

RAINS, DROUGHTS AND DREAMS OF PROSPERITY

Resourceful strategies in irrigation management and beyond
The Sri Lankan case

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Acronyms and abbreviations

ADA	Agricultural Development Authority
ADB	Asian Development Bank
AGA	Assistant Government Agent (Divisional Secretary)
AI	Agricultural Instructor
ASC	Agrarian Service Centre
ASCC	Agrarian Service Committee Council
AW	Akkara wela (the extended part of the command area)
CA	Command Area
CO	Cultivation Officer
CPR	Common Pool Resource
CWE	Commercial Wholesale Establishment
DAS	Department of Agrarian Services
DO	Divisional Officer
DOA	Department of Agriculture
DPA	District Political Authority
FFHCB	Freedom From Hunger Campaign Board
FO	Farmer Organisation
GA	Government Agent (District Secretary)
GN	Grama Niladhari (service officer at local level)
GPS	Guaranteed minimum Price Scheme
HYV	High Yield Variety
ID	Irrigation Department
IIMI	International Irrigation Management Institute (IWMI)
IMPAC	Irrigation Management Policy Advisory Committee
IMPSA	Irrigation Management Policy Support Activity
INMAS	Integrated Management of Major Irrigation Schemes
IO	Institutional Organiser
IPKF	Indian Peace-Keeping Force

IRDP	Integrated Rural Development Project
IWMI	International Water Management Institute
JVP	Janatha Vimukthi Peramuna (People's Liberation Front)
LDO	Land Development Ordinance
LTTE	Liberation Tigers of Tamil Eelam
MOAL	Ministry of Agriculture and Lands
MoP	Means of Production
MP	Member of Parliament
NGO	Non Governmental Organisation
NIRP	National Irrigation Rehabilitation Programme
OECD	Organisation for Economic Co-operation and Development
OFC	Other Field Crops
O&M	Operation and Maintenance
PA	People's Alliance
PC	Provincial Council
PMB	Paddy Marketing Board
PRA	Participatory Rural Appraisal
PRDP	Participatory Rural Development Programme
PW	Purana wela (the old part of the command area)
SCOR	Shared Control of Natural Resources
SI	Structured interviews
SJP	Samurdhi Janatha Project
SSI	Semi-structured interviews
TA	Technical Assistant
TO	Technical Officer
UI	unstructured / in-depth interviews
UNP	United National Party
USAID	United States Agency for International Development
VIRP	Village Irrigation Rehabilitation Programme
VV	Vel Vidane
WFP	World Food Programme

Glossary of Sinhalese words

Akkara wela	new (extended) part of the command area
Akkara lease	leasehold tax
Ande-tenancy	sharecropping arrangement
Attam	reciprocal exchange of labour
Ayuredic	indigenous medicine
Bade-tenancy	private leasehold
Berawa	‘drum-players’ caste
Bethma	temporary redistribution of land in times of water scarcity
Bina	matrilocal marriage
Chena	slash and burn and shifting cultivation
Diga	patrilocal marriage
Gama	village
Gamsabha	village council or court
Govigama	farmers’ caste (also referred to as ‘goygama’)
Govi-niyamake	farmers’ mobiliser / animator, government appointed
Grama Niladhari	local government officer for a division
Hakgediay	conch-flute players caste
Jayabhoomi	land grants programme initiated under PA government
Janesaviya	poverty alleviation programme of UNP government
Kanna	season
Kasippu	liquor
Kattimaru	rotation of part of the land
Korale	colonial officer at Divisional level (AGA)
Kuluma	tank, irrigation reservoir
Maha kanna	main cultivation season (October-March)
Mudulali	trader, shopkeeper

Niyamake	animator / mobiliser
Pangu	shares (land)
Pangu-list	shareholders list
Pimbure	ancestral land
Pradeshiya Sabha	Local elected council at divisional level
Purana	old
Purana wela	oldest part of the command area
Rada	laundry caste
Ratemahatmaya	colonial officer at District level (GA)
Samurdhi	rural development and poverty alleviation programme initiated under PA government
Samurdhi-niyamake	Samurdhi-mobiliser
Shramadana	collective action for maintenance activities
Swarnabhoomi	land grants programme under UNP government
Thattumaru	rotational cultivation of one plot of land among several children within one household
Thulana	GN Division, consisting of a cluster of villages
Vel vidane	traditional irrigation headman
Wewa	tank, irrigation reservoir
Yala kanna	dry season (April – September)

Conversion table of units

1 ha	10,000 m ²
1 ha	2.471 acre
1 acre	4046.86 m ² or 0.404686 ha
1 perch	25.29 m ²
1 foot	3.048 decimetres
1 Ac.ft.	1233.48 m ³
1 bushel	20.9 kilograms
Rs. 100	US\$ 1.43 (at the time of the study)
US\$ 1	Rs. 70 (at the time of the study)

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Preface

Frances Cleaver recently observed: “Participation has become an act of faith in development, something we believe in and rarely question” (Cleaver, 1999, p. 597). This research intends to show some of the processes at work that discourage some farmers from participation in minor irrigation management, and also the processes that lead to co-operation, networking and seeking alliances. It deals with questions of compliance and resistance, of trust and distrust, in the context of irrigation management.

This thesis focuses primarily on those factors, which obstruct the participation of vulnerable groups of farming households. It asks questions about the distribution of resources along political lines, corruption in tank rehabilitation projects, the political support for illegal activities and the exclusion of particular households within the community.

I would like to emphasise that, in questioning these, it is not my intention to suggest that the participatory approach should be abandoned, or that tank rehabilitation projects do not have a positive impact on the food and income-security of farmers in rural areas. On the contrary, I still believe that these projects can make an important contribution to peoples’ lives. Similarly, the discussion on political strategies, and on the distribution of resources along political lines, should not be read as an effort to blame the present ruling party. These processes also existed under previous governments, and in all likelihood will continue under future governments.

Finally, it is not my intention to suggest that all farmer representatives, government officers and politicians are only interested in their own benefits, whether these comprise money, power or votes. I encountered many government officers, representatives and politicians who were dedicated to their work, who tried to assist the farmers within their realm of possibilities. Understanding and incomprehension, trust and distrust, approval and disapproval are inherent to human plurality. In the words of Hannah Arendt:

“Human plurality, the basic condition of both action and speech, has the twofold character of equality and distinction. If men were not equal, they could neither understand each other and those who came before them nor plan for the future and foresee the needs of those who will come after them. If men were not distinct, each human being distinguished from any other who is, was, or will ever be, they would need neither speech nor action to make themselves understood. Signs and sounds to communicate immediate, identical needs and wants would be enough” (Arendt, 1958, p. 175)

Foreword

When I started, the process of conducting Ph.D. research seemed to be a rather straightforward and predictable process. It seemed to be a process of going through different phases and facing a variety of difficulties along the way. Many theses do not refer to the other part of the process in conducting research: personal experiences. Perhaps it is best to leave it like that. After all, a thesis is expected to be written in the language provided for by the academic world, wrapped up in theories, hypotheses, research questions, descriptive and analytical readings, but not in the language of personal experience.

But I see the two separate languages as reflections of two worlds, which are, at least to me, inextricably interwoven with each other. Validity, reliability and objectivity set the norms. Social research should be kept free from personal bias, norms and values and from personal interference (unless it is action research or experimental research).

Cultural relativism encourages us to be unbiased towards other cultural settings, leaving space for other opinions about the social and political arrangements in society. Nevertheless, many academic studies are a reflection of the modes of thought prevalent in their period of time. Currently, it seems to be good practice to go with the flow of paradigms such as participation, good governance, gender and sustainable development; as embraced by many donor organisations and which almost seem to have an aura of being “politically correct”. These are interesting and challenging topics, asking for integrated and

interdisciplinary approaches, which appealed to me when starting this research.

However, halfway through the ‘project’, two years later, I found myself drifting in another direction. After trying to build a solid foundation on which to construct the thesis by the formulation of a conceptual framework, the building stones of information I obtained while collecting data proved to be of a very diverse nature. To stick with the image of a construction site, one could say I found bricks made out of sandstone, I found limestone, cobblestones, bricks of clay, both intact and damaged. Some of these bricks I could use in constructing the thesis, they matched the foundation and architecture I had in mind. Others I could not use. I did not only find stones at moments when, and at places where, I was looking for them, I also stumbled upon them, sometimes most unexpectedly.

Using another metaphor, the water in the irrigation reservoirs (“tanks”) which occupy a central position in this research, was sometimes muddy and silted, and the surface of the water was covered by both weeds (*Salvenia*) and beautiful Lotus flowers. Sometimes the weeds were floating in the centre of the lake, other times they were floating close to the bund, to the sluices, or they would cover the water around bathing places. The mutual positioning of factors, which seemed to be clear at one time, changed during other times.

I looked for a way out of this dilemma, to come to terms with the question of what to do with the factors (the stones) that did not seem to fit the foundation, and the factors (the weeds) which seemed to constantly change places. The easy way out would be to have ignored

all of this. After all, the choices made at the start had been well thought out and justified. In mature scientific language, one calls this demarcation or delimitation. Indeed, wise advice in order to avoid a muddy thesis.

However, as the research evolved, I felt more and more that ignoring much of this information would result in a completely different story, a different perspective, supporting only the popular and politically correct paradigms. I would have to close my eyes to the social consequences of applying some of those paradigms at the local level – in real life, rather than in theory. It would probably lead to an image of reservoirs with clear waters, decorated by beautiful Lotus Flowers. The problems would not be ignored, but rather they would be arranged in a neat way, in flowcharts, problem charts and game theories. Some squares, some circles and some arrows would indicate the connections, causalities and dependencies.

I drifted from the intellectual exercise of formulating a conceptual framework and research questions, through the sometimes exhausting exercise of conducting fieldwork, many conversations and interviews, towards the process of listening. Listening not only to the answers to my questions but also listening to other stories which inevitably came up during or at the end of the interviews. Those stories revealed the hardships, frustrations, traumas of violence and personal losses.

During the first days of carrying out research in any village, I would be told without exception, that all villagers were relatives, that they had good relationships, and that problems and conflicts were not part of their life. In other words, living close together as relatives ensured a

way of relating to each other such that conflicts were either avoided or solved; a society where people lived together in harmony. But sooner or later, some of the villagers would disclose the other side of the mirror: one of dependencies and inequalities, of disagreements and distrust, sometimes even of illicit behaviour, corruption and personal threats. The image of a traditional harmonious society, where solidarity and concern for each other still were an important part of social relationships, was shattered.

Through these stories, I also began to see the consequences of applying some of the paradigms mentioned earlier. I found examples where participatory approaches offered ample opportunities for corruption at the local level, where social inequalities and economic dependencies prevent villagers from objecting during the ‘participatory’ meetings or consultations. As a result, some (though not all) of those projects which could have been ‘successful’ in the rehabilitation of the physical infrastructure of the reservoirs and canals, were found to be the prime sources of corruption and the disruption of social relationships once the project was completed.

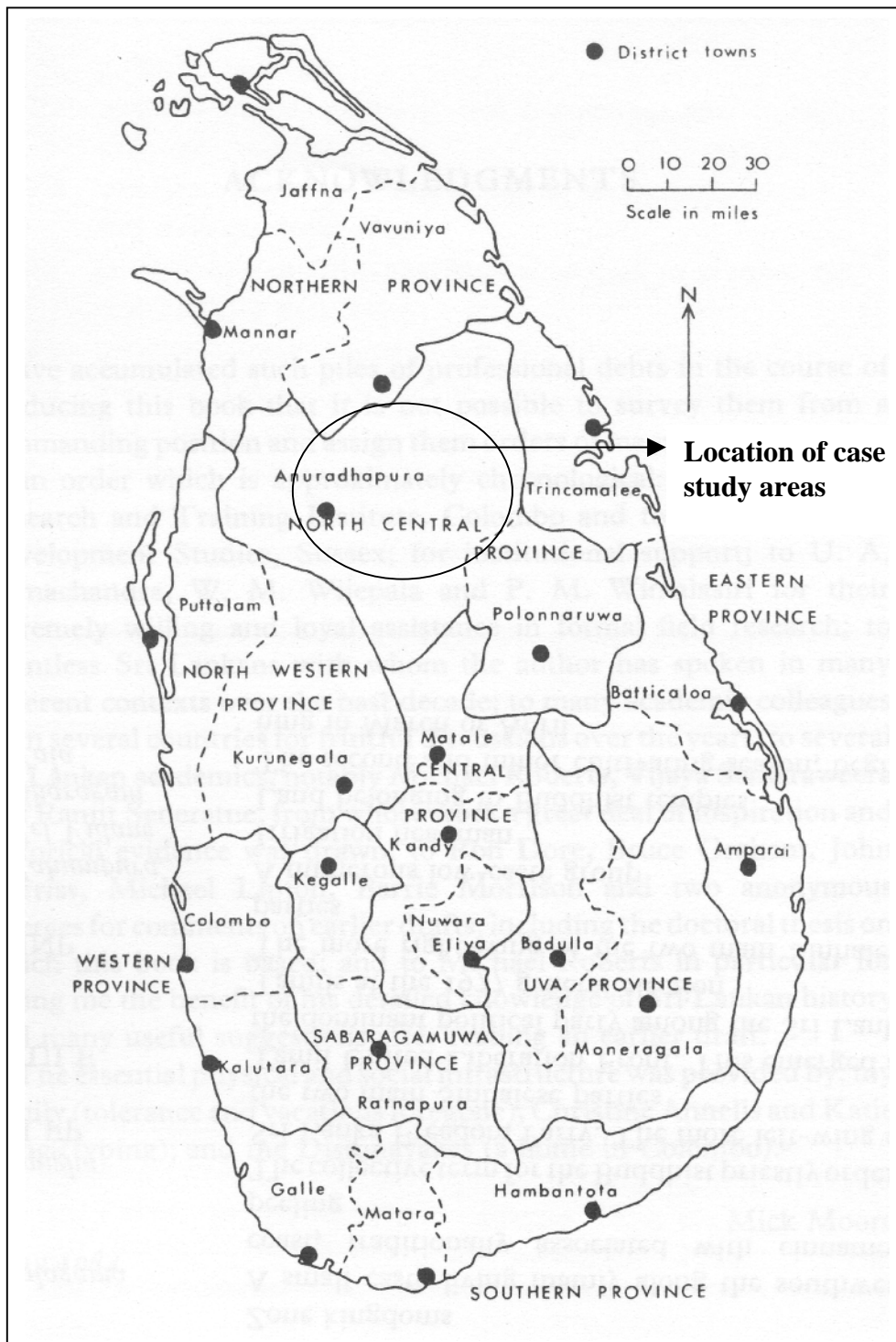
The disruption of social relationships was also manifest at a different level. In some of the villages, there was a large temporary migration of women to work as maids or servants in the Middle East. Once they returned, they were often more independent and self-aware than when they had left, and they were more involved in decision-making at the household level. However, sometimes the consequences of their temporary migration were poignant. Young women left their families, their husband and often young children behind for a few years, without any opportunity of seeing them until their return. Alcoholism,

broken families, child neglect and child abuse were some of the consequences that a few of these families had to deal with.

I realise now, more than at the start that the accumulation of knowledge and insights into the processes taking place at the local level, depends on the trust and willingness of people. They decide individually, time and time again, to what extent they will let me into their lives, to what extent they want to share their hopes, frustrations, needs and stories with me, realising that I really cannot do much for them in return. I received many requests that I was not able to respond to (such as talking to the President to arrange a feeder canal), but to one request I can. This was to inform the public, in particular the donor organisations, about the frustrations, and the feelings of dependency, the political influences and corruption, and about some of the negative consequences of ‘successful’ projects. By completing this thesis, I hope I am contributing to this.

I saw a mirror from both sides. The people showed me the shining, sparkling side of their life, as well as the clouded and dark side with grief and despair. I would like to recommend the reader to seriously consider the statement made by Ralph Waldo Emerson (1803-1882) before continuing reading this thesis:

“Sometimes a scream is better than a thesis!”



Source: Moore, 1985, p. xv

Ch. 1 Introduction and problem definition

“...From the rising grounds of Dambool and Kandepalle on the one side and Nikini, seventeen miles from Dambool, on the other side, the country bears the appearance of being occasionally overflowed; and probably this tract of country was all included within the limits of the immense reservoir. We found the double sluice of the Kalawa Tank in perfect preservation.... The spill water is a great mass; I believe to be about five miles.... Other lateral embankments of still greater length ... completes this stupendous work, which, in a much more contracted form, had existed for centuries before it was enlarged by King Dasenkelloya, a short time before he was murdered in A.D. 477”
(Brohier, 1934, p. 7)

1.1 Introduction

Sri Lanka has been praised and glorified for its advanced irrigation infrastructure and technology in the dry zone as far back as ancient times. Small water reservoirs (referred to as ‘tanks’) and their settlements had become a significant feature in the dry zone landscape by the first century B.C.

The construction of larger irrigation works – in response to the need for greater food production for a growing population - advanced under the reign of King Vasahba (67-111 A.D.), King Mahasena (275-301 A.D.), and King Dhatusena (460-478 A.D.). Large reservoirs and intricate canal networks were created, and much new land was brought under cultivation. Large water reservoirs such as

Huruluwewa, Kalawewa and Nachchaduwa were constructed during this period (Ismail, 1995, p. 30-33). The construction of irrigation works was of vital importance to satisfy the basic needs of the population. In a publication on early settlements in northern Sri Lanka, Ismail states:

“As the population depended mainly on agriculture, the villages were often linked to the tanks. The small tanks supported small villages, while the larger tanks supported a larger group of villages, often with a main centre which was perhaps a large village or sometimes a town.” (Ismail; 1995, p. 30).

During the reign of these and other kings, the central government not only assumed the responsibility for construction, repair and maintenance of these irrigation works, but also for the regulation and distribution of water from all the major tanks. The small tanks, some of which were constructed as private enterprises by local communities, landlords and monasteries, were under the jurisdiction of the village headmen (Ismail, 1995, p. 32). Although irrigation management has, throughout the centuries, been subject to many changes, the construction and rehabilitation of the irrigation infrastructure remains the responsibility of central and provincial government authorities.

Irrigation works were, and still are, of vital importance in satisfying the basic needs of the population in the dry zone of Sri Lanka. The livelihoods of farmers in the North-Central Province – part of the dry zone - depends strongly on the availability of water for cultivation of paddy (rice) and other field crops. Cultivation of paddy is located in

the command area of the tank; other crops such as vegetables, fruits, grains, roots, pulses and spices are cultivated mostly in home gardens and under a system of (shifting) slash and burn cultivation - referred to as chena.

The food- and income security of the farming population is seriously affected by unpredictable rainfall, which sometimes results in crop failure. Drought periods occur frequently in the North-Central Province, sometimes over several years in succession¹. Without sufficient water for paddy cultivation, the population depends for food and income on other sources, such as day labour, financial support from their children, and poverty alleviation programmes. Due to the absence of employment opportunities many women migrate temporarily to the Middle East to earn an income, and many men join the army.

1.2 Political background

Since the 1930s, governments have promoted irrigation works and colonisation projects in the dry zone in an attempt to increase rice production and reduce land pressure in the wet zone. In 1939 a new settlement policy was formulated by the Minister of Agriculture and

¹ There are two cultivation seasons, the main cultivation season during the North-East Monsoon (*maha kanna*: October – March) and the dry season (*yala kanna*: from April – September). Between 1880 and 1999, the number of Maha season droughts in the dry zone fluctuated between 2 and 3 severe and moderate droughts per decade. The only exception being in the 1920s, with only one severe drought and no moderate droughts (Basnayake, est. 1990).

Lands (Mr. D.S. Senanayake), which included not only cultivation services, but also the construction of canals, provision of engineering services, building of houses, health services and co-operatives. Government policies tried to provide relief to the poverty-stricken population by the allocation of small plots of land in the dry zone. In combination with the Malaria Eradication Programme (initiated in 1945) these welfare-oriented policies led to a large increase in population. The government was not able to reduce socio-economic problems such as unemployment, landlessness and external dependency on food. The rehabilitation of ancient irrigation works, coupled with land development and colonisation in the dry zone was considered as a solution to deal with these problems (Siriwardena, 1989, p. 60).

Several programmes and schemes were introduced to assist small farmers in their struggle to make a living from paddy cultivation, such as the Guaranteed Price Scheme for rice in 1948, food subsidies and subsidised fertiliser schemes. Another important development was the protection of tenant farmers through the Paddy Land Act of 1958. This Act made provisions for the establishment of Cultivation Committees and abolished the remuneration (*salaris*) paid to the irrigation headmen (*vel vidane*), thereby leading to the gradual disappearance of the *vel vidane* and his role.

This Act was a reaction to the deteriorating economic situation and the high cost of rice imports. This Act was further born out of the belief

among the Marxist parties of the time² that tenant cultivators and smallholders must be protected vis-à-vis local feudals and landlords (Moore; 1985, p. 60). It was thus not only an agrarian law covering the smallholder sector; it also represented a class struggle.

Following sharp declines in the price of Sri Lanka's export commodities and a considerable increase in the expenditure for rice imports in the 1960s and the burden of food subsidies on the total public expenditure (17% from 1970-1977), subsequent governments have emphasised the need to achieve self-sufficiency in the production of Sri Lanka's main staple crop (rice).

The new United National Party (UNP) government which came to power in 1977 rejected the previous welfare-oriented policy, eliminated food subsidies and replaced this by food stamps, and moved towards production-oriented policies. The economic liberalisation policies, which followed, marked a turning point in Sri Lanka's economy. To increase the production of paddy, the government invested heavily in irrigation projects, such as the Accelerated Mahaweli Development Programme³. These policies contributed to an additional 23.15 million bushels⁴ of paddy over the

² The country was ruled by a coalition of the Sri Lanka Freedom Party (SLFP) and one or more of the smaller Marxist parties (the Communist Party and the Lanka Sama Samaj Party (LSSP)) for most of the period 1956-65, and again between 1970 and 1977. (Moore, M.; 1997, p. 1011)

³ This is the largest irrigation programme in Sri Lanka, accounting for 90% of the total irrigation investments over the last two decades of the 20th century (Barker and Samad, 1998, p. 14). The AMDP aimed at an increase of food security, an increase hydropower generation, and to create employment.

⁴ One bushel is 20.9 kilogram.

whole period between 1960-61 and 1980-82 (Thorbecke and Svejnar, OECD, 1987, p. 46). The increase of irrigable land⁵ was to be accompanied by complementary labour, fertiliser, the introduction of high-yielding varieties (HYVs), and mechanisation in paddy cultivation.

One of the emerging priorities under the UNP government (between 1977 and 1994) was the restoration and renovation of the existing irrigation infrastructure to increase the agricultural productivity, not only the restoration and renovation of large and medium irrigation systems, but also of minor irrigation systems. A large number of tank rehabilitation and modernisation programmes were launched⁶, many of which received foreign technical and financial assistance. However, operation and maintenance proved to be a costly and problematic affair. For this reason, community-based management, participatory approaches, and joint management were introduced to reduce government expenditure and to improve the operation and maintenance of irrigation schemes.

⁵ The area of irrigated land rose from approximately 250 to 550 thousand hectares between the 1950s and the mid 1980s (Barker and Samad, 1998, p. 13).

⁶ Such as the Tank Irrigation Modernization Project (TIMP), the Major Irrigation Rehabilitation Project (MIRP), the National Irrigation Rehabilitation Project (NIRP), the Village Irrigation Rehabilitation Project (VIRP), the Gal Oya Water Management project (GOWMP), the Irrigation System Management Project (ISMP), the Uda Walawe Modernization Project (UWMP), the Anuradhapura Dry-Zone Agricultural Project (ADZAP) and the Minipe-Nagadeepa Rehabilitation Programme. Many of these received foreign technical and financial assistance.

This resulted in a decade of “experimenting with organising farmers and involving farmers in irrigation system rehabilitation and operation and maintenance” (Athukorale; Athukorale; Merrey, 1994, p. 2).

The first experiments with participatory management in large-scale irrigation systems were introduced in Minipe and in Kimbulwana Oya - with no foreign involvement - and in Gal Oya, with support from USAID. In 1984, the INMAS programme (Integrated Management of Major Irrigation Schemes) was the first attempt to implement participatory management in a number of irrigation schemes, following the pilot projects in Gal Oya, Minipe and Kimbulwana Oya. In the late eighties, the government received additional support from USAID to refine and operationalise its participatory management policy, aiming for a broad consensus on this approach, under the Irrigation Management Policy Support Activity (IMPSA). The improvements of irrigation systems and experiments with farmer participation were not limited to large-scale irrigation systems. The Village Irrigation Rehabilitation Project (VIRP) was one of the first comprehensive programmes for the physical rehabilitation of minor irrigation schemes, later followed by several other government, NGO, and donor-funded programmes.

In 1988, the Cabinet of ministers accepted a Cabinet paper on participatory management. The objectives of this policy were to improve the productivity of the irrigation schemes through management by the farmers and to increase the share of O&M expenditure borne by the farmers (Nippon Koei, 1999, p. 4-20). Actual implementation remained pending until 1991, when an amendment was made to the Agrarian Services Act No. 58 of 1979,

giving legal recognition to farmer organisations. Through this amendment, each farmer organisation gained responsibility for the formulation and implementation of the agricultural programme for the area, co-operation and co-ordination with the local government authorities (the Department of Agrarian Services) and in village level construction work and repairs to irrigation works. The farmer organisation was envisaged as institutional infrastructure for organising farmer participation in operation and maintenance.

Following the election of the Peoples Alliance (PA) government in 1994, the strong emphasis on self-sufficiency and increased agricultural productivity in paddy cultivation was replaced by an emphasis on economic viability, focusing on the cultivation of high value crops. Modernisation of the agricultural sector, commercialisation and privatisation of agrarian services, are stated as two of the three government priorities for the agricultural sector into the new millennium.

1.3 Problem definition

In minor irrigation schemes, the agricultural policies are still primarily based on the concept of participatory irrigation management, as evolved during the 1980s and 1990s. The establishment of farmer organisations, and the adherence to a participatory approach, was expected to be cost-effective, and responsive to the real needs of farmers, and to contribute to the development of farmers' commitment and sense of ownership for their system. Furthermore, it was expected to provide a remedy for the poor performance in the operation and

maintenance of irrigation schemes, and for the high government expenditure related to maintenance⁷. The expectations for this policy were highly optimistic:

“If the programme proposed here is implemented, then by the turn of the century, the small farmers in Sri Lanka’s irrigated agriculture sector can make substantial progress in shifting from a state of poverty and underemployment, barely meeting their subsistence needs, to a state of increasing prosperity... Broadly speaking, the irrigated agriculture sector will be dynamic, diversified, efficient, equitable, productive, sustainable and participatory... ”(IMPSA, 1992, p. 1, 2)

The Irrigation Management Policy Advisory Committee (IMPAC) advised the Government of Sri Lanka in 1992 that:

“A major transformation in the implementing institutions must be initiated to bring about a shift from ...farmers dependent on the State to self-reliant small farmers organised into strong, democratic, effective and autonomous organisations with the authority and ability for full management of their resources... ”(IMPSA, 1992, p. 1, 2)

⁷ Thompson (1995, p. 1522) gives an overview of four main reasons why – in general - public sector agencies are taking an interest in participatory approaches from the planner-centered perspective. These are: (a) a search for (cost-) efficient ways of service provision, (b) encouragement and pressure by the international aid community for government authorities to support participatory development programmes and projects, (c) recognition of the failure of past ‘blueprint’ development strategies and (d) positive experiences of other public agencies.

The IMPAC acknowledged that the success of participatory management would depend on the willingness and capacity of farmers to manage their own affairs.

Notwithstanding the promising initial results in Gal Oya - the expectations proved to be overoptimistic. The establishment of farmer organisations and the implementation of participatory management were more complicated than was foreseen, and the willingness and capacity of farmers to manage their own affairs was harder to bring about than expected. In many cases, the participatory approach proved to be a superficial approach, and was actually transformed in a top-down approach at the field level. Lack of maintenance, conflicts between member farmers and farmer organisations, inactive or malfunctioning farmer organisations, and poor communication between farmers and government organisations were – and still are – frequently reported.

A substantial portion of the complaints by farmers are directly related to the behaviour and strategic actions of other member-farmers and to the outcome of decision-making as a result of these strategies. Some participation ideologies portray peasant farmers as victims and beneficiaries instead of strategic actors. By emphasising the notion of ‘beneficiaries’, these ideologies create an image of passivity, helplessness and powerlessness⁸. In contrast to this perception, there is another interpretation of the role of peasant farmers. One of the studies on irrigation development in Sri Lanka indicates that strategic

⁸ A similar orientation can be found in many publications from donor agencies on gender, where women are portrayed as beneficiaries and victims rather than strategic actors.

actions by farmers in order to influence their social, bureaucratic and political environment actually do affect the outcome of development interventions:

“Farmers are not passive participants within official development programmes but strategic actors who use their knowledge and capabilities to pursue their own interests” (Siriwardena, 1989; thesis).

“When confronted with the struggles, negotiations and strategic actions of farmers, local officials are forced to alter the policies and procedures of planned intervention in order for themselves to survive within local arenas”(Siriwardena, 1989; thesis).

Where reports speak of problems in terms of performance, communication, accountability and representation, the farmers speak of misinformation, manipulation, domination and bureaucratic or political interference. Not only do they object to the selective distribution of information and the selective distribution of benefits by the farmer organisation, they also complain about lack of compliance with - and manipulation of - rules by other member-farmers. Similarly, they agitate against particular strategies by individual farmers or groups of farmers to take personal advantage of the benefits provided by rehabilitation projects, and against alliances with government officers and politicians if these result in preferential treatment or irregularities within the farmer organisation.

The frustration among farmers and groups of farmers about the outcome of decision-making - and their dissatisfaction with the system in which strategic alliances with government servants and politicians

are rewarded – seems to serve as a fuel for opposition to the office-bearers, and results in poor attendance of meetings and participation in maintenance activities, in ignoring rules and deadlines, and in further conflict escalation instead of conflict resolution between particular categories of farmers within the organisation. Therefore, the question that seems to be justified is to what extent – and in what way - do these strategic actions also affect the functioning of farmer organisations. This results in the following **research question**:

How do farmers (individual farmers, specific categories and/or groups of farmers) adapt their strategies to pursue their interests in a changing institutional environment, and how can the functioning of the farmer organisation be understood in terms of these strategies, and the outcome of these strategies, for specific categories of farmers?

The research question implies that an analysis of the strategies of different categories and groups of farmers is required in order to understand why some farmer organisations are inactive, not successful in enforcing compliance with the cultivation schedule, unable to effectuate participation in maintenance activities, and not able to resolve conflicts; whereas other farmer organisations seem to perform much better in the accomplishment of these tasks. In other words, it wants to understand why (and in what way) particular strategies affect the functioning of the farmer organisation. The ‘functioning’ of farmer organisations will be understood as their performance in planning and implementing the cultivation schedule, operation and maintenance of the irrigation system, rehabilitation of the scheme, co-

ordination with the local government authorities, and conflict management (see chapter 2).

Although the potential impact of external influences on the functioning of farmer organisations should not be underestimated, the research question clearly rejects any assumption that the explanation will be found primarily in external factors⁹. Without losing sight of the external influences, this research question aims to identify the strategies of farmers and specific categories of farmers¹⁰, to understand why they use these strategies and to what extent they are capable – through these strategies –of engendering changes within the farmer organisation and their environment. Chapter 2 provides an overview and discussion of relevant literature. It concludes with an analytical framework and a subdivision of the main research topics. It also provides an outline for the remaining chapters.

⁹ In doing so, it also rejects the perspective which portrays peasant farmers as mere ‘beneficiaries’ rather than as strategic actors.

¹⁰ The distinction between categories and groups of farmers is made deliberately. Instead of group behaviour (where the group is a well-defined entity), it is likely that many farmers will cooperate with some farmers for one purpose, and with others for another purpose. Later in this thesis, ‘categories’ is sometimes replaced by ‘groups’. This does not necessarily imply group-coherence or group-based action.

Ch. 2 Conceptual framework

“Both colonial and contemporary irrigation social theory divert interest of planners away from social actors and their wider networks, take little cognisance of the fact that social action in the context of common or public resources is markedly political, that relations of power underly conformity, or that individual strategies are themselves mediated by social institutions whose elements are constituted in culturally and historically specific ways” (Mosse, 1999, p. 326)

The previous chapter concluded with the research question as to how farmers adapt their strategies in a changing institutional environment and how the functioning of the farmer organisation can be understood in terms of these strategies and the outcome of these strategies. In answering these questions, it is helpful to examine theory and to identify for use the theoretical concepts and terminology, *and* the analytical tools, which are already available in literature.

Natural resource management – in particular irrigation management – has caught the attention of many academics, including irrigation engineers, sociologists, anthropologists, economists and (political) geographers. Therefore it may not come as a surprise that this has resulted in heated debates about the appropriateness of various perspectives and analytical models.

While the divide between the engineering perspective and the sociological perspective is gradually being bridged, new dichotomies emerge. An example of these is the dichotomy between the game-

theoretic concepts on irrigation management (describing farmers as rational utility maximisers), and those adhering to theories on informal interaction, repeated practices and socially embedded institutions. This chapter will present both perspectives, and indicate in what way or to what extent these concepts and theories will be used for descriptive or analytical purposes in later chapters.

This overview refers to literature on irrigation engineering and management (section 2.1), the participation discourse (section 2.2), the tragedy of the commons (section 2.3), traditional management of natural resources (section 2.4), new institutional economics and common pool resource management (section 2.5), social capital (section 2.6), political geography (section 2.7), and to concepts such as human agency, strategic behaviour, power relationships and structure (section 2.8). Section 2.9 presents the analytical framework to be used, followed by the research questions and the structure of this thesis in section 2.10, with an explanation of categories, scales and units of analysis in section 2.11.

2.1 Irrigation engineering and irrigation management

Agro-ecological features

Irrigation engineering is concerned with the hydraulics of canals and structures, the design and construction of the irrigation infrastructure, operational design principles, irrigation efficiencies, and the regulation and control of water flows. The agro-ecological features of an area are clearly related to this, and include the soil characteristics, water availability, rainfall and temperature, seasonal changes,

vegetation and cropping patterns, geology. These technical and agro-ecological features have a direct impact on operation and maintenance requirements, on the distribution of water, on irrigation efficiency, and on the extent to which water distribution can be manipulated. Irrigation engineering is thus directly related to concerns of irrigation management. An outline of these impacts on an irrigation management system is provided in chapter 4.

Spatial and temporal aspects

The spatial and temporal aspects of irrigation are relevant for the operation and maintenance of these systems. The spatial boundaries of minor irrigation systems incorporate not only the physical infrastructure, the hydrological boundaries of the catchment and command area (see chapter 4), but also the boundaries set by the institutional landscape (chapter 5), by the existing marketing infrastructure or employment opportunities (chapter 6), the boundaries of social interaction (chapter 7), the boundaries of participation and legal action (chapter 8) and the boundaries of political interaction and electoral representation (chapter 9). The temporal aspects refer to the irrigation requirements and opportunities for cultivation (or their uncertainties) over time. The opportunities for cultivation are determined by agro-ecological features such as seasonality and climatic fluctuations or to the growth cycle of crops (chapter 4). The way in which some of these uncertainties influence the livelihood strategies of farmers will be a recurrent theme in chapter 6 and dealt with again in chapter 10, which tries to explain why some of the findings do not match the expectations derived from literature.

Irrigation management system

There are numerous frameworks for describing irrigation management systems, usually making a distinction between various types of activities or irrigation tasks (e.g. Chambers, 1988; Coward, 1985). Based on this literature, and the perspective of water-users (farmers) in the area, the functioning of the irrigation management system under farmer organisations (and vel vidanes) will be defined as their performance with regard to:

- Planning and implementation of the cultivation schedule;
- Operation and maintenance;
- Rehabilitation¹ of the irrigation system (if required);
- Co-ordination with governmental organisations;
- Conflict management.

However, the view that the ‘functioning’ of farmer organisations can simply be labelled in terms of effectiveness or efficiency² ignores the heterogeneity among farmers, and how the functioning of these organisations is shaped by social and economic networks and personal relationships. This thesis argues that the extent to which farmers are satisfied with the way in which the farmer organisation operates is – at least partly – related to their socio-economic position and the

¹ Construction of new irrigation infrastructure is not an issue at the level of farmer organisations, only at higher levels of administration (provincial/national government).

² E.g. the ‘appropriateness, effectiveness and efficiency model’ which looks at the relationship between vision, goals and objectives, inputs, actions, outputs and outcomes to determine the efficiency, effectiveness and appropriateness (Woodhill and Robins, 1998, p. 34).

distribution of resources other than water. The question is thus not simply how the irrigation management system under the farmer organisation (or the *vel vidane*) manages to establish co-operation among the farmers, but also vice versa, how personal relationships and social networks – and the use of these relationships and networks – have an impact on the functioning of farmer organisations and *vel vidanes*.

The opinion of individual farmers is shaped by their view on: (a) the role of the farmer organisation in construction and rehabilitation projects, such as acquisition of funds or the ‘acquisition’ of rehabilitation projects, implementation and monitoring of rehabilitation works and contracting arrangements; opportunities to participate in, and profit from, rehabilitation works; (b) the decision-making processes with regard to daily use of water, with regard to the operation and management of water, and with regard to one’s entitlement to participation in the decision-making process (c) system operation, water allocation, daily water distribution and water use, water wastage by the operators; (d) entitlement to benefits, resource distribution and appropriation of land, water or other resources; (e) the performance of collective maintenance activities; (f) overall performance of individual duties and conformity to the cultivation schedule; (g) advantages and disadvantages from co-ordination or individual relationships with government officials and politicians; and (h) conflict management, such as conflict mediation and conflict resolution. Several examples will be presented in chapters 7, 8 and 9 to illustrate the way in which farmer organisations fail to represent the interests of all farmers, and how this affects the farmer organisations.

There is a strong orientation, in the mainstream institutional theory on local irrigation management, towards rules and regulations. Ostrom gives three sets of rules, which are necessary for the effective functioning of an irrigation system. These are the *operational rules*, governing the daily use of water, the *collective choice* rules, which determine how schemes should be operated and managed, and *constitutional choice* rules which determine one's entitlement to participation and who has control over operational and collective choice rules (Ostrom, 1992, p. 44-45). This terminology will be used later in this thesis to highlight some of the strengths and weaknesses in the irrigation management by farmer organisations, and to identify how particular rules are manipulated or challenged by farmers.

2.2 The participation discourse

The discussion on irrigation management is closely linked to the discourse on the participation of water users. This discourse evolves – to a large extent – around the rationales for enhancing participation³. Michener makes the distinction between ‘planner-centred’ and ‘people-centred’ participation. The first type of participation focuses

³ There is a wide variety of frameworks available for the assessment of participation. Pretty (1994) for example uses a typology, which distinguishes between passive participation; participation in information-giving; participation by consultation; participation by providing resources in return for material incentives; functional participation; interactive participation and self-mobilisation. Other authors focus on the phases of the project cycle in which participation can materialise (Cohen and Uphoff, 1980), on levels of participation (Dehler and Sock, 1985), or on the frequency of participation (Lise, 2000).

on administrative and financial efficiency; it facilitates the exploitation of indigenous knowledge and is expected to result in lower implementation costs through the use of local labour, financial and in-kind contributions by local populations. The people-centred or 'empowerment' perspective considers participation both as a means and as an end in itself, as it has inherent value to empower the poor by enhancing local management capacity and raising collective consciousness (Michener, 1998, p. 2106).

Quite interesting, for the purpose of this research, is the body of literature which gives attention to the way in which participation serves the interests of planners (Dehler and Sock, 1985) or the way in which beneficiaries employ the opportunity to participate (White, 1996; Moore, 1985). These authors suggest that the use of participatory approaches – both by planners and beneficiaries - is less neutral than generally presumed:

“Many advocates of participation have romantic notions of communal altruism in developing countries and may not recognize manipulation from the bottom up.... For example, while development agents work to promote self-reliant, empowered communities, community members may have a very different mechanism for meeting their needs. They may display passivity and dependency, specifically to establish a clientelic relationship (Michener, 1998, p. 2114)

In this thesis, the perspective on participation will be similar to that of Michener, being that participation is not only a right, an obligation or an interest in itself, but that it can be employed actively as a strategy to pursue particular interests. Therefore, it is important to

acknowledge “that different individuals and groups have different ‘stakes’ in the management of resources and that they make different evaluations of situations, depending on their socio-cultural and political-economic conditions (Gosselink and Strosser; 1995, p. 12-13). This is taken as the starting point in the chapter on livelihood strategies (chapter 6), the chapter on exchange strategies (chapter 7), and in the chapter on formal strategies (chapter 8) which give an indication of the heterogeneity within the farming community.

One of the problems associated with participatory approaches is that government and donor organisations tend to focus on participation in formal organisations, thereby ignoring the existing local norms of decision-making and representation, informal networks, norms, customs and practices. Building on Bourdieu’s notion of traditions and beliefs that exist beyond discourse or argumentation⁴, Kabeer stated:

“in assessing whether or not an achievement embodies meaningful choice, we have to ask ourselves whether other choices were not only

⁴ This notion is referred to as ‘doxa’; Bourdieu cited in Kabeer, 1999, p. 441. In a later publication, Bourdieu elaborates on censorship. He states that “among the most effective and best concealed censorships are all those which consist in excluding them from the groups which speak or the places which allow one to speak with authority. In order to explain what may or may not be said in a group, one has to take into account not only the symbolic relations of power which become established within it and which deprive certain individuals (e.g. women) of the possibility of speaking or which oblige them to conquer that right through force, but also the laws of group formation themselves (e.g. the logic of conscious or unconscious exclusion) which function like a prior censorship” (Bourdieu, 1991, p. 138).

materially possible but whether they were conceived to be within the realms of possibility” (Kabeer, 1999, p. 442).

This can be applied to participation as well. We have to ask not only whether participation is formally possible, but also whether active participation is conceived to be within the realms of possibility.

Frances Cleaver argues that there is a tendency to concentrate on the analysis of formal institutions, such as contracts, associations, committees and property rights. According to her, it is much more through practices that are embedded in social networks, daily interactions and cultural norms, where the actual water resource management takes place (Cleaver, 1999, p. 601-602). Similar comments are made by Mosse⁵ (1999), and Leach, Mearns and Scoones (1999), in their discussion of community management of natural resources (Leach, Mearns, Scoones, 1999, p. 240). Although it would be naïve to ignore the formal institutions and formal strategies altogether, the empirical material from this research gives strong support to the views of Cleaver, Mosse, and Leach, Mearns and Scoones. To substantiate how irrigation management is embedded in social networks and informal institutions, I will frequently use extracts from interviews.

The challenge is to explore the co-existence of formal and informal institutions, to analyse the processes which incorporate both elements,

⁵ David Mosse is a social anthropologist at the School of Oriental and African Studies, University of London, who has conducted ethnographic and historic research on tank irrigation systems in South-India. His findings reveal many similarities with tank irrigation systems in Sri Lanka

and to recognise the situations in which property rights, rules and criteria are adopted or adapted. Analogous to the concept of legal pluralism, one could thus adopt the concept of institutional pluralism, where institutions are not only conceptualised as organisations, rules and structures, but also as the outcomes of cultural norms, social practices and dependency-relationships.

2.3 The tragedy of the commons: calling for state intervention

Irrigation systems are often described as common pool resources or common-property. Common pool resources (CPRs) can be defined as the resources accessible to the whole community of a village and to which no individual has exclusive property rights; such as village pastures, community forests, village ponds, tanks or reservoirs, riverbeds (Jodha, 1986, p. 1169). Benefits are commonly shared by all legitimate co-owners of a property. Irrigation systems can also, in more abstract terms, be defined as resources where exclusion is difficult and yield is subtractable (Gardner, Herr, Ostrom and Walker, 1990)⁶.

⁶ Ostrom indicates that the tragedy of the commons, the prisoners' dilemma, and Mancur Olson's logic of collective action, all predict that those using common pool resources will not cooperate to achieve collective benefits. However, she rightfully emphasises that these three models may be useful for predicting behaviour in large-scale CPRs in which no one communicates and in which everyone acts independently, but that these models are far less useful for the prediction of behaviour in smaller-scale common pool resources (Ostrom, 1990, p. 184)

Management of common resources is identified with the ‘tragedy of the commons’ (Hardin, 1968) or the problem of externalities (Lloyd, 1977, p. 8-15), and with risks of free-rider behaviour (Ostrom and Gardner, 1993). In essence, in the face of scarcity, people tend to use more resources than they are entitled to, resulting in the overexploitation of resources. They are unlikely to restrict their use when the immediate benefits of their actions are their own, but when costs of their actions are passed on to the society as a whole. Similarly, people tend to refrain from investing in maintenance and collective action at the expenses of others who have to make up for their absence. This is referred to as free-rider behaviour. The implication is that effective institutions are required to prevent a situation in which common pool resources are underprovided and overused.

The question is to what extent this argument also applies to irrigation management systems, which are much more regulated than the grazing grounds. Dasgupta argues that local commons, such as village tanks, are not common property resources as defined by Jodha or Gardner, Herr, Ostrom and Walker:

“The point is that local commons (such as village ponds and tanks, pastures and threshing grounds, watershed drainage and riverbeds, and sources of fuel wood, medicinal herbs, bamboo, palm products, resin, gum and so forth) are not open for use to all in any society. In most cases they are open only to those having historical rights, through kinship ties, community membership, and so forth. Those having historical rights of use tend, not surprisingly, to be very protective of these resources. Local commons are easy enough to monitor, so their

use is often regulated in great detail by the community, as noted earlier, either through the practice and enforcement of norms, or through deliberate allocation of use” (Dasgupta, 1993, p. 290).

2.4 Traditional management of natural resources

The plea for continued management by the community, based on historical rights, kinship ties or community membership is reflected in the literature on indigenous management of natural resources. Many of the publications on traditional or indigenous resource management systems emphasise the strength and potential of traditional forms of management, social rights, value systems and moral codes which result in co-operative resource management.

Traditional land use patterns and co-operation strategies can be seen in terms of coping with scarcity of resources, and with food and income insecurity. Such strategies have not only provided food and income through the exchange of gifts and the sharing of resources, they are also assumed to result in a binding force within the community. This perspective is clearly visible in a publication on indigenous resource management in the dry zone of Sri Lanka:

“the indigenous (historic) strategy of land resource management can be described as functionally integrated at local level, institutionally decentralized and technologically flexible. The exogenously influenced, modern mainstream strategy is characterised by segmentation, centralisation and standardisation... This strategy – embedded in the dominant development discourse of modernization – not only oppressed indigenous potentials, but created environmental

problems as well as social and economic hardship to many people” (Geiser, 1995, p .193).

This is an idealistic interpretation. Mosse points out how intervention by the state, especially with regard to common property such as water and forests, is perceived by some authors as one of the main causes of the demise of traditional systems of sustainable resource use (Mosse, 1999, p. 305).

The glorification of the traditional management system by Geiser and others - which shows a certain analogy with the praising of ancient irrigation systems - may be questioned for several reasons. For one, Mosse indicates that the contemporary concern over the dissolution of traditional tank management systems, are rooted, and have their origin, in the exigencies of colonial administration in the nineteenth century. He argues that the models that emphasise local irrigation institutions (e.g. by Uphoff 1986, Ostrom 1990, 1992) are not sufficiently aware of the historical and social context, ignoring the importance of political relationships, and the cultural construction of natural resources (Mosse, 1999, p. 304). To some extent this may well apply to the position of privileged landholders as representatives of the ‘community’ who enjoyed state recognition of their vested (‘customary’) irrigation rights for generations under the colonial British administration (Gilmartin, 1994, p. 1144-1145).

Yet, in the case of Sri Lanka, the attention on traditional management has to be seen against the background of another controversy. Traditional society is portrayed as a society in which small peasant farmers cultivate rice in small self-sustaining villages, where life is

centred around the irrigation tank, paddy fields and the Buddhist temple (e.g. Gunasekera, 1981, p. iii; Hettiarachchy, 1982). According to Moore, this portrayal is part of a nationalist ideology, which incorporates assumptions about the history of Sri Lanka and the Sinhalese. This is referred to by Moore as the 'Sinhalese national myth' (Moore, 1989, p. 190-191)⁷

The glorification of ancient Sinhalese civilisation and its hydraulic infrastructure (see the introduction to chapter 1) has also served to sustain this myth (Moore, 1989, p. 190-191). The concern for customary rights and the recovery of traditional irrigation management, the strong policies in favour of rice production, colonisation policies and agricultural policies has frequently been associated with this ideology (see also Rogers, 1994, p.10; Peebles, 1990, p.32, Tambiah, 1990, p. 27).

The view that the Sinhalese have selectively appropriated their past in order to understand the present and shape the future, is challenged by Hennayake and Hennayake. They argue that the claims of anthropologists and other researchers such as Moore, Rogers and Tambiah might be fashionable, but cannot be substantiated based only on case studies of a village or two, without paying attention to the class and caste constitution of the ethnic societies and the growth of Sinhalese nationalism in varying contexts, and without paying attention to the growth of Tamil nationalism.

⁷ The use of the term 'myth' is rather confusing, for it suggests that this is historically inaccurate. However, Moore only wanted to emphasise that it functions to strengthen a feeling of common (Sinhalese) heritage and a national cultural identity.

They state that reading the past through the present is a very political act, not an innocent anthropological work (Hennayake and Hennayake, 1999). Although this research tries – where appropriate – to relate the present situation to the past (but not vice-versa), this research is not concerned directly with the ethnic crisis. Therefore, there is no intention to take a stand in this controversy.

2.5 New institutional economics and common pool resource management

During the 1990s, several authors documented successful arrangements among resource users to prevent the overexploitation of resources and so challenged the assumption by Hardin that the rent-seeking behaviour of individuals would prevent the establishment of any form of effective self-management. They analysed the conditions and institutional arrangements which encourage reciprocal exchange, co-operation or collective action for the management of common pool resources (CPR) by using analytical frameworks drawn from game theory (Ostrom, 1992; Ostrom and Garner, 1993; Gardner, Ostrom, Herr and Walker, 2000; Dayton-Johnson, 2000; Uphoff, 2000).

This body of literature, the CPR stream within ‘new institutional economics’, examines the links between institutions, incentives, economic behaviour and outcome. It focuses on the conditions under which collective action in resource management is likely to emerge. In the CPR literature, institutions are defined as ‘rules of the game’.

Another stream within New Institutional Economics focuses more on transaction costs; institutions are considered as formal rules and conventions, and informal codes of behaviour or norms, which regulate human behaviour (Mehta et al. 2001, p. 14-15). Much of the institutional-economic literature on farmer's behaviour in irrigation management starts off from a rational-choice analytical framework, claiming that the farmers' interests can be known, predicted and will primarily be based on economic gain.

Ostrom, who is one of the leading authors in this field, formulated design principles that characterise long-enduring, self-governed common pool resource institutions for irrigation. These are:

1. "Clearly defined boundaries: Individuals or households who have rights to withdraw resource units from the CPR must be clearly defined, as must the boundaries of the CPR itself.
2. Congruence between appropriation and provision rules and local conditions.
3. Collective-choice arrangements: most individuals affected by the operational rules can participate in modifying the operational rules
4. Monitoring: monitors, who actively audit CPR conditions and appropriator behaviour, are accountable to the appropriators or are the appropriators.
5. Graduated sanctions: appropriators who violate operational rules are likely to be assigned graduated sanctions (depending on the seriousness and context of the offense) by other appropriators, by officials accountable to these appropriators, or by both.
6. Conflict resolution mechanisms: appropriators and their officials have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials.

7. Minimal recognition of the state for farmers to organise: the rights of appropriators to devise their own institutions are not challenged by external governmental authorities” (Ostrom, 1990, p. 90).

Given the fact that most farmer organisations in the case study areas were established less than ten years ago, it is too soon to speak of farmer organisations as long-enduring self-governed irrigation institutions. Consequently, an analysis of the irrigation management systems according to the design principles as mentioned above can only give an indication of the potential of these organisations. Without denying the relevance of these principles, they characterise the system without an analysis of the social and political struggles, or of the historical developments through which these features came into being.

Similarly critical remarks are made by other authors, which will be briefly addressed in section 2.7. Consequently, even though at times a cross-reference will be given to one of Ostrom’s design principles, the irrigation management system will be examined using a broader analytical framework. This research aims to explore the context within which farmer organisations operate, and how the social, economic and political struggles affect the outcome of their strategies.

Surprisingly, the game-theory models in the CPR literature suggest that irrigation systems are single-characteristic common pool resources, and that the individual behaviour of farmers can be predicted from this. There is hardly any reference to the multiple characteristics of the resource-base, let alone of the multiple

perceptions of the resource-characteristics⁸. The irrigation systems, which are neatly catalogued as common-pool resources, encompass private property (the privately owned paddy fields), common pool resources (water resources for irrigation and fishing purposes), state property (the headworks of the irrigation infrastructure), and perhaps even open-access resources (water resources for the purposes of bathing, laundry, and as a source of drinking water for cattle).

This corresponds to the opinion of Campbell et al., who argue that there is a ‘fair degree of misplaced optimism about common property resource management’ and reflects a vast number of case studies which show a breakdown of local institutions in the management of common pool resources⁹. According to them, the research on common pool resources starts off with simplistic classifications. It needs to move towards a more “in-depth understanding of each landscape unit or resource, paying more attention to spatial contexts, temporal contexts, including history, the micro-politics of resource use and transaction costs” (Campbell et al., 2001, p. 596).

That is why it is also necessary, in this research, to examine the individual behaviour from several perspectives, not focusing on individual behaviour purely from an irrigation perspective, but also to pay attention to livelihood strategies, social relationships and multiple identities. Any individual or group will have a wide range of social

⁸ Farmers perceive the irrigation infrastructure to be state property, whereas the government wants them to accept it as common property, see also the conclusions of Chapter 8.

⁹ Their analysis is based on case studies from social forestry. However, they frequently refer to CPR literature related to irrigation management systems.

identities or interests, which may be related to locality, social-cultural identity, gender, occupation, landholding, and personal loyalties (see also Moore, 1985, p. 4; Giddens, 1984). How this influences the strategic behaviour of individual farmers and their co-operation within the farmer organisation, will be discussed in later chapters.

2.6 Social capital

Eggertsson pointed out another ‘sore spot’ in the new institutionalism, the limited attention given to the evolution, emergence and decay of informal institutions, and how they interact with formal institutions. This criticism has much congruence with the criticism on the participation literature (see section 2.2). He states that:

“it is of the utmost importance to understand ... the extent to which informal institutions adjust to formal institutions; and the extent to which the stock of informal institutions will undermine specific public policy initiatives” (Eggertsson, 1997, p. 1192)

In response to this criticism, a new theory was formulated, emphasising the social context as a determinant of human and organisational behaviour. According to this theory, social relationships themselves can constitute ‘social capital’, which may be used by individuals to reduce risk, access services, obtain information and co-ordinate collective action (Rudd, 2000, p. 135). Coleman defined social capital as “the ability of people to work together for common purposes in groups and organisations” (Coleman, 1988, p.

95). Networks, shared norms and values, and trust are factors which facilitate co-operation and co-ordination (Putnam, et al. 1993; Coleman, 1988; and Uphoff, 2000). The networks for reciprocal exchange and social capital both act as nonmarket institutions to reduce transaction costs.

There is a remarkable similarity between the literature on social capital and the literature on institutions. For example, Uphoff distinguishes between structural and cognitive forms of social capital. Structural social capital includes “roles, rules, procedures and precedents, as well as social networks that establish ongoing patterns of social interaction” whereas cognitive forms of social capital are said to include “norms, values, attitudes and beliefs that predispose people to cooperate” (Uphoff, 2000, p. 1876).

Pretty and Ward distinguished four central features of social capital: (a) relationships of trust; (b) reciprocity and exchanges; (c) common rules¹⁰, norms and sanctions; and (d) connectedness, networks and groups (Pretty and Ward, 2001, p. 211). These aspects play a central role in explaining the strategies of farmers and groups of farmers in the farmer organisation, and the impact of particular strategies on the functioning of farmer organisations.

¹⁰ There is much more said about the relationship between rules and regular patterns of behaviour. Furthermore, several authors, including Bourdieu, cautioned against confusion between ‘rules’ as explanatory hypotheses (used in e.g. game theory), and rules as principles which really govern the practice of agents concerned (Bouveresse in Shusterman, 1999, p. 46).

Trust refers to the belief and confidence in other agents to behave as expected, despite uncertainties, risks and the possibility for them to act opportunistically (Lyon, 2000, p. 664). Reciprocal exchange refers to informally enforced agreements to give goods, services, information, or money in exchange for future compensation. It involves personalised and long-term exchange relationships, and proceeds according to unwritten, but well-understood, rules that specify the level and direction of transfers of goods and services (Kranton, 1996, p. 830). Norms define what actions are considered acceptable or unacceptable, and include customs of co-operation, reciprocity, avoiding deception, keeping verbal contracts and deciding on acceptable sanctions (Lyon, 2000, p. 665). Formal rules are those set out by authorities, such as through laws and regulations, while informal ones are those that individuals use to shape their own everyday behaviour (Pretty and Ward, 2001, p. 211). Finally, this research considers the dimension of the connections, interaction and co-operation within and between households, through informal networks or through social interaction in organisations.

Scott's view, shared by many, reveals that it is especially through these informal networks and social interactions that class structure is reproduced. In this respect it is important to refer to patron-client relationships, which – ironically enough - involve trust, reciprocal exchange, norms and sanctions, and networks. However, these relationships are not for the common benefit (the central focus of social capital literature) but primarily used for personal benefit. Patron-client relationships are understood as “a specific case of dyadic (two-person) ties involving a largely instrumental friendship in which an individual of higher socio-economic status (patron) uses his own

influence and resources to provide protection and / or benefits for a person of lower status (client) who, for his part, reciprocates by offering general support and assistance, including personal services to the patron”. (Scott, 1972, p. 92).

Empirical material confirms how important these patron-client relationships really are. Consequently, this will be a recurrent theme throughout the chapters on livelihood and exchange strategies, on formal strategies and on political strategies. Yet, it is important to emphasise that the exchange of resources and favours is not always based on economic calculation, but is also based on the structure of kinship obligations and friendly exchanges. Or, in the words of Bourdieu:

“The exchange of gifts, conceived as a paradigm of the economy of symbolic goods, is opposed to the equivalent exchanges of the economic economy as long as its basis is not a calculating subject, but rather an agent socially disposed to enter, without intention or calculation, into the game of exchange” (Bourdieu, 1998, p. 98).

At present, the operationalisation of social capital is still in its initial stage. The relationship between trust, shared norms and reciprocity is obvious, but unclear and difficult to trace. Furthermore, social capital is likely to depend upon the purpose for which it might be used, and the actors involved. For example, the willingness of villagers to participate for several days in the desilting a tank may be much lower than their willingness to contribute voluntary labour to a funeral ceremony.

Additionally, it is not at all clear to what extent social capital is susceptible to internal conflicts and incidents. Social capital is assumed to be increasing with its actual use, yet the question remains how durable social capital is under the influence of particular policies, economic changes and external shocks. Uphoff and Wijeyaratna are rather optimistic when – based on a case study of Gal Oya in Sri Lanka - they conclude that:

“where people hold complementary norms, values, attitudes and beliefs predisposing them to co-operation and mutual assistance, a valuable set of assets can be created by joint action that is not only productive in the present, but also in the future.” (Uphoff and Wijeyaratna, 2000, p. 1885).

The question is what happens if there is no common understanding of values, attitudes and beliefs, if – instead – there is clash of norms, values, attitudes and beliefs. Obviously, in the conceptualisation of the harmonious traditional rural society, this is unlikely to be found. Yet, the empirical material from the case studies indicates otherwise, as will be discussed in later chapters.

Furthermore, shared norms, values and visions can also be counterproductive. One only has to think of particular gender ideologies, which may effectively prevent women from active participation in collective management and decision-making. One of the few authors who refers to the possibility that social capital may be counterproductive is Robbins, who explores corruption “as a system of normalized rules, transformed from legal authority, patterned around existing inequalities and cemented through co-operation and

trust” and demonstrates that corrupt forms of social capital follow existing lines of caste, class and gendered power and reproduce persistent elements of local policies (Robbins, 2000, p. 424). Although far more pessimistic than most adherents to the social capital literature, this vision gives a significant counterweight to the view that social capital can be influenced and strengthened through interventions.

It may be clear from all the critical remarks on social capital that there is no intention to draw substantially from this body of literature. However, as indicated earlier, some of the terminology used in the social capital literature is frequently used in this thesis, in particular the concepts of trust, reciprocity and exchange, common rules and norms, and networks and groups.

2.7 Political geography and political economy

The publications on irrigation management, on CRP theory, and on social capital are strongly criticised by Mosse (Mosse, 1999, p. 324-329). According to him, contemporary collective action theory separates village resource management from wider political relationships and the historical context. He rightfully rejects the narrow definition of economic interest, utility and value, and of the exclusion of a wider range of political interests involved in the management of tanks as common village resources. This criticism is summarised as follows:

“In a sense, its ‘design principles’ and its idioms of ‘individual strategy’ or ‘social capital’ are as static, ahistorical and apolitical as the colonial idioms of ‘tradition’ and ‘custom’. For example, the economic notion of social relations as ‘capital’ which can be carefully tapped, invested or transferred to meet development ends (or wasted) ..., implies a static store of consensual cultural practices which comes close to colonial ideas of ‘tradition’“(Mosse, 1999, p. 325).

Irrigation management and the strategic behaviour of farmers cannot be isolated from social and political struggles and from strategic alliances between farmers and government officials or politicians. This is the clear message from publications which focus on spatialised networks of politics and power, on social and political struggles at multiple scales, and on the relationship between political networks and the local political economy (e.g. Das, 1998; Jones, 1998; MacLeod & Goodwin 1999).

The strategies of local actors are likely to be influenced by the relationships between state institutions and by social and economic strategies of state and non-state actors within the political geography (Jeffrey, 2000, p.1014). This is why, in chapter 5, much attention will be paid to the institutional landscape which has been shaped by historical and political developments. Individual farmers, particular categories of farmers, and farmer organisations can potentially actively use the features of the electoral system and the powers associated with political actors to improve their position or to improve their access to resources. This is strongly confirmed by the research material, as will be shown throughout chapters 8 and 9.

2.8 Human agency, strategic behaviour, power relationships, structure

Strategic behaviour is instrumental in achieving particular objectives, or in realising particular outcomes¹¹. Strategies refer to purposeful action, which can be adjusted to the situational and temporal contexts. With reference to Callon, Mollinga refers to four types of resources which can be employed to achieve one's ends; texts, artefacts, people and money (Mollinga, 1998, p. 21). It is important to emphasise that time and space can also be used as 'resources' in strategic conduct, as will be shown in the chapter on political strategies (chapter 9).

The notion of strategic action is founded upon the concept of 'human agency' which plays an important role in the discussion of human behaviour. It refers to the concept of the individual as an active agent and to the ability to define one's own goals and to act upon them within the options available for action¹². These options are determined by one's position in relation to others in the socio-cultural, political and economic context. It can take the form of decision-making, negotiation, deception and manipulation, subversion and resistance (Kabeer, 1999, p. 438) and is directly related to the concept of power.

¹¹ Not all behaviour referred to in this thesis can be characterised as strategic conduct. For example, being absent from collective maintenance activities is not necessarily the result of free-rider behaviour, it may also be the result of illness, temporary employment or other obligations.

¹² This concept is related to a broader discussion in social theory, where one can observe a contrast between voluntaristic and deterministic types of theory, the dualism between the individual and society, or between subject and object (Giddens, 1979, p. 4). It is further important to notice that human agency is not always intentional or based on conscious knowledge.

Giddens refers to power relations as regularised relationships of autonomy and dependency, and defines power as “the capability of actors to secure outcomes where the realisation of these outcomes depends on the agency of others” (Giddens, 1979, p. 93).

Human agency is also directly related to structures. Giddens emphasised that “structures are both the medium and the outcome of the reproduction of practices” (Giddens, 1979, p. 5). Structures thus not only put constraints on human agency, they also enable human agency. Sewell emphasises the multiplicity of structures when he states that “societies are based on practices that derive from many distinct structures, which exist at different levels, operate in different modalities, and are themselves based on widely varying types and quantities of resources” (Sewell, 1992, p. 16). He indicates that structures tend to vary significantly between different institutional spheres (e.g. kinship structures, religious structures, productive structures), but also that there is important variation within a given sphere.

Here we enter the theoretical discussion on institutions, which shows many similarities with Sewell’s discussion on structure. There is a wide range of definitions of (formal and informal) institutions, which can view institutions either as norms, as rules, as roles or as shared strategies. In a discussion on the grammar of institutions, Crawford and Ostrom define institutions as “enduring regularities of human action in situations structured by rules, norms, and shared strategies, as well as by the physical world. The rules, norms and shared strategies are constituted by human interaction in frequently occurring or repetitive situations” (Crawford and Ostrom, 1995, p. 582).

In this research, a distinction will be made between formal institutions and informal institutions. Formal institutions, as employed in this research, refers to ‘enduring regularities of human action’ which are constituted in economic, organisational, political, regulatory and judicial structures, policies, programmes, laws, rules, sanctions, procedures, decision-making processes and policy or budget instruments, property rights, contracts, and market arrangements. Informal institutions also refer to ‘enduring regularities of human action’, but those which are constituted in unwritten rules and informal roles, norms and values, social networks, reciprocal exchange, daily practices, social interaction, and informal sanctions.

2.9 From critique to an analytical framework

The literature on irrigation management has yet to provide a clear-cut answer to the question as to how people’s behaviour (e.g. their participation in formal meetings or their co-operation) is shaped by the co-existence of, and interaction between, formal and informal institutions in irrigation management. The literature on human agency and human behaviour provides some indications of this, but this has yet to be linked to the vulnerability of agents.

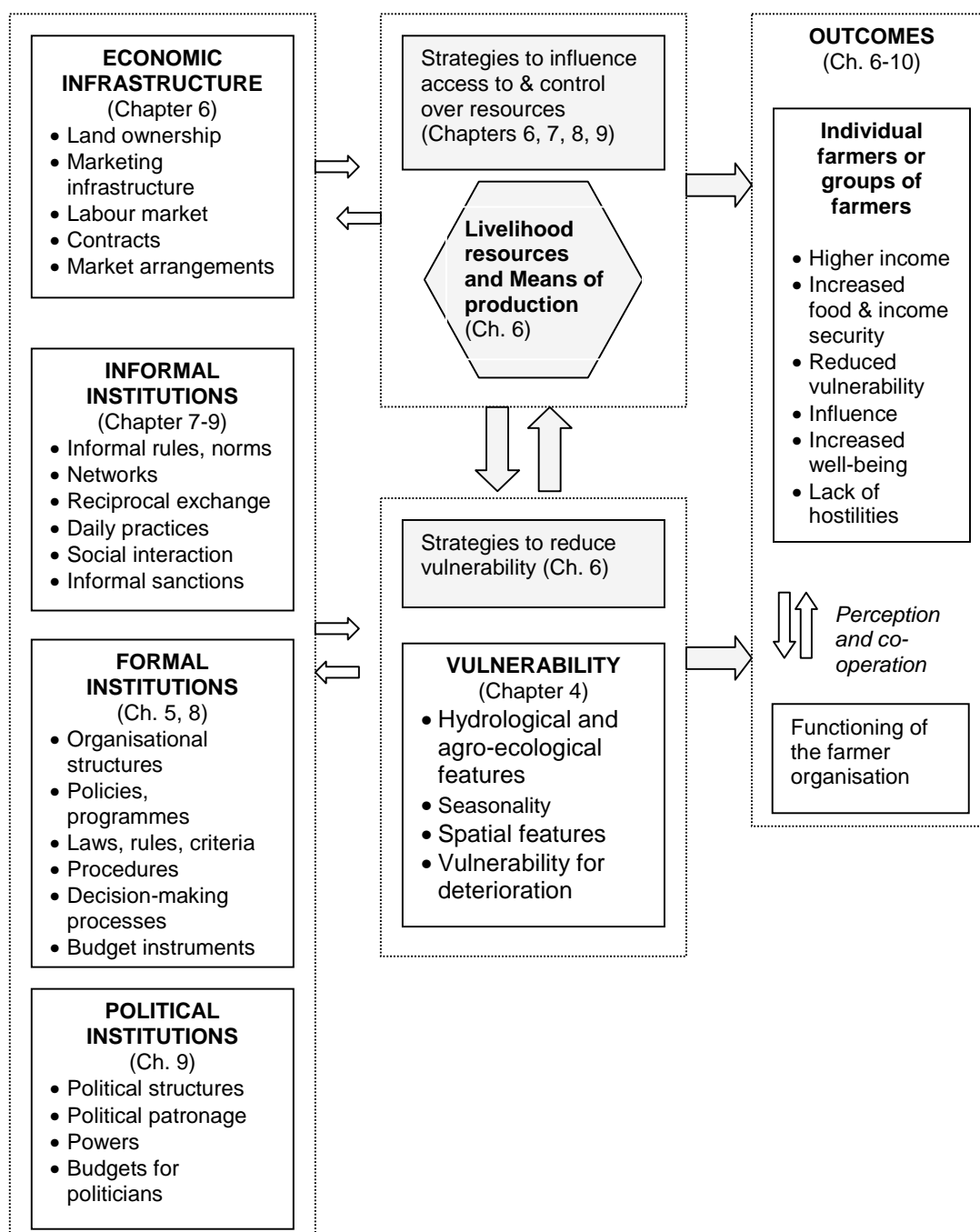
Several authors have pointed out that one of the conditions for successful common property regimes is a high dependency of users on the resource (Adger and Luttrell, 2000, p. 75-89). Much of the literature assumes that this dependency is more or less known and constant over time. In an area with unpredictable rainfall and large

seasonal fluctuations, it might be difficult to state how strong this dependency is, and it may vary over time.

One of the analytical frameworks which take this vulnerability into account is the Sustainable Livelihoods Framework. According to this framework, the strategies of people are influenced by the range of resources available to them, by their own priorities, by seasonality and insecurity while their *options* are determined by policies, institutions and processes. Based on the discussion in previous sections, Figure 2.1 (adapted from Farrington et al., 1999, p. 3) is somewhat re-arranged and modified for the purpose of this research. The livelihood resources positioned in the hexagon include physical resources, labour and employment, agricultural inputs, financial resources, land resources, water resources, and machinery.

The analysis in this research will focus on strategies, which are influenced by seasonality and insecurity (chapter 4), by the range of livelihood resources available to farmers (chapter 6); while their options are determined by the economic infrastructure (chapter 6), by informal institutions (chapter 7), by formal institutions (chapter 5 and 8), and by the features of the political system (chapter 9). Due to the blurred boundaries between strategies and spheres, some examples used in one particular chapter, might well have been used in other chapters as well. Finally, based on the sequence of information provided in the chapters, it will only be in chapter 9 (section 9.2), that a complete view can be given of the flow of resources and interactions between the four main groups of actors: farmers, farmer representatives, government officials and politicians.

Figure 2.1: Sustainable livelihoods framework



2.10 Research questions and structure

The main research question to be answered in this thesis is:

How do farmers adapt their strategies to pursue their interests in a changing institutional environment; and how can the functioning of the farmer organisation be understood in terms of these strategies and the outcome of these strategies, for specific categories of farmers?

There is a strong tendency in both the institutional-economic literature and the CPR literature to explain farmers' behaviour from a rule-oriented background, with an emphasis on formal structures, design principles, formal rules, transaction costs and procedures. Although the relevance of social networks and informal institutions is acknowledged, in particular in the literature on social capital, the knowledge with regard to the impact of these social networks and informal institutions on the strategies of farmers in irrigation management is still limited.

Therefore, one of the challenges to be addressed in this study is to provide insights in the complexity of the above-mentioned relationships in irrigation management in the case study areas. Furthermore, in concordance with the critical remarks of Campbell (section 2.5) and Mosse (section 2.7), this study aims to position the strategies of farmers in the socio-economic and political landscape of minor irrigation systems. The first part of the main research question is thus not merely a question of how farmers adapt their strategies in the institutional environment. It also aims to achieve an understanding of how farmers' strategies are embedded in wider social and political

networks. The second part of the research question aims at reaching an understanding of the functioning of farmer organisations in terms of these strategies and the outcome of these strategies for particular categories of farmers. Following a brief overview of the research methodology in chapter 3, the following issues will be addressed in Chapters 4 to 10:

Chapter 4: Rajarata: King's country

This chapter deals with the question how the technical characteristics of the minor irrigation systems in the case study areas, and the agro-ecological features, affect the irrigation management system. To answer this question, it is first necessary to describe the technical characteristics of the given irrigation system and the agro-ecological features, and how the irrigation management system operates.

Chapter 5: The institutional setting

The key issue in this chapter is to determine the features of the institutional environment in which farmers and farmer organisations operate. It starts with a description of the colonial setting and of the relevant changes since independence, which have affected the current institutional structures. It then provides an overview of the current legal-institutional setting.

Chapter 6: Livelihood strategies

This chapter focuses on livelihood strategies employed by the farmers in the case study areas and questions how these strategies can be understood in relation to the seasonal vulnerability and the unpredictability of income-generation through cultivation. The chapter

will conclude with a section on the impact of government policies on the strategies of the rural population in dealing with this vulnerability.

Chapter 7: Exchange strategies and co-operation

The main focus of this chapter is to determine how co-operation and collective action in relation to cultivation and irrigation management are influenced by social and economic relationships, by relationships of trust and distrust, by informal norms, and unwritten rules and practices. In other words, it concentrates on the issue of how exchange strategies and co-operation can be understood within the broader socio-cultural context. To help answer this question, the chapter starts with a description of the socio-cultural environment in which farmers and farmer organisations operate.

Chapter 8: Formal strategies

This chapter focuses on the question as to which formal strategies are used by farmers and farmer organisations to pursue their interests. Furthermore, it raises the question as to how these strategies should be understood from the broader institutional – legal context, and from the local socio-economic context. In answering these two questions, this chapter concentrates on the strategic use of options for participation in the decision-making process within the farmer organisation, on the strategic use of formal procedures for tank rehabilitation, and on strategies within the legal domain.

Chapter 9: Political strategies

The main question answered in this chapter is which strategies are employed by farmers and farmer organisations to pursue their interests through political intervention. In order to understand these strategies

from a broader political context, the chapter starts with a description of the political environment in which farmers and farmer organisations operate.

Chapter 10: Conclusions and Reflections

This chapter considers the second part of the main research question, and raises the question how the functioning of the farmer organisation can be understood in terms of these strategies, and the outcomes for specific groups of farmers.

2.11 Different categories, scales and units of analysis

In answering these questions, this research uses three units of analysis: (a) farmers and farming households within the farmer organisation, (b) categories of farmers, within the farming community, with similar interests or similar livelihood strategies and (c) farmer organisations. The categories of farming households will be developed in detail in chapter 6. A household is understood here as a unit of one or two parents and their children who operate as an economic unit.

It is important to emphasise that, although such a categorisation is useful to indicate farmers' access to, and control over, resources (chapter 6) and to indicate their access to, and participation in, the meetings of the farmer organisation (chapter 8), it also has some disadvantages. For example, in relation to co-operation between households, it makes much more sense to look at farmers on the basis of kinship or the location of their land, as will be demonstrated in

chapter 7. Similarly, when looking at the distribution and the allocation of resources which are distributed by the state, it proves to be more useful to make a categorisation based on political preference (chapter 9). In other words, the categories are rather fluid and dissimilar for different purposes.

Contrary to the CPR literature, this research holds the view that the behaviour of individual farmers and groups of farmers cannot easily be predicted or calculated. This research focuses on these strategies that are primarily motivated by one's access to and control over resources at a certain moment of time (during the course of this research), one's socio-economic position towards other villagers, and one's status (as landowner/ tenant). This, of course, has only limited explanatory value. The interests and strategic behaviour of farmers are also influenced by other factors such as age, family composition, personal preferences, skills, gender, level of education and political preference. Furthermore, although this research looks at strategies of farmers and farming households, it does not refer explicitly to intra-household relationships and strategies¹³.

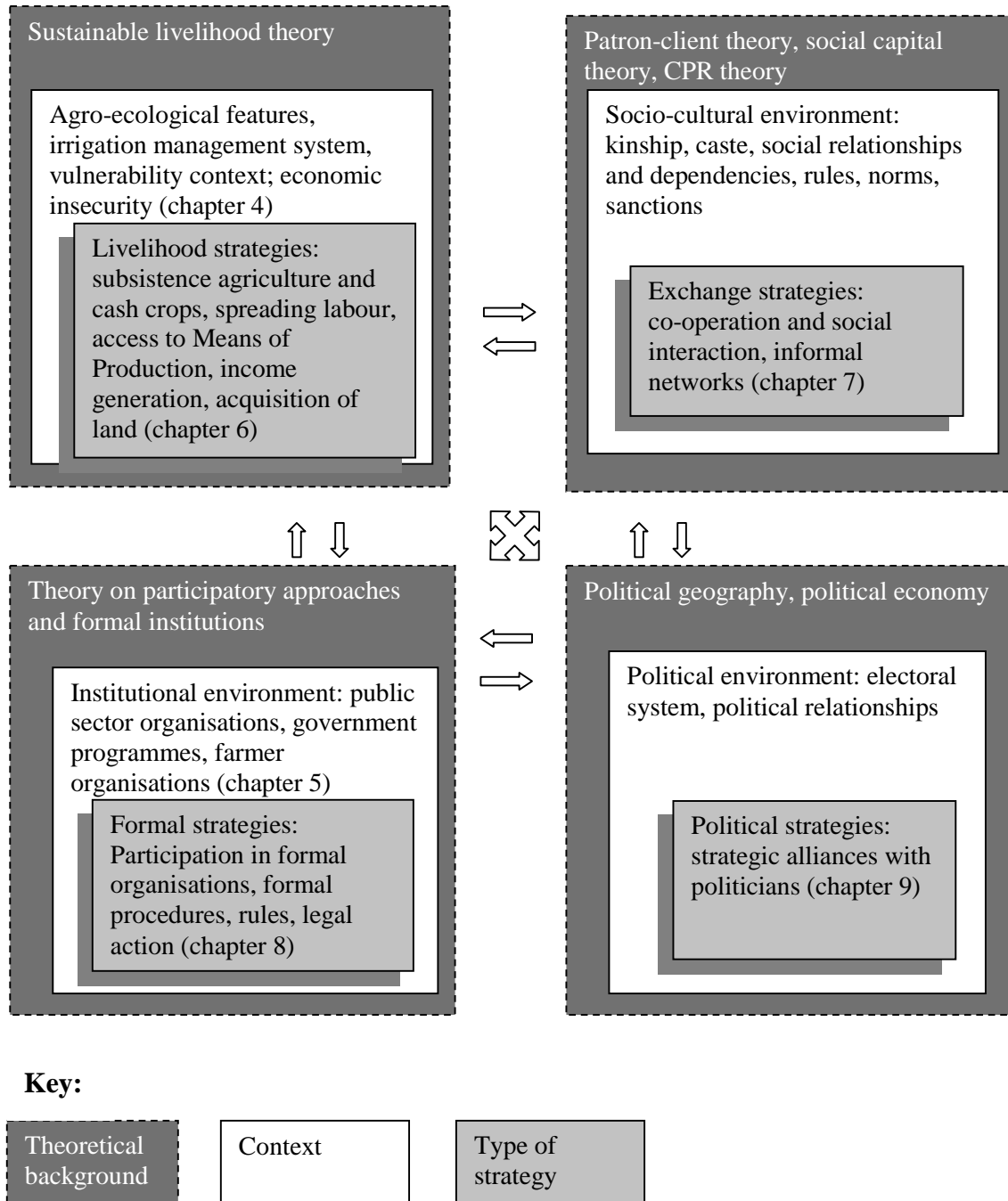
As with the previous observation on the categorisation of farmers, it would be artificial to limit the research to one particular geographical scale of analysis, but in so doing we assume that the actions of farmers do not cross the relevant administrative boundaries. The geographical scales of analysis are thus:

¹³ For a more detailed gender analysis, one should refer to a previous study on female participation in the minor irrigation systems of Sri Lanka (van der Molen, 2001).

- Village (for the farmer organisation and socio-cultural environment)
- Village and nearby town (for the marketing infrastructure)
- Village, neighbouring villages, and nearby areas which fall within one of the schemes of the Mahaweli Development Programme (day-labour)
- Division and district (for the bureaucratic environment)
- Electoral Districts, Province, Parliament (for the political environment)
- District and national courts (for the legal environment)

The figure below indicates the useful theories and concepts which help to explain the relationships between strategy and context.

Figure 2.2: Theory and concepts used to explain the relationship between strategy and context



Ch.3 Methodology

"Errors, stumblings, and surprises are particularly likely to occur – before our workspace becomes routine. Qualitative researchers are explorers making "first contact" with alien civilisations, courting experiences through observing diverse times and places, later reanalysing and rewriting, hoping for heightened awareness to ignite insight. But this insight is not a treasure at the end of the road for the Princes of Serendip¹; it is one that unfolds with every twist and turn in the road." (Fine, G.A; Deegan, J.G.; in: QSE, 1996, vol. 9, no. 4, p. 438).

The research design is based on qualitative research and triangulation, and encompasses a combination of literature study and multi-site case studies in the field, including historical records, literature and ethnography. The research strategy can be best described as 'grounded theory', which is a general methodology used for developing theory that is grounded in, or emerges from, data systematically gathered and analysed (Strauss and Corbin, in: Denzin and Lincoln, 1998, p. 158; Glaser and Strauss, 1967). The theory emerges during the research from empirical data through reiterative processes of interaction between theory and empirical data from case studies.

1 'Serendip' originates from a Hindustani name for Sri Lanka, Saradip, meaning 'Golden Island' (Fine, G.A. and Deegan, J.G. in: QSE, 1996, vol. 9, no. 4, p. 446).

3.1 Triangulation of quantitative and qualitative research methods

One of the important characteristics of qualitative research is the attention given to the social context. Miller and Dingwall give a good summary of the features and value of qualitative research, when they state that:

“Perhaps the most fundamental assumption ...is that qualitative research is an empirical enterprise. It involves the close study of everyday life in diverse social contexts. Two major objectives of qualitative research are to describe and analyse both the processes through which social realities are constructed, and the social relationships through which people are connected to one another. It is within, and through, these relationships and processes that organisations, institutions, culture and society emerge and are sustained” (Miller and Dingwall, 1997, p. 3):

A study on the strategies of farmers and farmer organisations cannot ignore the positioning of actors within their social settings if it intends to understand the relationships and interactions between actors, and the processes through which actors attempt to accomplish their objectives and to pursue their interests (Giddens, 1984, pp. 288-293). An understanding of the interests, strategies and behaviour of actors requires first of all an understanding of people’s identity, their roles and responsibilities in terms of inter-household relationships, gender relationships, kinship, class formation and caste.

An important characteristic of qualitative research is the use of multiple methods. In this research, qualitative techniques for data collection and analysis will be combined with analysis from

quantitative techniques, although the qualitative methods predominate. This combination of methods is called triangulation. Similarly, one can speak of triangulation of diverse data sources: data collected at different places, sources, times, and at different levels of analysis. Although the triangulation strategy is not without its shortcomings (see e.g. Miller and Dingwall, 1997), it can be used to illuminate certain elements of a context, and to enrich the understanding by allowing for new or deeper dimensions to emerge. For example, by including more in-depth research on gender-specific aspects - moving beyond the original research question - valuable information was disclosed about land tenure and marriage patterns. These patterns were found to have consequences for women's access to membership of the local farmer organisation and their participation in it.

Although the research techniques in this research are predominantly of a qualitative nature, some quantitative techniques and methods are also used. The data collection techniques used in this research are:

- a. Documentation, such as the minutes of meetings, administrative documents, studies, legislation, acts and ordinances, articles;
- b. Archival reports and records, organisational diagrams, maps, graphs, meteorological data, statistics from surveys, historical records;
- c. Interviews: structured (SI), semi-structured (SSI) and unstructured (or in-depth) interviews (UI);
- d. direct observation and participatory observation (agricultural activities; shramadana; collecting water; washing and bathing);
- e. Participatory Rural Appraisal (PRA) techniques, participatory mapping; group discussion.

Table 3.1 gives an overview of the data-collection techniques used. Given the large amount of collected material, use has been made of N5, a computer programme (from the NUD*IST series), for qualitative data analysis. All searches and coding have been executed using this programme.

Table 3.1: Overview of data-collection techniques

<i>Technical characteristics / spatial features</i>	<i>Agro-ecological features / vulnerability</i>	<i>(Functioning) Irrigation management system</i>	<i>Livelihood resources / Means of Production</i>	<i>Positioning of farmer households</i>	<i>Formal institutions, law, policies</i>	<i>Informal institutions</i>	<i>Strategies</i>
Participatory mapping of irrigation infrastructure and CA	Electronic database at meteorology department	Direct and participatory Observation	Shareholder-list FO/ land registration-list ASC	Standardised questions: name, age, education, family composition, marital status, land, occupation, FO membership	Acts, Ordinances, Legislative enactments, Constitution	Interviews (SSI, UI)	Interviews (SSI, UI, group interviews)
Technical plan surveys ASD/ ID	Transect walks	Interviews (SI, SSI, UI)	Interviews (SI, SSI, UI)	Outline of kinship relationships of office-bearers	Policy documents	Observation	Observation
Photos	Direct observation	Attending meetings	Direct observation	Unstructured interviews	Project documents	Secondary information	Court files
Technical information sheets	Time-lines by respondents	Group discussion	Information Grama Niladhari		Organisational diagrams, Flowcharts		Tank files (archival material)
Structured interviews	Secondary literature	Information FO & DO			Reports, Studies		Secondary information
Artefacts	SSI						
Transect walks							

3.2 The decision to use case studies and the selection of case studies

Some authors (e.g. Yin, 1994; Eckstein, 1975) suggest that the case study approach is especially appropriate when the research: (a) focuses on contemporary processes; (b) relates to contemporary phenomena within its context; (c) aims at understanding complex social relationships and processes; and (d) employs multiple sources of evidence.

The problem definition and research objectives of this thesis match all four criteria, and the case study approach was therefore chosen as a suitable and feasible research method. The research strategy in this research is based on the use of multiple case studies. The criteria for case-study selection were:

- Small-scale irrigation systems with a command area below 80 ha;
- Old settlements (excluding Mahaweli settlements or colonies);
- Areas dominated by paddy cultivation and chena cultivation;
- Areas with tanks which receive water only from rainfall and runoff from the catchment areas.

The choice to study small-scale irrigation systems - as compared to areas under major irrigation schemes, many of which have a more constant supply of water - is based on the frequent occurrence of severe water scarcity and unpredictability of rainfall in those areas.

3.3 The relationship between theory and empirical data

The previous chapter revealed that the problem definition encompasses many links to theories, for it deals not only with concepts such as collective action, common property, equity, participation and legal pluralism but also draws from theories on political economy and political geography, anthropology, sociology, game theory and new institutionalism, and social capital theory. The conceptual layers as described above, in combination with a strong emphasis on patterns of action and interaction and processes, closely correspond to the conditions mentioned for applying grounded theoretical methodology. According to Denzin and Lincoln, *“grounded theory methodology is designed to guide researches in producing theory that is ‘conceptually dense’ – that is, with many conceptual relations”* (Denzin and Lincoln, 1998, vol. 2, p. 169).

The relationship between the case studies and theory, as used in this research, also demonstrates features of “heuristic case studies” (Eckstein, 1975) or “controlled comparison” (Diesing, 1971; George, 1979). The explanation which is deduced for the first case, and the theoretical construct which is then based on this case, will be confronted with another case, and this might suggest ways of amending and improving the construct to achieve better case interpretation. The explanation and construct is not only used to refine explanations and constructs for the succeeding case, but also for refinement of the same case in a later phase.

This continual refinement of explanations and constructs, and the process of reiteration between empirical data and theory, eventually

resulted in a reformulation of the research question. The initial research question focused on the potential contribution of traditional forms and strategies of water management to the effectiveness of water resource management systems in the contemporary setting. Based on the growing awareness that the effectiveness of irrigation management systems is equally determined by strategies that are based on consolidation of power, the use of political relationships or the use of illegitimate means, the research question was reformulated.

3.4 Validity, reliability, objectivity

Conventional positivist and post-positivist social science applies four criteria to assess the quality of social science. These are internal validity, the degree to which findings correctly map the phenomenon in question; external validity, the generalisability of the findings to other similar settings; reliability, the extent to which findings can be replicated by another inquirer; and objectivity, the extent to which findings are free from bias (Denzin and Lincoln, 1998, p. 186). Although the conceptual framework is not purely positivist, but has several features similar to critical theory² and social constructivism (see next section), some comments are useful with regard to these four criteria.

² This paradigm incorporates the positioning of inquiry in relation to the historical setting, and in relation to social, political, cultural, economic, ethnic and gender structures which constrain the emancipation (or empowerment) of suppressed groups (Denzin and Lincoln, 1998, p. 205-213).

To enhance the internal validity, the choice has been made to repeat and compare the observations systematically across different cascades of tanks (see chapter 4 for an explanation of cascades). By repeatedly visiting and living in the various case study areas at different periods during the cultivation season, two important varying conditions (seasonality and space) have been covered to enhance observational consistency (Lofland and Lofland, 1984). A continuous effort was made to crosscheck information with other respondents, and - if possible - by using different data collection techniques³.

Many authors (e.g. Feagin, Orum and Sjoberg, 1991) indicated the tension between understanding one or a few cases in detail, and the degree to which findings can be generalised to other similar settings (external validity). This research focuses primarily on processes rather than outcomes. It tries to understand the processes at work, while the particularities and outcomes may be different when comparing one location to another. Furthermore, it is complementary to some other studies which explicitly refer to strategies of farmers and government officials, but which were executed in a different geographical area (the Mahaweli area). This facilitates more accurate statements on the generalisability of the research findings. The extent to which the research findings can be replicated or reproduced by another inquirer is limited by the use of a grounded-theory approach. The final result of the refinement of interview questions over time, is documented in a compilation of semi-structured interviews (august 1999).

³ The reliability of quantitative data is rather limited: there was a high degree of inconsistency on numbers from various sources (in particular with regard to land ownership).

3.5 Taking off the straitjacket

Social constructivism or the ‘social construction of technology’ emphasises that physical objects are not determined by nature and natural conditions alone, but that they are the result of negotiations between social groups. Similarly, by linking validation to the ‘community of scientists’ and to a particular period,

“validity becomes a historically embedded social construction appropriated by a ‘community of scientists’ who decide that certain outstanding examples of research will guide further work by the community in considering what is and what is not trustworthy” (Scheurich referring to Mishler [1990, p. 422] in QSE, 1996, p. 51).

Postpositivists such as Mishler (1990) do not contest the essential meaning of validity, being trustworthiness, quality and legitimacy. Their contention is that validity is used as a boundary, separating acceptable research (acceptable to particular community) from unacceptable research, splitting emancipatory research from oppressive research (Scheurich, 1996, p. 53). Although it goes beyond the purpose of describing the methodology, in this chapter, to discuss this extensively, the plea for “the willingness to hold open an intersubjective space in which difference can unfold in its particularity” does contain some valuable points. This requires a much stronger injunction to listen, to allow for particular deviations from the pre-formulated framework, with assumptions, concepts, categories, theories and interpretation modes. However, it also requires trust, and the willingness of others to tell their stories, or to provide confidential information.

Trust and kinship are two items which are mentioned repeatedly in this thesis. It is important to emphasise that trust and kinship are more than just ‘topics’ or ‘factors’ in an analytical framework. By repeatedly visiting and staying with families in the village or near the village, over time I was able to gain trust. Having a basic command of the language made communication easier, which not only had advantages in doing fieldwork, but made life much more pleasant. My ‘image’ as ‘*suddu noona*’ (white lady), was usually enhanced to ‘*duwe*’ (daughter), ‘*nangi*’ (younger sister), or ‘*akka*’ (elder sister). Having a basic command of the language facilitated the use of humour and laughter, which is sometimes more valuable than any question.

3.6 Allowing serendipity to enter the island of Serendip

By allowing space for deviation, and the appreciation of the unknown, as advocated by Scheurich, another opening is provided, an opening towards unplanned events, which can potentially yield meaningful and interesting discoveries, also referred to as ‘serendipity’. In this research, a number of instances can be described under the heading of serendipity (although not with miraculous consequences). One of such occasions provided valuable additional historical information on some of the selected tanks (see box 3.1).

Box 3.1: Serendipity

One example of serendipity occurred when I decided to attend a pre-cultivation meeting in one of the villages. This meeting had to be postponed due to the absence of one or two relevant officials. Nevertheless, I decided to stay around for half an hour to speak to some others present there, and to wait for the Divisional Officer to arrive to speak to him as well. When he finally arrived, it was obvious that he was in a hurry to go on to the next meeting. He mumbled something about tank files at the office, although it remained unclear at that particular moment what he meant by 'tank files'. I asked him whether it would be possible to meet at the office the next day (for I intended to move on to the next case study area two days later). Although the next day was a Sunday, he agreed to meet me at the office.

On arrival the next day, he opened the 'office' in which he had stored the tank files. The room was filled with stacks of dusty files, bound together with strings, piled on the floor against the walls. The files had obviously been damaged by the humid conditions and probably by mice, who might have considered the files to be either tasty or a valuable addition to their diet. In this small office in quite a remote area, the Divisional Officer proved to be in the possession of hundreds of tank files from all over Anuradhapura District, containing much of the written communication between farmers, traditional village irrigation headmen and local governmental authorities. The oldest files dated back to 1895 under British administration. The files revealed information about requests, conflicts, nomination of officials, and communications concerning rehabilitation. The existence of such files was unknown in the area, even among other divisional officers and among officials within the district court. Since the district court only kept files in their archives for five years, the availability of information regarding conflicts was very limited from that source. The 'discovery' of those tank files thus proved to be a very fortunate moment in terms of the collection of data.

Ch. 4 Rajarata: Land of the kings

*“Fifteen centuries before the Norman conquest of England, there developed from a small settlement effected by the early descendants of the Sinhalese, a mighty city including its gardens the size of modern London. It stood in the “King’s Country” as the North-Central regions of Sri Lanka came to be called...”*¹
(Brohier, 1998, p. xv).

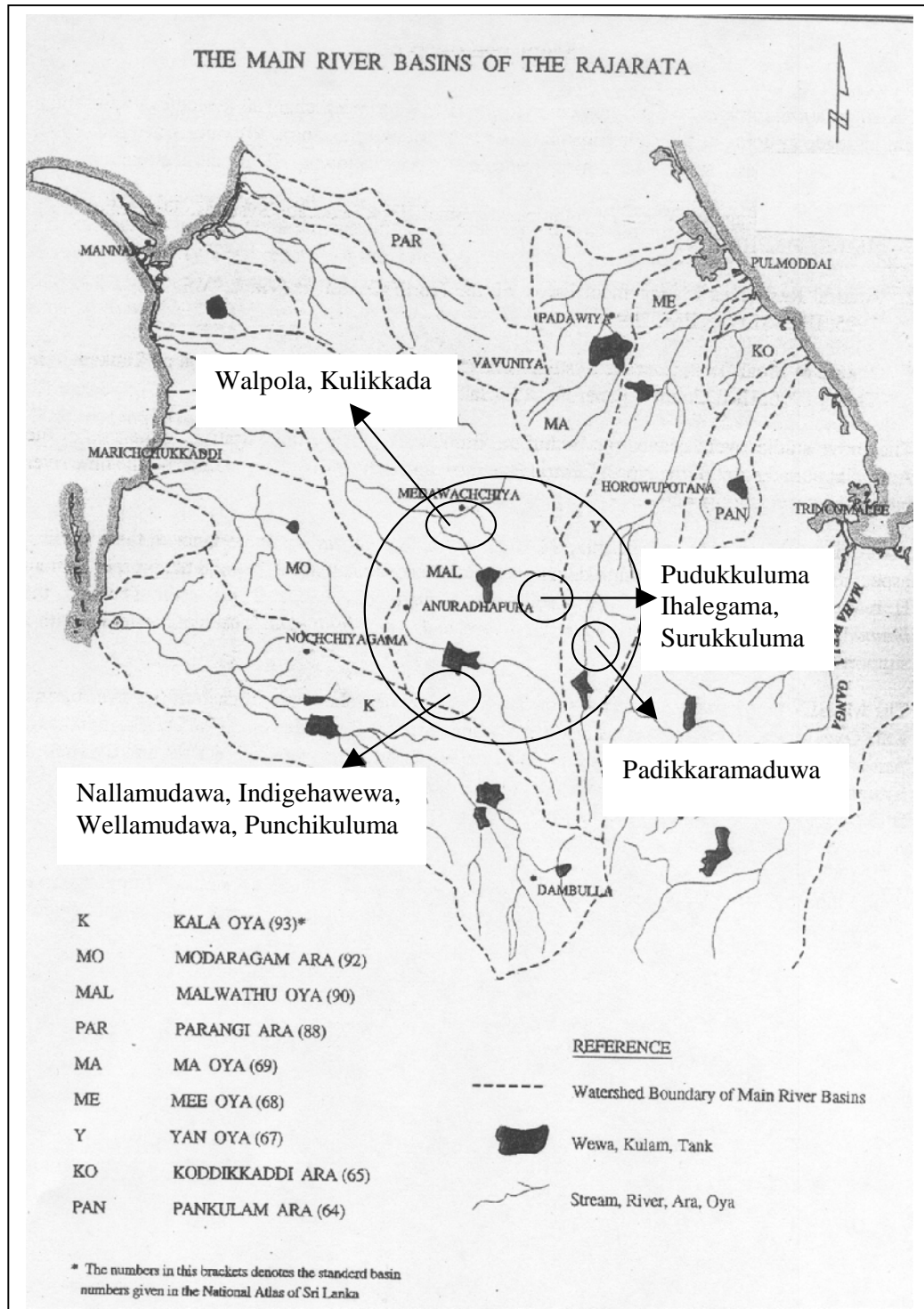
Rajarata: land of kings. It is legendary for its stupas, palaces, Buddhist monasteries, and its ancient irrigation infrastructure. Anuradhapura is at the heart of Rajarata, and located in the dry zone, close to the case study areas. Anuradhapura District covers only part of Rajarata, but contains all of the case study areas. This chapter considers the implications of the technical characteristics of the minor irrigation systems in the case study areas and the agro-ecological features for irrigation management.

4.1 Location and history of the tanks

Rajarata encompasses the whole area occupied by the river basins of the Kala Oya, Modaragam Ara, Malwathu Oya, Parangi Ara, Ma Oya, Mee Oya, Yan Oya, Koddikkaddi Ara and Pankulam Ara (see figure 4.1). It extends beyond the boundaries of the Anuradhapura District in the North-Central Province.

¹ This and the next quotation are examples of the glorification of the ancient Sinhalese civilisation (see 2.4).

Figure 4.1: Main river basins of Rajarata



Source: Panabokke, 1998, p. 2; scale 1: 1,663,000

Anuradhapura District is characterised by a large number of water reservoirs, referred to as ‘tanks’², which have been used for centuries for both irrigation and domestic purposes. In “*The history of Sri Lanka*”, K.M. de Silva comments that:

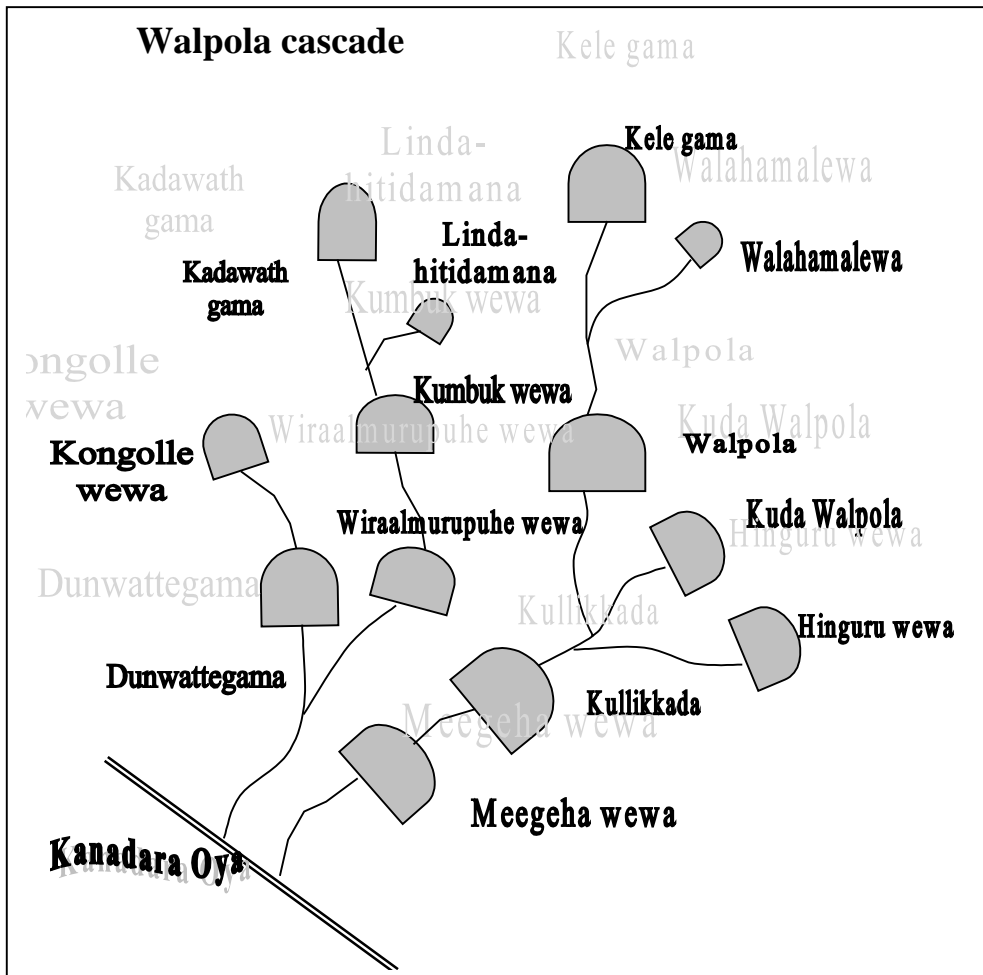
“the most distinctive achievement of the people of the Anuradhapura Kingdom, was their masterly organisation and maintenance of an irrigation network [...] by the 1st century AD, large scale irrigation works were built with an amazing knowledge of hydraulic principles” (Silva, 1981, p. 27).

The total number of minor (with a command area below 80 hectares), medium (80-400 ha) and major tanks (over 400 ha) in the entire Rajarata area is estimated as 5,447. In Anuradhapura district, which is part of Rajarata, the total number of working tanks with a command area below 80 hectares is estimated at approximately 1,870 plus approximately 1,170 abandoned tanks.

90% of the small tanks in Rajarata are clustered into cascades (Panabokke, 1998, p. 21). A cascade is a chain of storage reservoirs (tanks), which are interconnected along the same watercourse within a meso-watershed. Below is a diagram of the cascade which includes Walpola. Rainwater and run-off water from the catchment area are the two main water sources for the minor tanks.

² - wewa and –kuluma are the Sinhalese and Tamil words for ‘tank’.

Figure 4.2: Sketch of Walpola cascade



Source: participatory mapping. Not to scale.

The tanks in the case studies areas are clustered in such cascades and located in the Anuradhapura District. These include Nallamudawa, Indigehawewa, Wellamudawa and Punchikuluma (south of Anuradhapura), Walpola and Kulikkada (south-west of Medawachchiya), Padikkaramaduwa (north-east of Huruluwewa), Ihalegama, Pudukkuluma and Surukkuluma (south-east of Mihintale).

Generally, there is no water flow between the small tanks within the cascades in the dry seasons, between May and October, and from Mid-February to early April, which is at the end of the main cultivation season (see also Panabokke, 1998, p. 20).

Some of the tanks in these villages can be dated back to ‘ancient kings’ time’ between the 1st century BC and 10th Century A.D. The tanks Kodarikuluma, Kuttikuluma, Ratmegehalwewa and Wageyakuluma (within the boundaries of Indigehawewa), as well as Wellamudawa and Punchikuluma are said to have probably been constructed during the reign of King Valagam Bahu¹ around the 1st Century BC. At this time, the area was probably populated by Tamils (field notes 1998, 1999)

The main tank at Nallamudawa is likely to be even of older date, predating the reign of King Duttha Gāmani (161-137 BC). The meaning of Nallamudawa is derived from the Tamil language, it refers to four crocodiles. This indicates that, at the time of construction, the population of Nallamudawa was Tamil. According to legend, the Tamil population was driven out by King Duttha Gāmani. The mother of King Duttha Gāmani is said to have left her earrings at the stone temple of Nallamudawa. Some ruins from this period can still be found in the jungle close to Nallamudawa. The tanks at Padikkaramaduwa were probably constructed a few centuries later. Another legend describes how Padikkaramaduwa was constructed.

¹ Also referred to as King Vattagamani Abhaya or King Valagam Aba.

During the reign of King of Mahāsena (274-301 AD), there was a monk in Ganewalpula. This monk did not do anything. So the king became angry and said: as punishment for your idleness, go to that place and you will build a wewa for the village. The king made a small house in the village, where he stayed and gave the monk a salary. Because the monk received a salary from this house, it is called Padi (salary) kara maduwa (small house) (fieldnotes, 1998).

Padikkaramaduwa was rehabilitated by villagers in the 19th century during the British colonial period. Puakpitiya was probably also constructed during King Mahāsen's reign and connected by a canal to both Huruluwewa and Dambegaswewa. These canals disappeared and the tank was abandoned. Approximately 30 years ago, Dambegaswewa was rehabilitated by villagers on the initiative of a local monk.

4.2 Location and description of the villages in the case study

This section intends to give a brief overview of the villages in the case study, with an indication of the number of families and total population, village occupations and other means of income, e.g. income through day-labour or by raising cattle. Although the primary occupation in all the villages is farming, it is important to realize that they also depend on other means of income-generation due to the unreliability of rainfall. The table at the end of this section provides an overview of the tanks attached to each village, the command area of these tanks, and the number of landowners with land under each of these tanks. It is important to realize that the average size of

landholdings is quite small (below 2 acres) and that the command area available for cultivation is below 80 hectares.

Almost all villagers (estimated 90 %) are literate. The level of education of the villagers ranges on average between 3rd grade and O-level². A few villagers have reached A-level standards or followed higher education. One can observe some differences in the level of education across the case study areas. The average level of education in villages such as Nallamudawa, Walpola, and Padikkaramaduwa is higher than in villages such as Indigehawewa and Kulikkada.

Across the case study areas, one can observe a number of factors which are in general correlated. These are: standard of living, dependency on day-labour, education, caste, and drinking problems. For example, Indigehawewa and Kulikkada are two lower-caste villages, with a relatively low standard of living, lower levels of education, high participation in day-labour, and a high consumption of alcohol among the male population. Wellamudawa and Punchikuluma, also lower-caste, have lower educational levels and alcohol consumption, but a higher standard of living due to the high participation of villagers in other income-generating activities such as catching fish, working in the Middle-East or for the police, army or garment factory. The participation of the population in the production and sale of liquor is mentioned in only three (all lower-caste) villages: Indigehawewa, Wellamudawa/Punchikuluma and Kulikkada.

² British system, O-level stands for ordinary level; A-level for advanced level

Nallamudawa

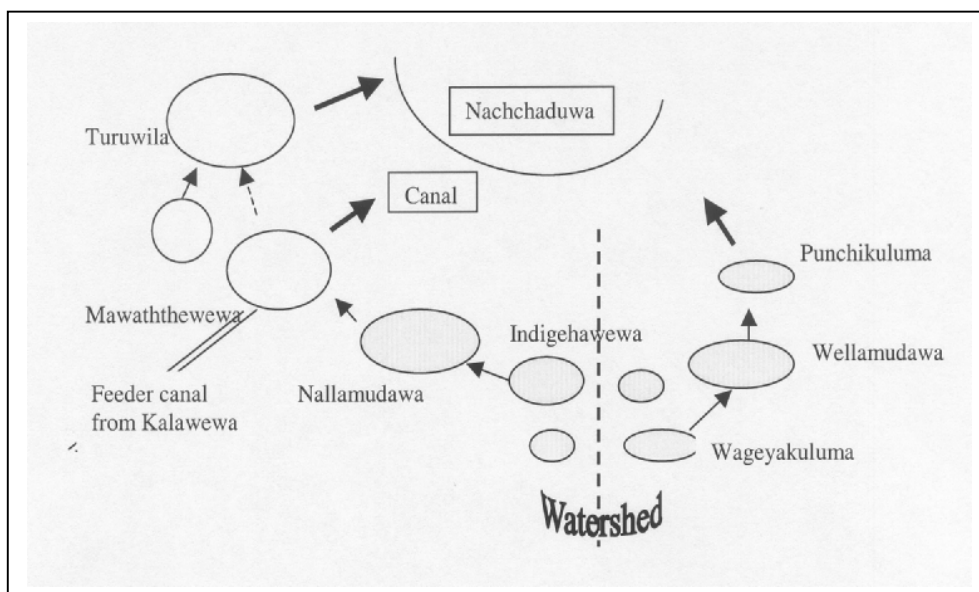
Nallamudawa is located approximately seven kilometres from Eppawala, 30 kilometres south of Anuradhapura. The Agrarian Service Centre is located in Eppawala. Nallamudawa has 167 families within its administrative boundaries. The primary village occupation is farming, which includes the cultivation of paddy and the cultivation of other field crops through *chena* cultivation (slash and burn cultivation). The average size of the landholdings is rather small: less than one acre³. Most villagers also have an income or food supply from cultivation in their home gardens and from *chena* cultivation. When – due to drought - cultivation is not possible in their own paddy fields, many villagers continue to perform agricultural activities as day-labourers in other settlements, often in the Mahaweli area. At the time the study was conducted, only 15 villagers were said to hold other occupations instead of, or in addition to, farming. These villagers worked for the army, the government, co-operatives, or the private sector.

Indigehawewa

Indigehawewa is located upstream of Nallamudawa in the same cascade and has six tanks within its boundaries. The farmer organisation of Indigehawewa is responsible for five of these tanks. There is a separate farmer organisation for Wageyakuluma, with landowners from both Indigehawewa and Mahakanamula. The number of families in Indigehawewa is 122, and the total population approximately 440. Although the primary occupation of most families is farming, some of the families have additional means of income. At

first glance, it appears that all tanks under the administrative boundaries of Indigehawewa are located upstream of Nallamudawa and that the run-off flows into Nallamudawa. In reality however, Indigehawewa is located on the watershed of two sub-cascades, which means that only the run-off of some of its tanks flows into Nallamudawa, (from there into Mawathewewa, and then through a canal towards Nachchaduwa). The run-off from the other tanks within the same administrative boundaries flows towards the East, and together with the run-off from a number of other tanks – into Nachchaduwa.

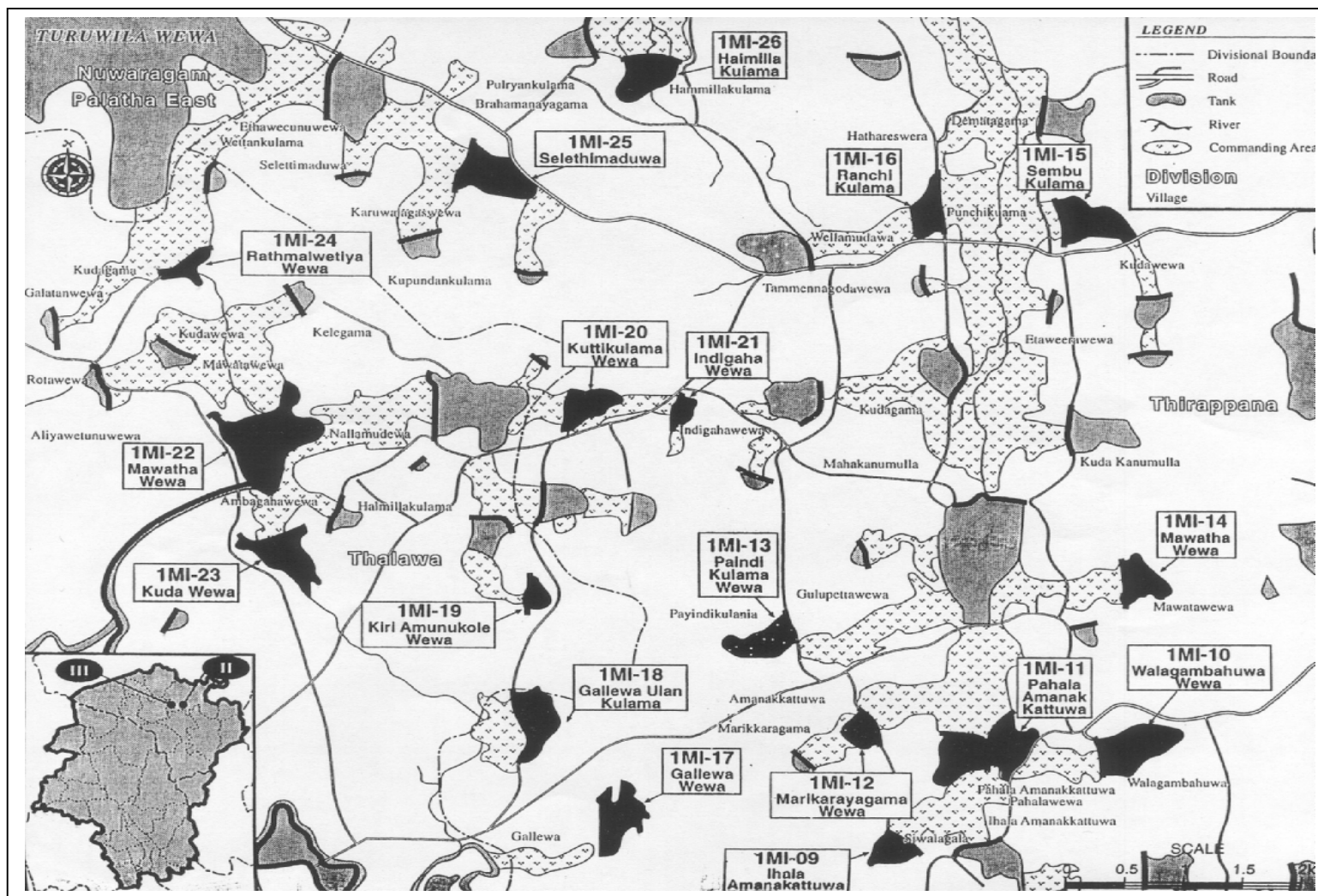
Figure 4.3: Sketch of watershed in Indigehawewa



Source: participatory mapping

³ 1 acre is 4047 square metres or 0.4047 ha. In other words, 2½ acres is a little over 1 ha (10,000 square metres).

Figure 4.4. Cascades Nallamudawa, Indigehawewa, Wellamudawa. Source: Nippon Koei, 1999, Annex F-4



Wellamudawa and Punchikuluma

Wellamudawa and Punchikuluma are situated north of Indigehawewa and are located in the same sub-cascade as Ratmalgehawewa, Thammanagala and Wageyakuluma, which are all within the boundaries of Indigehawewa thulana (see figure 4.3). The run-off from those tanks flows towards the northeast into Nachchaduwa. Some villagers have also lands in the command area of Tharanagolèwa. Figure 4.4 shows the cascades in which Nallamudawa, Indigehawewa, Ratmegehalwewa, Kodarikuluma and Kuttikuluma, as well as Wellamudawa and Punchikuluma, are located.

The villages are almost integrated due to their proximity and in the sense that most landowners have land under both Wellamudawa and Punchikuluma¹. There is one farmer organisation responsible for both Wellamudawa and Punchikuluma. Additionally, for the operational tasks², a *vel vidane* (traditional irrigation headman) is attached to Punchikuluma and one to Wellamudawa. According to estimates by respondents in both Wellamudawa and Punchikuluma, 65% of the families also depend on other means of income, in addition to farming, such as hired labour, fishing, business, carpentry, and jobs in the Middle East. The relatively high number of villagers with additional, or other, jobs to farming is related to the lack of rainfall and the poor state of the irrigation infrastructure of Punchikuluma.

1 Wellamudawa and Punchikuluma are treated as one because of their proximity, the joint farmer organisation, and because villagers have lands under both tanks.

2 Opening and closing of the sluices, checking the water levels, monitoring farmers' duties in cleaning of the canals, fencing, building watch huts, etc.

Walpola

Walpola is a small village, a few kilometres west of Medawachchiya, and approximately 35 kilometres northwest of Anuradhapura, in the North Central Province. Walpola is also located close to from Pul Eliya (eight kilometres)³. There are 148 families in the village and the total population is 561. Walpola has three tanks: Maha wewa, Kuda wewa and Hinguru wewa. There is one farmer organisation for all three tanks in Walpola, and the main occupation is farming. The village is referred to as a 'border village'; since it is located not far from the war-torn area.

Kulikkada

Kulikkada is a neighbouring village of Walpola, a few kilometres beyond Walpola on the same road and located within the same cascade. It is also located in the border area. Cultivation and irrigation are managed by the *vel vidane*. The farmer organisation has been active for only a couple of years. Two of its tanks, Kuratiya wewa and Gadol wewa (see table 4.1) are registered as common tanks. However, most villagers indicate that these are private tanks, belonging to two extended families. Kulikkada is home to 152 families, with a total population of 511 inhabitants. Besides paddy and *chena* cultivation, some families have large herds of cows or buffaloes.

Padikkaramaduwa

Padikkaramaduwa is located a few kilometres northeast of Huruluwewa, and approximately 40 kilometres southeast of Anuradhapura. Although located close to Huruluwewa, it does not

³ Known from the publication by Leach, 1971.

receive any water from the Huruluwewa scheme. There are 110 families in the village, with a total population of 390. There are three tanks in the village: Padikkaramaduwa wewa, Puakpitiya and Dambegas wewa. Again, as in the other villages, the main occupation is farming, either on one's own fields, or as hired labourers.

Pudukkuluma

Pudukkuluma is approximately 15 kilometres southeast of Mihintale. The total number of families is 47 and the total number of inhabitants is 175. The main occupation is farming, although 46 villagers are involved in other occupations, mostly employed by the police and army, or working for garment factories. Ten families have an additional income from cattle raising. The farmer organisation is a joint organisation covering Pudukkuluma, Ihalegama and Surukkuluma.

Ihalegama

Ihalegama is situated a few kilometres north of Pudukkuluma and belongs to the same GN Division⁴. According to the latest records of the *Grama Niladhari* (general service officer at village level), there are 36 families in the village and 113 inhabitants. However, over the past ten years several families migrated out of the village, resulting in a number of approximately 25 families. The primary occupation is farming, but 24 villagers are involved in other employment (including working in the army, the police, the Middle-East, in garment factories,

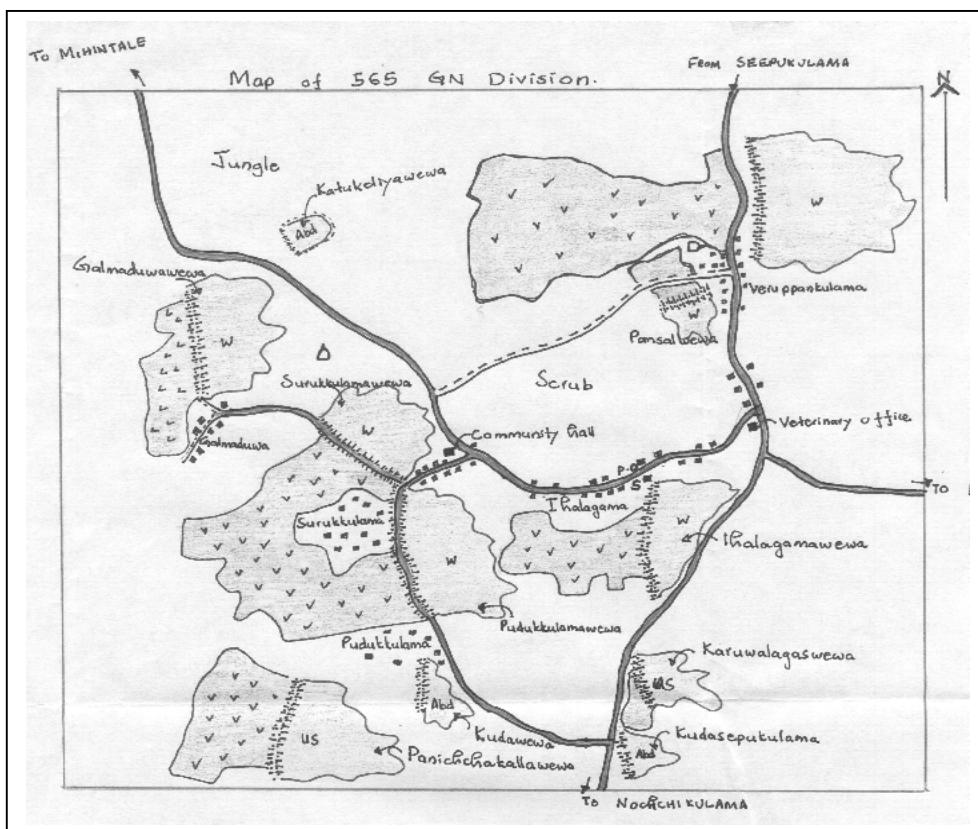
4 A Grama Niladhari (GN) Division (also referred to as 'thulana') consists of a cluster of villages. In Anuradhapura District, there are 695 GN Divisions and 3,088 villages (Somasekaram, Perera, De Silva and Godellawatta, 1997, p. 189).

as teachers, or for the post office). Only 10% of the families work as day-labourers to earn additional income.

Surukkuluma

Surukkuluma is located close to Ihalegama and Pudukkuluma and in the same GN Division (see figure 4.5). There are 19 families, with a total population of 71 inhabitants. Ten families depend on day-labour. Approximately ten villagers are employed by either the army, the police, or working in the Middle East, in a garment factory, or for the government. Around seven families have small cattle herds.

Figure 4.5: Pudukkuluma, Ihalegama and Surukkuluma cascade



US = unsettled, Abd. = abandoned; W = Working; --- = path

Table 4.1, on the next page, provides an overview of village tanks, the size of the command area, the number of households in each village and the number of landowners⁵ in the command area of the tank.

⁵ All estimates in table 4.1 are based on a composition of: primary data from respondents themselves, office-bearers and local government officers (*grama nilidaries*), secondary information from the respondents about the population, lists of shareholders.

Table 4.1: Village tanks, size command area, no. of households & landowners

<i>Name village tank</i>	<i>Command Area: acres</i>	<i>No. of households</i>	<i>No. land owners under the tank</i>
Nallamudawa	150	167	75
Kiriammunukole	35	- (unsettled)	20
Hamillikulume	55	-	35
Ambagahawewa/Amuna	6.5	-	1
Syambalegas wewa	4	-	1
Indigehawewa	25	122	16
Kodari kuluma	60	-	35
Ratmalgeha wewa	30	-	19
Kutti kuluma	40	-	35
Wagaya kuluma	95	-	?
Wellamuddawa	42	35	40
Punchikuluma	139	138	120
Tharanagolèwa	24	-	7
Walpola wewa	87	148	78
Kuda wewa	62	-	29
Hinguru wewa	38	-	25
Kulikkada	108	152	80
Meegeha wewa	60	-	22
Gadolwewa	16	-	10
Kuratiya wewa	20	-	10
Nagemayagamawewa	10	-	5 (priv.)
Rilaakada wewa	16	-	10 (priv)
Diwulgaha wewa	8	-	5 (priv.)
Gobaththapage wewa	3	-	1 (priv.)
Padikkaramaduwa	80	110	57
Puakpitiya	50	-	35
Dambegaswewa	20	-	32
Pudukkuluma	145	47	20
Panichchakalla	80	-	25
Ihalegama	45	36	30
Surukkuluma	37	19	10

4.3 Soil characteristics

The type of soil found in the case study areas is a combination of well-drained reddish brown earths in the higher aspects of the lightly undulating landscape (highland), and poorly drained low humic gley soils and alluvial soils in the lower parts. The low humic gley soils and the alluvial soils consist of a mixture of sand and black clay soil. Such soils are used mainly for paddy cultivation, but can also be used for the cultivation of a few other crops, such as chillies and onions.

Table 4.2: Soil typology

<i>Soil type / features</i>	Structure	Base saturation & soil reaction	Water holding capacity
<i>Reddish Brown Earths</i>	Weak - moderately coarse, subangular blocky	60-80%; slightly acid to neutral	Low
<i>Low Humic Clay Soils</i>	Subangular blocky to massive, extremely hard when dry, sticky when wet	90-100%; moderately alkaline	Fairly good
<i>Alluvial Soils</i>	mixture of sand and black clay	60-90%; slightly acid to slightly alkaline	Medium to fairly good
<i>Sandy soils</i>	Fine to moderately coarse sand; loose consistency	75-90%; neutral	Low; rapid infiltration

Source: Panabokke, 1996, ch. 4

The structure of the low-humic gley soils and the alluvial soils makes tillage of the land very difficult using manual labour. This has consequences for the gender-based division of cultivation activities as will be shown in chapter 6 (section 6.2).

The red soils can be used for the cultivation of various other field crops (OFCs), but not for paddy. Further, one can find sandy soils and gravel, the latter being the subsoil covered by the red soils in the highlands. Gravel is used for strengthening the bunds and as top layer on rural roads.

The area is further characterised by slightly undulating terrain (which is used by the gravity-based irrigation systems), by some rock knob plains and eroded lands, and some erosional remnants – in particular in the area around Ihalegama, Pudukkuluma and Surukkuluma (near Mihintale).

4.4 Rainfall

Sri Lanka is characterised as having two major climate zones (the wet zone and the dry zone) and an intermediate zone between the two. The case study areas are all intentionally located in the dry zone. There is a large variation in rainfall which has a major impact on the possibilities for the cultivation of paddy (rice) and other field crops. This variation consists of (i) variation over a year; (ii) variation of seasonal rainfall from year to year (seasonality); (iii) variation of monthly rainfall from year to year; (iv) variation in periodicity (how long per day) and (v) intensity of rainfall. Although the average annual rainfall received in the dry zone indicates that this is a semi-arid area (rainfall between 890 mm –1,900 mm), severe water shortages do occur successively in certain years (Tennekoon, 1986, p. 42). A recent study from the Department of Meteorology shows a 9% decline of rainfall in the Anuradhapura District comparing rainfall in the periods of 1931 to

1960 and 1961 to 1990. During the first period, the average rainfall in the Anuradhapura District was 1,505 mm, which dropped to an average rainfall of 1368 mm in the second period (Chandrapala, 1999).

The rainfall is not equally spread across the country. Seasonal rainfall is divided into the Northeast Monsoon (December to February), the First Intermonsoon (March and April), the Southwest Monsoon (May to September), and the Second Intermonsoon (October to November). In the Anuradhapura District, most rain falls between the months of October and early January. The main cropping season (*maha kanna*) starts in October and lasts until March or early April when the harvesting takes place. The dry season (*yala kanna*) usually starts just after the Sinhalese New Year in April and lasts until September. During the dry season (*yala kanna*) water in the tanks is either scarce or absent. Drought periods occur frequently, sometimes several years in succession.

The most recent period of drought occurred in the years of 1994 to 1996. Serious droughts not only result in crop losses, but may also cause loss of animal husbandry; inability to meet basic needs, health and sanitary problems; malnutrition as well as nutritionally-related and water-borne diseases; increasing debt burdens; and a deterioration of housing and living conditions (Tennekoon; 1986, p. 132). The vulnerability, which is the result of these frequent droughts, has important consequences for the livelihood strategies of farmers in the area. Later chapters will discuss how this vulnerability influences these strategies.

4.5 Type of cultivation

Today, in Sri Lanka, the area of irrigated land extends to over 0.52 million hectares. Sri Lanka has approximately 0.73 million ha of land suitable for rice cultivation. From 1988-89 onwards, 0.31-0.33 million ha has been sown each cultivation year under medium and major irrigation schemes. These are schemes with command areas between 80 and 400 ha, and schemes with a command area of more than 400 ha respectively. Another 0.17 million - 0.18 million ha of the paddy fields come within minor irrigation schemes (below 80 ha). Finally, 0.24 – 0.25 million ha of paddy is sown in fields not located under any irrigation scheme (Min. of Agriculture and Lands, 1998, p. 99). An estimated 0.4 million ha is used for the cultivation of plantation crops (tea and rubber), 0.2 million ha is used for the cultivation of subsidiary food crops (grains, roots, pulses, oil seeds, spices, sugarcane etc.), and another 0.1 million for other crops, fruits and vegetables. Additionally, an estimated 1 million ha is under slash and burn cultivation, or shifting cultivation, also referred to as *chena* cultivation (Nippon Koei, 1999, p. 3-3).

The cropping patterns in the case study area are predominantly based on paddy cultivation in the command area of tanks, and cultivation of other field crops (OFCs) - such as vegetables, pulses, spices and fruits - in *chena* fields and home gardens. Cultivation of highland⁶ is not very common in the case study areas. Paddy cultivation requires a lot of water and would therefore seem not the most appropriate choice,

⁶ Permanent cultivation of land at the higher elevations of the undulating landscape; usually located on the left and right-side borders of the command area; sometimes located outside the village.

considering that the scarcity of water is one of the most important constraints to cultivation in the case study areas. One consequence is that various projects and organisations have tried to demonstrate the profitability of cultivating OFCs in the command area of tanks.

However, most of these efforts have not been successful for a number of reasons. First of all, paddy serves both as the staple crop and as a cash crop. Secondly, the preference of farmers for cultivating paddy in the command areas is based on both economic and agro-ecological reasons, such as food security, storability, yield stability, marketability, inputs, financial investment, labour input, land suitability, pests and diseases, post-harvest operations, seed viability and storability (see also Ratnayake, 1998, p. 2). Thirdly, the lack of enthusiasm among farmers to abstain from paddy cultivation is also influenced by cultural factors. Notwithstanding the anthropological controversy on the importance of rice cultivation in ancient history, the more recent history of farming in the dry zone is undeniably linked to paddy cultivation⁷. At present, it does form part of the cultural identity of farmers, together with factors such as caste,

⁷ Some historic publications indicate this (e.g. by Robert Knox, first English edition in 1681). For example, with regard to rice, Knox said: “They have divers sorts of Corn, tho all different from ours. And here I shall first speak of their Rice, the Choice and Flower of all their Corn” (Knox, 1981, p. 102). With regard to the irrigation tanks: “Where there are no springs or rivers to furnish them with water, as it is in the Northern Parts, where there are but two or three Springs, they supply this defect by saving of rain Water; which they do, by casting up great Banks in convenient places to stop and contain the Rains that fall, and to save it till they have occasion to let it out into their Fields: They are made rounding like a C or Half-Moon, every Town has one of these Ponds, which if they can but get filled with Water, they count their Corn is as good in the Barn” (Knox, 1981, p. 104).

kinship, ethnicity and religion. Not surprisingly, rice is integrated as a symbol in many cultural and religious rituals.

Between 1968 and 1988, the production of paddy cultivation in Sri Lanka increased from 0.43 to 2.48 million tons, which can be attributed mainly to the introduction of High Yield Varieties (HYVs) (Mapa, 1999, p. 3). Although the cultivation of the new varieties has resulted in a decline of soil fertility and the emergence of new plant diseases, farmers have been able to compensate for the loss in soil fertility by applying more fertilisers. However, this has resulted in a higher level of investments needed for the cultivation of paddy, partly nullifying the financial benefits of the higher output. These investments result in a large number of farmers who depend on credits at the start of each cultivation season, which has important consequences for their dependency upon others (see chapters 6, 7 and 8).

The water requirement for paddy cultivation is influenced by climatic and soil conditions, such as the amount and intensity of rainfall; evaporation; and the permeability of the soil. Additionally, it is related to agronomic practices, such as the type of seed paddy, depth and method of ploughing, timing of cultivation, pattern of irrigation water releases, field irrigation practices, broadcast sowing, transplanting and fertiliser use (G.H. Peiris, 1996, p. 77).

The original settlers of the villagers used to cultivate the part of the command area that is referred to as '*purana wela*'. This part was usually located close to the tank bund and easy to irrigate due to its hydrological and geological characteristics. These characteristics have

– to a large extent - determined the demarcation between the old command area and the extended part of the command area. At present, the command areas of most tanks encompass both *purana wela* and the extended area: *akkara wela*.

Notwithstanding the cultural and economic significance of paddy cultivation, rainfall is not sufficiently reliable for paddy cultivation each year, and therefore the population also depends on the cultivation of other field crops in chena fields. *Chena* fields are usually encroached state lands (falling under the State Land Ordinance)⁸ which are cleared by ‘slash and burn’. After a year of cultivation, another - usually adjacent - plot of land will be cleared for cultivation, using the same procedure. The first plot is then left fallow for some years, thereby enabling renewed growth of bushes and trees, and the regeneration of soil fertility. After several years⁹ the farmer returns to the first cultivated plot for re-cultivation.

The nature of chena cultivation has changed considerably over the years (Gelbert, 1988), but is still an important source of food for home consumption and provides additional income. Due to the increase in population, the amount of land claimed for chena has now reached its

⁸ Officially, villagers would need *chena* permits for the cultivation of such plots, but in reality the need for such permits is largely ignored.

⁹ The precise number of years that a plot is left fallow depends on the availability of *chena* land. Where it used to be left fallow for long periods (10-20 years) in the past, nowadays it varies between one and seven years. Gelbert gives a typology of *Chena* cultivation, including long fallow-type of shifting cultivation (*Navadeli-chena*); short-fallow type of shifting cultivation (*Alut-chena*) and more or less permanent swiddens, with occasionally short fallows (*Stirawagawa-chena*) (Gelbert, 1988, p. 207).

limits in some villages. This means a more continuous cultivation pattern of the same plots resulting in a much faster decline of soil fertility and productivity, and this has led to deforestation of some areas (see also Starkloff, 1998, p. 992; Gelbert, 1988, p. 270-272).

Both paddy cultivation and chena cultivation are vulnerable to crop damage by elephants in the area. Especially during the harvesting season, elephants eagerly enter the fields in search of food which seems readily available to them.

4.6 Types of irrigation systems

The irrigation systems referred to in this research can be characterised as minor irrigation reservoirs using gravity-based irrigation through non-lined or only partially lined canals, with a hydrological layout on two levels (distributory canals and field canals). As an example, the technical data of the Nallamudawa tank is provided in the annex.

Due to the criteria used for selecting the case study areas (chapter 3, section 3.2), the irrigation systems studied were not that different from a technological viewpoint. They consisted of small reservoirs with earth bunds, and one to three small sluices (operated with or without a key), a spill structure (natural or concrete), one to three very small distributory canals with small earthen bunds, a few concrete outlets, diversion structures, and direct field inlets.

There is only limited possibilities for regulation and control of the water flow, other than through opening and closing the sluices and

blocking the canals. Furthermore, monitoring the water level and water discharge is based on visual estimates. Due to the earthen canals and lack of advanced technology, the systems are not particularly prone to vandalism, yet it is relatively simple to manipulate the water flow by blocking the canal or making cuts in the small canal bunds.

Water release and water distribution are based upon agro-ecological features, such as the rainfall and the water supply in the tank, by the soil conditions and the undulation of the command area, and by the water requirements of the crops. The evaporation and water losses through seepage and percolation are estimated to be approximately 25% (evaporation) and 30% (seepage and percolation) (Walisundara, 1999). Although lining of the canals can reduce water losses, this is not common in the case study areas. There are two popular methods for increasing the water holding capacity of these tanks during rehabilitation, either by desilting the tank bed or by raising the spill level. Raising the spill level is not always possible due to potential inundation of lands and roads.

4.7 Description of responsibilities under the irrigation management system

As indicated earlier in chapter 2, all farmers have a common interest in (a) co-operation with all the other farmers in planning and implementing the cultivation schedule and irrigation management; (b) adequate operation and maintenance of the irrigation system; (c) acquisition of funds for rehabilitation of the irrigation system; (d) coordination with governmental organisations; (e) conflict prevention

and conflict settlement. Therefore it is useful to give an initial impression of how these responsibilities are assumed by the farmer organisations and vel vidanes in the case study area.

The government assigned the following responsibilities to farmer organisations¹⁰:

- a. The formulation and implementation of the agricultural programme;
- b. Carrying out local construction work; repairs of irrigation works;
- c. Marketing produce, distributing seed, fertiliser and agro-chemicals;
- d. Promotion of, and co-operation between, the agricultural activities of government organisations and the farmers of the area; and
- e. Any other beneficial activity approved by the Commissioner.

The farmer organisation is constituted by its members, most of whom are landowners of land in the command area of the tank. Traditionally, paddy land ownership was inextricable linked to membership of the farmer organisation or for participation in the pre-cultivation meetings. Under the current Agrarian Services Act, the ownership of paddy land has been removed as a criterion.

Non-owners may also apply for membership of the farmer organisation, provided that they cultivate land, that they are over 18 years old, that they reside in the area of the farmer organisation, and show interest in the farmer organisation. The change in the criteria for its membership gives the farmer organisation more authority to effect

its decisions and to exercise control among a larger group of cultivators and tenants. The owners of paddy land in the command area of the tanks were, and still are, referred to as *shareholders*. The shares refer to the share of land they have in the command area of the tank. All shares are listed in a '*pangu*-list' [translated: list of shares].

There is a clear conflict between the legal provisions and the informal criteria for membership of the farmer organisation. Membership is still perceived – also by the farmers themselves – to be first and foremost for paddy landowners, or 'shareholders'. Although paddy landownership in the command area of one of the common tanks is reflected in one's status as a shareholder, it does not automatically imply membership of the farmer organisation. Membership requires the payment of annual contributions, and regular attendance at meetings, which is obligatory although usually sanctions are not applied. All farmers are allowed to attend the pre-cultivation meetings of the farmer organisation, regardless of their status as member, landowner, cultivator or tenant. Recently, membership has also been enabled through the implementation of tank rehabilitation projects, where the local population has been involved in the labour works, such as digging, desilting, and strengthening or raising the bund.

The newcomers, who join the farmer organisation for the purpose of participation in the rehabilitation works, are referred to as 'temporary' members, even though the temporary nature of their membership is not always interpreted very strictly.

¹⁰ Agrarian Service Amendment Act no. 4, 1991: Interim Constitution for the Farmer Organisation.

The membership of female farmers and farmers without paddy land increased considerably as a result of this option. As with the other members, newcomers have to pay the annual contribution, but their entitlements are not necessarily the same as those of the permanent members.

Most farmer organisations have a small sub-committee to discuss daily matters. There are four types of meetings: committee meetings; general meetings (one or two per year); pre-cultivation meetings, which are referred to as '*kanna* meetings' (one or two per year) and meetings for tank rehabilitation projects (ad hoc). *Kanna* meetings are organized at the start of each cultivation season. These meetings are used to discuss the planning and implementation of the cultivation schedule, and to reach agreement on the operation and management of the irrigation system. These meetings are – and always have been - a very strong instrument in the local management of minor irrigation systems under various political and institutional settings since independence.

Planning and implementation of the cultivation schedule

At the start of the cultivation season, after the first rains in September and October, and a gradual increase in the water level in the tank in October and November, office-bearers of the farmer organisation approach the Divisional Officer and the Agricultural Instructor with a proposed date for the *kanna* meeting in their village. Upon agreement by the Divisional Officer and the Agricultural Instructor, the farmer organisation informs all its members about the *kanna* meeting by displaying notices at the local shop, at the community hall or the temple.

Box 4.1: Translation of minutes *kanna* meeting Nallamudawa

Decisions including report of the *kanna* meeting of landowners, farmers and tenants held on March 30, 1998 for Nallamudawa wewa Puranawela under Article 42 of No. 58 Agrarian Service Act of 1979

- 01 Divisional Secretary Division: Thalawe
- 02 Agrarian Service Executive Committee CA: Eppawala
- 03 Cultivation Officer / Grama Niladhari Division: no. 376,
- 04 Nallamudawa
- 05 Extent of paddy lands of *yaya* / *yayas*: 60
- 06 Number of land owner farmers and tenants in *yaya* / *yayas*: 28
- 07 Number of land owner farmers and tenants present in *kanna* meeting of *yaya* / *yayas*: 28
- 08 Number of acres which it is decided to cultivate in *yala* 1998: 60
- 09 Start of cleaning & maintenance of bunds & canals: 01-04-1998
- 10 Date to start first release of water: 07-04-1998
- 11 Date to stop release of water: 10-08 1998
- 12 Type of paddy to be cultivated: three months paddy
- 13 The date to begin sowing seeds: 15-04-1998 to 25-04-1998
- 14 Last day of sowing: 25-04-1998
- 15 Closing date of fencing: 04-05-1998
- 16 Closing date of building watching huts: 15-05-1998
- 17 Closing date of cutting paddy: 10-08-1998
- 18 Entrance of buffaloes and tractors into *yaya* and threshing closing date: 20-08-1998
- 19 Fines for not cleaning canals in pre-decided time Rs. 15 for two metres. For fencing Rs. 100 for 2 metres, for a watching hut Rs. 500, for not watching at night Rs. 100. Confirmed.
- 20 Implementing power of all decisions made here was handed over to the Grama Niladhari and *Yaya* representatives
- 21 Punishments to those who break and do not follow above regulations which are stated under the sub-statement 55(3) and 42(9) in the Agrarian Service Act no. 58, 1979.
- 22 Other decisions

With majority's votes all decisions from above 07-22 suggested by H. Kudarala and approved by A.V. Ranbanda

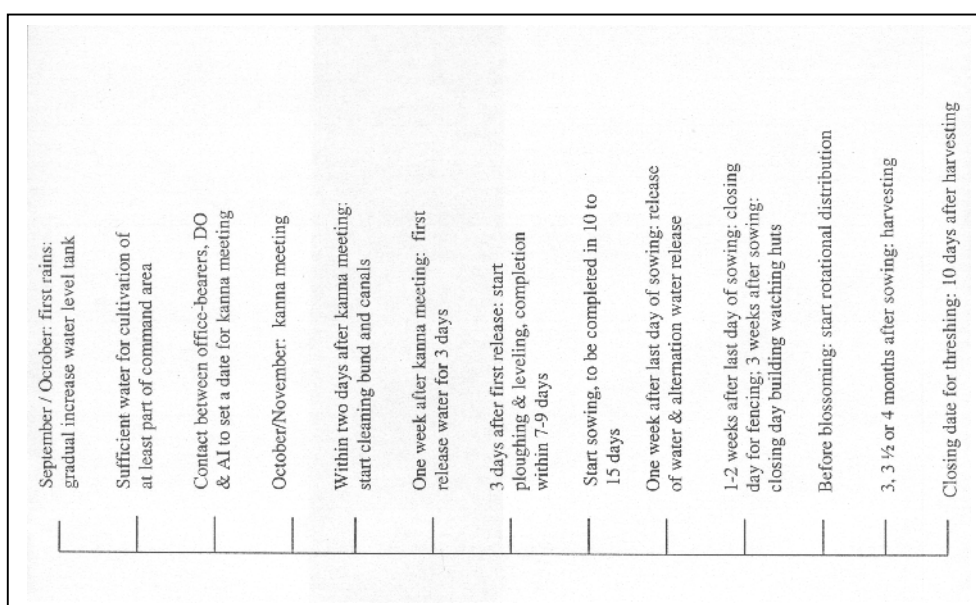
Date, Place

Signature Chair officer

At the kanna meeting in October or November, farmers decide on (a) the cultivation schedule with the dates for commencing, and the deadlines for completing, particular activities, (b) the duties of landowners / cultivators, (c) the type of crops to be cultivated and (d) the rules with regard to the intake and discharge of water.

The agreement among farmers in the kanna-meeting with regard to the cultivation schedule does not rule out the possibility that people deviate from the rules and cultivation schedule. Similarly, it does not necessarily denote their agreement with the day-to-day operation and management by office-bearers or vel vidanes¹¹. A typical timeline of the cultivation schedule is produced below.

Figure 4.6: timeline of cultivation schedule



¹¹ For example, proposals to irrigate the fields at night are - in general - not accepted by the farmers (with the exception of Nallamudawa).

The diagram shows that the first release of water takes place approximately one week after the kanna-meeting, which allows the farmers time to clean the canals and the bund. Three days after the first release, the farmers can start ploughing and levelling and constructing small field bunds, which all has to be completed in seven to nine days.

After levelling, people will let out any excess water. One day after levelling, farmers can start sowing, which is to be completed within ten to fifteen days. Within a week after sowing, the release of water starts again and the sluices are opened and closed as required.

Photo 4.1: Sluice at Walpola Kudawewa



If the water level in the tank is not sufficient to maintain this sequence, most farmer organisations start with rotational distribution just before blossoming of the paddy and continue until the harvest. The schedule for releasing water from the sluice is adjusted according to the rainfall.

The amount of water allocated to individual cultivators is not specified but depends on the method used for water distribution (continuous flow, alternation, or rotational distribution) and the area used for cultivation. Under continuous (full) flow, there is a constant discharge to the fields, except at night. Alternated flow refers to alternatively opening and closing the sluices every few days. If the water level in the tank is insufficient for cultivation of the entire area, farmers may decide to practice *bethma*. *Bethma* refers to the temporary redistribution of land among all owners of land below the tank, where only part of the command area is cultivated under a system of rotational distribution. (see chapter 7, section 7.3)

With rotational distribution, the command area is divided into several shares, and each share consists of several allotments belonging to a number of landowners. For example, in Walpola, the plots along the distributory canal of Maha wewa are divided into five shares each consisting of 15 – 20 acres, with plots belonging to approximately ten farmers. Opening of the sluice starts each day at 6.00 a.m. and they are closed around 6.00 p.m. The first group of ten farmers all get water simultaneously during one day, and any excess water flows through a small drainage canal to the next share of ten farmers. The second day, this second group of farmers gets the water. The people at the tail end have more time allocated (one and half or two days)

because otherwise they would not get enough water. One cycle of rotational distribution takes approximately seven to ten days. After these seven to ten days, they close the sluice for five days and then start over again. In most case study areas, there is a fair flexibility in the time-based allocation of water under rotational distribution, in particular for tail-end farmers.

The implementation of the cultivation schedule requires not only the release of water in accordance with the cultivation schedule, but also requires the participation of farmers in maintenance activities and that they carry out their duties on time. These include fencing, building watch huts, and rotational shifts for watching at night.

Fencing is required to prevent cattle and elephants from entering the fields. During the period allowed for threshing, the fences will be opened to allow tractors to enter the fields (*yayas*). When the fences are opened, the fields are vulnerable to crop damage since animals can enter the fields. This is the reason for the pre-determined date for threshing. Building watch huts and rotational shifts to watch the fields at night is required in areas near the habitat of elephants (all the case study areas). Farmers use guns and firecrackers to scare the elephants away when they are spotted near the paddy fields (and also the chena fields).

Photo 4.2: Watch hut



Operation

The office-bearers are responsible for operation of the sluices, for monitoring the discharge from the sluices through the canals, and taking action when farmers try to increase their intake without authorisation. With the exception of the traditional sluices in Kulikkada, all the other sluices are operated with a key, which is available to the office-bearers of the farmer organisation or the vel vidane. The number of copies of a key in circulation gives a good indication of the extent to which the schedule for releasing water can be manipulated. The operation of the sluices is quite flexible. Individual requests by farmers for more water stand a good chance of being granted, within reasonable limits.

Maintenance

Maintenance of the irrigation system involves cleaning out of the canals at the start of the cultivation season, cleaning the bund (removing all weeds and bushes from the path or road on top of the bund) and carrying out small repairs to the canal system. Each landowner / cultivator has to clear a part of the distributory canal in proportion to his or her share of land (referred to as the *pangu* method). The part of the canal system to be cleaned by individual farmers is usually adjacent to their fields. For clearing the bund, *shramadana* is the more common method. This involves the joint effort of all landowning families to remove the weeds and bushes from the bund. This activity usually takes a couple of hours. The farmer organisation or *vel vidane* is responsible for the mobilisation of the people for *shramadana*, for monitoring the maintenance tasks, and taking measures if some farmers do not carry out their duties.

Rehabilitation of the irrigation infrastructure

Rehabilitation and improvement of the irrigation infrastructure is a recurrent theme in the petitions and requests of *vel vidanes* and farmer organisations towards governmental organisations. Silting up of the tanks, seepage through the bund, and leakage from the sluices, are some of the problems in the case study areas. Deterioration of the irrigation system is caused by poor maintenance, damage by cattle and elephants, cultivation of the reservation area, and poor rehabilitation of the irrigation infrastructure.

The projects that were ongoing or recently completed in the case study areas included projects by the World Food Programme (WFP); the Samurdhi programme; the Freedom from Hunger Campaign Board

(FFHCB); and the National Irrigation Rehabilitation Programme (NIRP). Activities commonly executed within the rehabilitation projects in the case study areas are: desilting of the tank, strengthening of the bund, raising the bund, raising the spill level, replacement of the sluices, replacement of a natural spill by a concrete spill, improvement of the canal structure or construction of a bathing place. All the programmes used labour-intensive methods for desilting the tank bed and strengthening the bund.

The execution of such works is done in close co-operation with the farmer organisation or vel vidane. They are responsible for mobilisation, execution and monitoring of the labour works. In some cases, the construction work is granted to the office-bearers of the farmer organisation, to the govi-niyamake, or to one of the Technical Officers, from either the District Secretariat, the regional office of the Department of Agrarian Services, or the regional office of the Irrigation Department.

Co-ordination with governmental organisations and other FOs

Although there is straightforward stimulation by the government of self-governance by farmer organisations¹, this does mean they are left without government interference and supervision. For example, there are strict guidelines for the compulsory presence of either the Divisional Officer or the Grama Niladhari in kanna meetings. This is required for the authorization of certain decisions. Furthermore, the Divisional Officer operates as chairperson in various co-ordination mechanisms at divisional and district level. The most important

coordination mechanisms at local level are the Agrarian Service Committee Council, the Agrarian Development Council, the Divisional Agricultural Committee and the District Agricultural Committee.

Conflict management

Conflicts (both explicit and hidden) among farmers emerge due to non-compliance with the rules and deadlines of the cultivation schedule, poor performance of individual maintenance duties, violating the rules, crop damage due to roaming cattle, and free-rider behaviour during shramadana (see box 4.2). Conflicts with regard to the irregular withdrawal of water do occur, but are not as frequent as might be expected based on literature.

Box 4.2: Common sources of conflicts related to cultivation and irrigation

- Cattle destroying yield of other farmers
- Farmers opening their inlet or blocking the canal to get more water to their field, when they are not supposed to
- Wastage of water by the vel vidane or chairman of the FO
- Division of land among the children within a family
- Farmers ignoring their duties and deadlines for cleaning of canals, fencing and building watch huts
- Farmers who cultivate in advance of the *kanna* meeting, or who start harvesting and threshing before the date set in the cultivation calendar and so open the fence too early, thereby enabling elephants and cattle to enter the fields.

1 This corresponds to the seventh design principle of Ostrom: minimal recognition by the state of the right for farmers to organise themselves.

Conflict management generally involves: (i) repeated consultation and/or reprimands by the farmer organisation, (ii) consultation with, inspection and settlement by government officers, such as the Grama Niladhari or the Divisional Officer, (iii) settlement through compensation for damages and (iv) filing cases in court.

The legal procedures lead to a lack of sanctioning possibilities by farmer organisations. Although there are fixed fines for defaulters which are highlighted in the kanna meetings, farmers can only be compelled to pay these fines by court when (a) the Divisional Officer was present at the meeting, or a representative authorised by the Divisional Office, and when he or she was chairing the meeting, (b) when more than 60% of the farmers attended the meeting and (c) when there were minutes drawn up. If less than 60% of the members attend the meeting, the meeting has to be (and will be) recalled.

The vast majority of open conflicts are settled within the first three stages and compensation is paid by cattle owners for crop damage due to roaming cattle. Conflict resolution is problematic when office-bearers or government officers themselves are part of the problematic situation (see chapter 7, section 7.4).

4.8 Implications of technical and agro-ecological features on the irrigation management system

The implications of the technical characteristics and the agro-ecological features are summarized in the table on the following two pages. The irrigation infrastructure requires regular maintenance, and

collaborative effort in fencing, building watch huts and watching at night. Co-operation is thus essential for successful cultivation.

One of the most important features is the high vulnerability, in terms of the climate, in terms of the condition of the irrigation infrastructure, and in terms of crop failure due to damage by cattle and elephants. This vulnerability has a direct and very important impact on the farmers' strategies, as will be demonstrated in chapters 6, 7, 8 and 9.

Table 4.3: Technical characteristics, agro-ecological features and implications for irrigation management

Technical characteristics	Implications for irrigation management system
Cascade system, high density of tanks	Raising of spill is not always possible due to submerging of other areas; drainage water flows towards other tanks. Extension of command area results in less excess water to other tanks.
Gravity-based	Somewhat higher areas have a very slow or limited inflow of water; results in non-cultivation or longer cycles during rotational distribution; discontent among landowners with land in this area.
Minor system and layout with only two levels: distributory and field canals	One farmer organisation is sufficient for all farmers. Office-bearers (usually chairman) responsible for operation of sluices, allocation of water in rotational distribution, monitoring water discharge and monitoring irrigator's duties. In case of two or more common tanks, operational tasks sometimes performed by vel vidanes (one for each tank).
Division command area purana and akkara wela	Many families have land in both purana and akkara wela which makes decisions to cultivate only part of the command area easier. Bethma usually (with some exceptions) practiced in purana wela.
Concrete sluices with thread-gate operated with a key	Replacement of traditional sluices by concrete sluices which are operated with a key has been quite effective in preventing opening of sluices without permission. Nonetheless, manipulation is still possible with illegal copies of the key and opening the lock by using a bar instead of a key. Deliberate damage to thread-gate sluice not common.
Hardly any devices for regulating water flow	Opening and closing by wooden gates. Increasing one's water inflow can be achieved quite simply by blocking part of the field canal (with earth). Such action has immediate consequences for the plots located off the same canal.
Some pipe outlets	Supply-oriented (Not designed for fine-tuning in accordance with demand). Low-intensity management. Obstructs water-inflow if not deep enough.
Earthen / concrete spill	Spill construction to prevent bund from breaking in heavy rains.
Non-lined / partially lined canals	Seepage through earthen canals, high intensity maintenance (regular cleaning required), easy to manipulate, easy to repair; vulnerable to damage by cattle and elephants.

Technical characteristics	Implications for irrigation management system
Tank siltation	Regular desilting required. In case of rehabilitation, tank silt applied to bund.
Erosion earthen bunds	Regular maintenance and repair required. Path on top of the bund gives access to tank for bathing. Breaches of bund due to its poor condition, erosion and poor rehabilitation.
Reservation area close to bund	Cultivation not allowed near bund to prevent erosion. In many cases part of this area is nevertheless cultivated; no action taken by office-bearers / government officers.
Agro-ecological features	Implications for irrigation management system
Soil / land	Alluvial or low humic gley soil, high water retention, makes tilling difficult when compared to chena fields, subsequent use of tractors for ploughing (see chapter 6) .
Cropping	Irrigated mono-crop cultivation, mostly direct-sown paddy, dominance of short-term varieties (3 month, 3 ½ month or 4 month), only HYVs, surplus tank water used for second crop in part of the command area under bethma/ rotational distribution. Cultivation frequency varies between once every year to once every two, three, four or even five years (smaller tanks) to once or twice a year (larger tanks).
Climate	Unreliable rainfall, declined by 9% in the Anuradhapura District, less predictable rainfall than in past. Decisions with regard to area to be cultivated, paddy variety and bethma are based on water levels. Kanna meeting not organized unless water level is sufficient for cultivation of part of command area.
Elephants' habitat	Various measures against crop damage by elephants, which require collaborative effort: fencing, building watch huts and watching at night.
Cattle	In areas with large cattle herds, numerous conflicts about crop damage and damage to canal system by roaming cattle, and lack of supervision by cattle-owners. Intervention by office-bearers and government officers required. Large problem in areas where cattle-owners are also large landowners and have a major influence as vel vidane or in the farmer organisation.

Ch. 5 The institutional setting

“The case was over, only the judgment had to be delivered now. The judge leant back in his chair, gazing over the jungle at the distance hills. There was not a sound in the court. Outside, down on the shore, the net had been hauled in, and the fish sold. Not a living thing could be seen now, except an old fisherman sitting by a broken canoe, and looking out of the waters of the bay. The wind had died away, and sea and jungle lay still and silent under the afternoon sun. The court seemed very small now, suspended over this vast and soundless world of water and trees.” (Woolf, L. in: *The village in the Jungle*; 1998, p. 123)

The novel, from which this excerpt is taken, plays out at the start of the nineteenth century. The author, Leonard Woolf, was Assistant Government Agent at Hambantota under Sir Hugh Clifford, the Colonial Secretary of that time. The novel narrates the daily struggle of a farmer in the jungle of Ceylon. The other actors within the narrative are all situated within the colonial setting: the *mudulali*, the village headman, the *Korale*, the *Ratemahatmaya*, and the Court.

This chapter will deal with the present features of the institutional and bureaucratic environment in which farmers and farmer organisations operate. In section 5.1, it starts with a description of the colonial setting which shaped some of the current features of institutional and bureaucratic environment. Section 5.2 describes the impact of the insurgency and the ethnic war on the lives of people within the case study areas. Although not discussed in this thesis, this has affected the

mutual relationships within the community to such extent that some families have abandoned their village either temporarily or permanently. Furthermore, due to the loss of lives, some villages have a relatively high ratio of widows within their community. Because of this, specific attention will be paid to the financial position of widows in chapter 6. The devolution of power was a political effort in response to the 'ethnic crisis', and will be discussed in section 5.3. The description of the devolution of powers has relevance for the potential scope of action for politicians at local and national levels. Their interventions will be the subject of discussion in chapter 9.

Whereas the first part of this chapter focuses more on the colonial history and political issues, the second part provides an overview of the legal-institutional setting. Section 5.4 overviews the ministries involved in irrigation management, and gives an impression of the current policy perspectives in relation to the development of the agricultural sector. Section 5.5 shows how the responsibilities at lower administrative levels have changed since independence, which puts the current emphasis on farmer organisations in a longer-term perspective. It also gives a first indication of the political influences in the administrative system, which will be elaborated upon in chapter 9. Section 5.6 discusses several government programmes, but only those which have - or were intended to have - a direct bearing on the livelihood opportunities for small farmers. It does not attempt to provide an overview of irrigation policies, land reforms or irrigation programmes. Finally, section 5.7 gives a schematic outline of the institutional setting at the various administrative levels, which will be useful again for the discussion of formal strategies in chapter 8, and the political strategies in chapter 9.

5.1 A legacy from colonial times

The administrative structure of Sri Lanka is strongly influenced by two institutional reforms introduced under British Colonialism. With the Colebrook-Cameron Reforms of 1833, the British colonial administration launched a system in which provincial secretariats and district secretariats had relatively autonomous decision-making positions. Economic planning for the various sectors was based on the district as the administrative unit. Each provincial secretariat co-ordinated and controlled the activities of various central government departments located in the districts. The provincial and district secretariats were governed by Government Agents¹ (GAs) and Assistant Government Agents (AGAs), and operated under the supervision and authority of the central administration² in Colombo.

Cameron recommended the establishment of a uniform and independent system of justice. He proposed bringing all courts under the supervision and control of a chief Justice and a Supreme Court appointed by the Crown. Notwithstanding recent political endeavours to exert influence on the judiciary³, some of the rulings by the

¹ In the initial period after the introduction of the reforms, these Government Agents were all British officials belonging to the Ceylon Civil Service (Wijeweera, 1988, p. 5).

² Composed of the Colonial Secretariat and the Governor.

³ There is constant pressure from political actors in relationship to the independence of the Judiciary. On the 11th June 2001, newspapers reported about the danger of a constitutional crisis over this. The UNP brought forward an impeachment motion against the Chief Justice, claiming that the Chief Justice was a personal appointee of the president. The motion was based on 14 charges including obstruction of justice and political bias.

Supreme Court are clearly against the prevailing political views. At present, even though some of the members of the Supreme Court are seen as political appointees, the political views of the ruling party have not completely permeated the rulings of the Supreme Court.

This means that there are still options open to fight the government through the courts. This position is important in the discussion of formal strategies, in particular with the choice by farmers to look for legal support, as will be discussed in chapter 8 (section 8.5).

The Donoughmore reforms⁴ of 1931 brought about a fundamental change in the administrative structure by replacing the Colonial Secretariat with ten ministries, each under the supervision of a Minister, and the grouping of departments under each of these Ministries. These departments managed many of the activities previously entrusted to Government Agents. In contrast to the Colebrook period, all economic activities were planned by sector (compartmentalised) at the central level. The Donoughmore Reforms thus resulted in the concentration of power in the departmental head offices and ministries, and in the weakening of the district administration. Co-ordination at district level was hardly present. How this affected minor irrigation systems is contained in the *Report of the Commission on the Organisation, Staffing and Operative Methods of Government Departments* of 1948:

⁴ The arrival of the Donoughmore Constitutional Commission was met with concern among the elite of the Tamil population. They feared that the British Crown would be replaced by a Sinhalese 'Crown' which would deprive them of their position in the bureaucracy and society.

“In one case a village tank was restored by the Irrigation Department at considerable expense, but 3 years after restoration no land under the tank was being cultivated and the earth bund for which the cultivators would have been responsible had fallen into disrepair. This waste of money was due to a lack of co-ordination between the Government Agent, the Land Department and the Irrigation Department.” (cited in: Wijeweera, 1988, p. 12-13)

The present administrative system still reflects the compartmentalism introduced by the Donoughmore reforms. Most agricultural and irrigation activities concerned with minor schemes within a district are primarily based on policies, planning and budgets of the national-based Ministry of Agriculture and Lands, and implemented through the Regional and Divisional Offices (Agrarian Service Centres) of the Department of Agrarian Services.

The Donoughmore reforms were said to result in the establishment of new departments and ministries to such an extent that it was hardly manageable. The establishment of new ministerial posts and the reshuffling of existing ministries has been a common feature since independence in 1948. At present, following general elections, candidates stand eagerly in queue to get a Minister's post and to receive the accompanying privileges (staff, housing, cars). Through the decentralised budget and the development programmes under the line ministries, there is still ample opportunity for partularistic intervention by Ministers. This will be explained in more detail in chapter 9.

5.2 The impact of insurgency and war

Since independence in 1948, three political events have had a major impact on the daily lives of the population. These are the insurgency of the Peoples' Liberation Front (the *Janatha Vimukthi Peramuna* (JVP)) in 1971, the war between the government and the LTTE (Tamil Tigers) in the North and the Northeast from 1983 onwards, and the second insurgency of the Peoples' Liberation Front between 1987 and 1989.

First JVP insurrection (1971)

In 1971, there was an armed attempt to seize power by the People's Liberation Front. This Marxist oriented movement⁵ was led by the educated Sinhalese lower middle-class and found support amongst the rural unemployed youth of southern Sri Lanka. They were frustrated with the high unemployment and the disregard among the English-speaking elite for their problems. This insurgence had a major impact on the country. Communication and supply lines of commodities were disrupted and the country was placed under a state of siege (Wijeweera, 1988, p. 56-57).

Ethnic conflict (1983)

Communal tension between the Sinhalese and Tamil populations in Sri Lanka existed during British colonial times, but increased and became more violent from 1956 onwards, after Sinhala had been as declared the only national language. From the mid-70s onwards, part

⁵ The JVP is usually portrayed as a Marxist militant youth organisation, yet there is still discussion on where to position the JVP in the Marxist, Stalinist, Maoist or even the Che Guevarist tradition (Chandraprema, 1991, p. 72).

of the Tamil population was calling for a separate state in the north and east of the country. In 1983, violence erupted after 13 soldiers were killed by Tamils. Since then, more than an estimated 60,000 people have lost their lives in a long running war between the LTTE and the government.

India and Sri Lanka signed an accord in July 1987 to try to settle the problem through devolution and greater autonomy for the Tamils, while an Indian Peace Keeping Force (IPKF) would disarm the Tamil forces. The proposals for devolution of autonomy to the Tamils led to opposition among the Sinhalese population, which was strongly opposed to the proposals to merge the northern and eastern parts of the island in a Tamil-dominated province.

Second JVP insurrection (1987-1989)

The JVP drew strongly on this Sinhalese nationalism and agitated against the separatist ambitions of the Tamils, and against the presence of the Indian Peace Keeping Force in Sri Lanka. Subsequently, between 1987 and 1989 a second period of violence erupted throughout the country in which the JVP made a renewed attempt to seize power. The military response by the UNP government was strong. Thousands of people were killed and 'disappeared'.

The impact of the JVP insurgency between 1987 and 1989 on the population of Walpola, Kulikkada and Wellamudawa, Ihalagama and Pudukuluma has been significant. Inhabitants of Kulikkada reported that there was a JVP camp in the village, with a lot of pressure on the population to join them. In Walpola six or seven men were killed during this period, and others were arrested and beaten up on the

suspicion of having links with the JVP. One respondent mentioned that they had lost three children as the result of the war and the violence during the JVP insurgency. In Wellamudawa, the army moved in after some people were killed by the JVP. Afraid of more violence, people fled resulting in the abandonment of this village and other villages in the area. Ihalegama and Pudukkuluma reported several assassinations, threats and robberies, and pressure to join the JVP. Several villagers abandoned the village. In Walpola, the JVP installed curfews and prohibited cultivation activities for two years (1988 and 1989).

5.3 Devolution of powers

As noted in previous section, India and Sri Lanka signed an accord in 1987 to settle the ethnic problem by creating greater autonomy for the Tamils. This accord included the devolution of state power and authority to the subnational level through Provincial Councils.

This brought about a fundamental change in the evolution of political and administrative institutions in Sri Lanka. The devolution was realised through the formulation and passing of the 13th amendment to the Constitution in 1987. The 13th amendment involved the transfer of government authority for planning, decision-making and management of public functions to the Provincial Councils for specific subjects and functions. The 13th Amendment contained three lists which defined the subjects which were and which were not transferred to the Provincial Councils:

1. Devolved list: all the subjects devolved to the Provincial Councils;
2. Reserved list: subjects within the competence of Central Government;
3. Concurrent list: all subjects under the joint responsibility of the Central Government and Provincial Councils.

Not all members of the Sri Lanka government were pleased with these measures since they wanted to keep control at the national level. They were – at least by some – perceived to be imposed upon Sri Lanka by India, an unwelcome intervention in internal affairs. The result was a half-hearted implementation of the 13th Amendment. Consequently, at present, there are two parallel systems of administration: (i) the Provincial Council through Provincial Ministries and Departments; and Local Authorities (Municipal and Urban Councils, and *Pradeshiya Sabha*) and (ii) the Central Government through the District Secretaries, the Divisional Secretaries and the Grama Niladharis.

With the 13th Amendment, most medium and even major irrigation schemes were delegated to Provincial Councils, with the exception of inter-provincial irrigation schemes. The Provincial Ministry for Irrigation was supposed to take over responsibilities, but failed in this due to the lack of expertise and funds at Provincial level. Most of their engineering staff had expertise on road infrastructure rather than irrigation infrastructure, and there was no incentive for irrigation engineers from the national irrigation department to move to provincial level. Once this became apparent, the medium and major irrigation schemes were handed back to the National Ministry for Irrigation and Power.

With the Department of Agrarian Services (DAS), the situation was not that different. The Department of Agrarian Services and its responsibility for minor irrigation works were initially indicated as devolved subjects (13th Amendment, 14 November 1987, item 9:1; 9:2 and 9.3, list I). The national Ministry of Agricultural Development and the Department of Agrarian Services were not at all pleased with this decision. They wanted to continue to operate at national level. Therefore, the Ministry filed a case in court to determine whether this subject should be in the devolved list or in the reserved list. The Supreme Court informed the Ministry of Agricultural Development in a letter of 22nd February 1991 that they could proceed on the basis that Agrarian Services was not a devolved subject.

“The Court has held that the matters dealt with in the Bill to Amend the Agrarian Services Act No. 58 of 1979 were all matters of national policy in regard to the rights and liabilities of owners and tenant cultivators [and farmer organisations], and thus fall within list two [reserved list]” (Attorney-General’s department, 22 February, 1991).

Paradoxically, in another letter to the Ministry of Public Administration, Provincial Councils and Home Affairs, the Attorney General explained that this applied to the Bill to Amend the Agrarian Services Act no. 58 of 1979, yet that the Department should be restructured so that the functions which fall within the legislative competence of a Provincial Council could be performed by a Provincial Agrarian Services Department.

Contrary to this later letter, between 1997 and 2000 the Department for Agrarian Services within the case study areas continued to operate

de facto under the national Ministry of Agriculture and Lands. Apart from the reluctance within the Department of Agrarian Services to transfer its powers to the Provincial Councils, the lack of institutional capacity at the Provincial Councils certainly did not assist a smooth devolution. This explains the limited involvement of the Provincial Irrigation Department in minor irrigation in the case study areas.

A confidential source indicated that the implementation was constrained by the inadequacy of funds and by institutional constraints, such as inadequate staffing, inadequate administrative capacity of the Provincial Councils, lack of clarity about the relationship with local government institutions, and conflict between political actors at different levels.

Other problems reported by several high-level bureaucrats included the lack of confidence and reluctance to co-operate between the civil servants and engineering staff appointed under the PA government and alleged sabotage by staff appointed by the UNP government⁶. A respondent from the Ministry of Agriculture and Lands stated:

“Apart from the programme on agrowells, most other tasks are not performed very well by the Ministry of Agriculture and Lands, or

⁶ At the Provincial Council elections in 1999, the PA gained a majority in all seven participating provinces. The outcome of the Provincial Council Elections and other elections is contested due to reported cases of ballot box rigging and pre-election violence. For more information see: *Final report of Alleged Violence on the 1999 presidential elections; Preliminary report on the April 1999 Provincial Council elections* by Centre for Monitoring Election Violence <http://www.lacnet.org/srilanka/politics/elections/cmev/>

non-existing, such as the co-ordination between the national and provincial level.

One of the reasons for this is that the UNP government established an Agricultural Development Authority (ADA) and appointed officers who were UNP supporters. The PA government feared that they were only continuing their propaganda activities in supporting the UNP while in their positions, and some were dismissed. That's why the co-ordination doesn't work properly" (fieldnotes Colombo, 2000)

The division of UNP-PA loyalties – mentioned in the example above - also affects the relationship between government officers and politicians. This will be discussed again in chapter 9.

A second attempt at devolution

Acting upon previous election promises, and in an attempt to solve the ethnic crisis and civil war once and for all, the Government of Sri Lanka again introduced a series of devolution proposals in August 1995. The discussion on these proposals went on for several years. Following the Presidential Elections in December 1999, on February the 26th 2000, one of the PA Ministers announced that – if the required majority in Parliament was not obtainable – the government might consider closing down the Parliament and reconvening it as a constituent assembly. Furthermore, if necessary for the implementation of the reforms, this would be accompanied by the closure of courts *and* the dismissal of any judge against it (see box 5.1). The Supreme Court was 'not amused', and the Minister was charged with - but later cleared of - contempt of court.

The column in box 5.1 was published in one of the English language newspapers in Sri Lanka, and is a parody on the situation described here. It directly criticises government interference with the judiciary. The “judge” Seeni Bola should be read as the Minister who made the remark. Blue is the colour of the People’s Alliance that won the Presidential Elections in December 1999 with a narrow majority of 51.1%.

Box 5.1: ‘The only court in session’

“In Paradise Island, most of the courts have been closed and the judges have been sent home. The only court in session is the Court of the People where Lord Seeni Bola presides and hears all cases. The court is in session. [...]

“Case Three”, called the Mudliyar “is a fundamental rights application by a judge who was sent home, challenging his dismissal”.

“Summon the judge” ordered Lord Seeni Bola. “What was the basis of the judgements given by you?” Lord Seeni Bola wanted to know.

“The basis, Your Lordship, is the law and the greater good of the people”.

“Tell me, how do you decide on the greater good of the people?”

“Why Your Lordship, that is based on what is right, what is moral and is legal.” Lord Seeni Bola laughed. “You are wrong” he said.

“But Your Lordship, that is how we have been taught to decide”.

“But you are wrong” said Lord Seeni Bola “You know that we, the Blues, represent the majority of the people, fifty one percent. So, for your judgements to serve the greater good of the people, they must be in our favour. You didn’t do that and that is why you were sent home”.

“Case four” the Court Mudliyar called. “No” said Lord Seeni Bola. “Court stands adjourned. I have to attend a cabinet meeting”



Source: *Sunday Times*, March 12, 2000, p. 11, 5th Column

After a series of revisions, debates and discussions, the PA government finally released a draft bill to the Parliament of Sri Lanka on the 3rd August 2000⁷. Under this draft constitution, agriculture, agrarian services (item 21) and regional irrigation schemes (item 24) were to come under the regional list, and thus under the responsibility of Regional Councils. The PA government entered into dialogue with the main opposition party in order to gain the support of the opposition required for a two-thirds majority. Despite long and intensive talks, there were many doubts on both sides whether an agreement could be reached. In the summer of 2000, a few days before discussion of the Draft Constitution in Parliament, it was withdrawn, as it was clear that the majority as required was not feasible at this stage.

5.4 Colebrook, the World Bank and the Ministries: soulmates?

Until the formation of a new cabinet following the Parliamentary elections in October 2000 (i.e. in the period when this research was carried out), three ministries were directly responsible for irrigation. One, the Ministry of Mahaweli Development⁸ is responsible for the conservation and management of water resources in the upstream and downstream areas of the Mahaweli river basin, for providing irrigation

⁷ The Constitution of the Republic of Sri Lanka Bill presented by the Minister of Justice, Constitutional Affairs, Ethnic Affairs and National Integration and Deputy Minister of Finance on the 3rd August 2000. [Http://www.priu.gov.lk/Cons/Constitution.html](http://www.priu.gov.lk/Cons/Constitution.html) or: <http://www.lacnet.org/srilanka/politics/devolution/doc033.html>

⁸ Originally the Mahaweli Authority of Sri Lanka, established in 1979.

facilities for agriculture, hydropower generation and other domestic uses. Secondly, the Irrigation Department (ID) of the Ministry of Irrigation and Power⁹ is responsible for the construction, operation and maintenance and rehabilitation of all the medium (80 ha – 400 ha) and major schemes (> 400 ha), which are not under the responsibility of the Ministry for Mahaweli Development. Finally, and most relevant to this research, the Ministry of Agriculture and Lands which is involved with:

- a. Land development policy and land use policy planning, such as *Jayabhoomi* Land grants, the Title Registration Programme;
- b. Institutional strengthening of farmer organisations and ASCs;
- c. Infrastructure development, such as minor irrigation, rural transport development, village tank rehabilitation; the agrowell programme;
- d. Crop production enhancement programme, agricultural insurance, national fertiliser scheme, agricultural extension services;
- e. Agricultural research, and agrarian research and training;
- f. Agro-enterprises and marketing through farmer companies.

Within the Ministry of Agriculture and Lands, the Department of Agrarian Services is *de facto* responsible for the operation and maintenance and rehabilitation of all minor irrigation schemes (see previous section).

In conformity with the World Bank's present infatuation with privatisation and market enterprise, the Ministry of Agriculture and

⁹ Now the Ministry of Irrigation and Water Resources.

Land and the Ministry of Irrigation and Power, both encourage private enterprise in their latest policy proposals. There is a strong focus on encouraging private sector participation in commercial agriculture and marketing.

“In order to meet the economic challenges of the new millennium, it is vital that subsistence agriculture is transformed into a profitable commercial venture. ... The concept of ‘New Agriculture’ encompasses diversification, market orientation, modernisation and profitable agro-based industries.” (Presidential Secretariat, Nov. 1999, no. 15).

Both ministries aim at a reduction in government intervention and government expenditure. Here we can observe similarities between Colebrook - who had similar views on state involvement and market enterprise according to Wijeweera (1988, p. 65), the World Bank, and the policies of the Ministry of Irrigation and Power and of the Ministry of Agriculture and Lands.

Despite the apparent similarities, there is an important distinction between the informally expressed views and the actual policies of the two Ministries. The Ministry of Irrigation and Power focuses on areas with the greatest economic potential. In their view, the population in areas with a high vulnerability to inadequate rainfall (and consequently low cropping intensities) will have to look for other means of income. Contrary to this, although the Ministry of Agriculture and Lands does officially propagate commercialisation, modernisation and private sector involvement; the Department of

Agrarian services concentrates primarily on subsistence agriculture and income generation for the rural youth.

The contrasts between the two ministries are distinct. The Ministry of Irrigation and Power, traditionally oriented towards engineering and construction, has integrated the concept of turning over the irrigation management with the institutional strengthening of farmer organisations in their programmes, and aims to transfer the irrigation management of all medium irrigation systems to farmer organisations by the year 2002. It presents itself as a streamlined organisation, and advocates economic viability and privatisation of engineering and agricultural services. With these characteristics it is able to attract funding from large donor organisations.

The Ministry of Agriculture and Lands, and the Department of Agrarian Services operates in areas with much lower economic viability, is less well organised and confronted with many claims of inefficiency and malfunctioning (at all levels). Agrarian Service Centres are poorly staffed and – apart from Divisional Officers– their staff are mostly absent¹⁰. On several occasions staff members of the Ministry of Irrigation and Power indicated that they were not impressed by the capacities available at the Ministry of Agriculture and Lands.

¹⁰ Divisional Officers are working for the Department of Agrarian Services whereas Agricultural Instructors are employed by the Department of Agriculture. The ASC also functions as the local office for field officers of the Agricultural Development Authority. Whether the high absenteeism is related to deliberate obstruction and loyalty to one's political party is not clear. Similar behaviour was observed among some Grama Niladharies.

Furthermore, the Ministry of Irrigation and Power seems to compete with the Department of Agrarian Services for donor projects. One of the decision-makers at the Ministry of Irrigation and Power said:

“There has been too much attention to irrigation and agriculture under minor tanks, when compared to the resettlement schemes and major irrigation schemes. This is not profitable. Donor organisations tended to rehabilitate the many bunds of tanks which had shifted during the course of centuries, and then call it a cascade, while in the past these tanks were never operational at the same time”. (fieldnotes Colombo, 2000)

“Much money has gone to the rehabilitation of tanks and irrigation systems which don’t have much potential, because they can’t cultivate each year even if the infrastructure is rehabilitated. Donor organisations now also begin to realise this. Traditional agriculture, restricted to mono-cropping or diversification, proves to be unable to provide adequate incomes and full employment from agriculture given the level of cropping intensity currently prevailing” (fieldnotes Colombo 2000)

The research in the case study areas indicate that the rehabilitation of minor irrigation systems still continues under existing donor programmes such as the World Food Programme. Nonetheless, the Department for Projects Development within the Ministry of Agriculture and Lands is very aware of the paradigm shift by donor organisations. One of its officials acknowledges that some donor organisations are not interested in their programme anymore:

“At this moment there are very few new projects. The funds from donor organisations and the National Planning Department have almost ceased. They think there is no scope for employment in the agricultural sector. The National Planning Department, as well as donor organisations are more interested in funding infrastructure projects.” (fieldnotes Colombo, 2000)

Apart from the focus on infrastructure projects, it is not unlikely that part of the reluctance of donor organisations is – at least to some extent – also related to the problems within the Ministry of Agriculture and Lands.

5.5 A changing institutional environment at local level

Subsequent governments from different political parties have put their mark on national development policies by reshuffling responsibilities between and within ministries, by relabelling positions and functions, and by the transfers of civil servants or the recruitment of new staff who are loyal to the ruling party. Apart from numerous shifts at ministerial level¹¹, functions at lower levels often change drastically, especially after a ruling party has been defeated. However, regardless of the relabelling of positions and functions, the subsequent chapters will indicate that these changes do necessarily affect the mechanisms at work within the society. The most important changes are:

- a. the establishment of Cultivation Committees in 1958;
- b. the establishment of Agricultural Production Committees and Agrarian Service Centres in 1972/1973;
- c. the provision for Cultivation Officers in 1979; and
- d. the provision for Farmer Organisations 1991.

Until 1958, a traditional irrigation headman (*vel vidane*) was responsible in each village for paddy cultivation and the operation and maintenance of the irrigation system. This position was inherited from the British colonial times and created by the Paddy Lands Irrigation Ordinance of 1856 (Perera, 1985, p. 48). He was selected by the farmers on the basis of family standing, 'experience', ownership of paddy land, literacy and his position within the village. He was officially appointed by the colonial administration. He received a payment in kind, the *salaris*, a fixed percentage of the harvested crop of all landowners. Unless farmers lost their confidence in the *vel vidane* and requested the British administration to replace him, the position was held for life.

Paddy Lands Act of 1958

Ande-tenants are tenants with a sharecropping arrangement. Under this arrangement, the landowner traditionally has paid (or provided) for the agricultural inputs such as fertiliser and agro-chemicals and the tractor rent. The tenant who cultivates the land has to pay the landowners 50% of the yield plus an extra share to repay part of the initial agricultural investments. *Ande*-tenants are not necessarily

¹¹ Which will not be addressed here. An overview of all these changes was provided early in 2000 on the official website of the Sri Lanka Government: <http://www.priu.gov.lk/>

landless, some of them are shareholders themselves. The Paddy Lands Act intended to regulate the relationship between landowners and tenants, and to protect the tenant by the provision that the landowner could demand only a maximum of 25% of the yield, instead of the usual 50%. The extent to which this has been effective will be discussed in chapter 7 (section 7.2).

The same act also provided for the establishment of Cultivation Committees. The Cultivation Committees consisted of elected representatives of farmers, responsible for irrigation and water management and the development of paddy cultivation at the village level. With the establishment of Cultivation Committees, the position of the traditional irrigation headman gradually disappeared.

Agricultural Productivity Law, No. 2 of 1972

Under the District Political Authority system, in 1972, a new law was approved. The Agricultural Productivity Law (No. 2 of 1972) provided for the establishment of Agricultural Productivity Committees. Under this law, ten members of the newly established Agricultural Productivity Committees were appointed on the recommendation of the Member of Parliament for the electorate. These committees were responsible for promotion and co-ordination of village level agricultural works and conflict management among farmers. (Ratnayake, 1992, p. 83). The Agricultural Lands Law (no. 42 of 1973) provided for the continuation of the Cultivation Committees.

One of the few changes which still survive was the establishment of Agrarian Service Centres (ASCs). These centres are responsible for

the co-ordination of agricultural services and the distribution of agricultural input. Their responsibilities include:

- Input supply to farmers (agricultural inputs);
- Strengthening of Farmer Organisations (13.000 FOs in Sri Lanka);
- Maintaining Paddy Land registers and Highland lists at the ASCs;
- Settlement of farmer disputes;
- Rural credits to farmers;
- Farmer training, especially with regard to Operation & Maintenance.

Agrarian Services Act, No. 58 of 1979

With this Act, the Cultivation Committees and the Agricultural Productivity Committees were replaced by Agrarian Services Committees. Additionally, the Act created the position of Cultivation Officer, responsible for (a) all matters connected with the cultivation of all agricultural lands irrespective of whether such lands were rainfed or fed by irrigation works, (b) all matters relating to minor irrigation works and irrigation management and (c) taking action in the case of trespassing of animals on agricultural lands and irrigation works. In addition to the Cultivation Officer, landowners could select from among themselves a person to assist the Cultivation Officer in his tasks, later referred to as the *yaya-representative*.

The position of Cultivation Officer has since been dissolved. In 1991, cultivation officers were appointed as local government officers, the

Grama Niladharies.¹² The loss of the position of Cultivation Officer resulted in a major setback in village agricultural development and a massive drain of agricultural expertise. To fill this vacuum, the PA government called into being the position of ‘farmer animators’ (*govi niyamakes*), who were mainly political nominees and much less capable of meeting their tasks. Their primary responsibility was to assist farmers and to collect the annual rent from farmers who have land under permanent leasehold arrangements. Recently, they have been renamed as ‘Farmer Research and Productivity Officers’.

Agrarian Services (Amendment) Act, no. 4, 1991

The Agrarian Services Amendment Act of 1991 was the follow-up and formalisation of a 1988 Cabinet paper on participatory irrigation management (see section 1.2). The objectives of this policy were to improve the productivity of the irrigation schemes through management by the farmers. The Act facilitated the establishment of Farmer Organisations. A farmer organisation is a village level organisation¹³ for management and decision-making concerning cultivation and irrigation of crops and lands in the command area of the common village tanks.

¹² In the aftermath of the second JVP insurgency, President Premadasa (1989-1993) launched a large poverty alleviation programme (the *Janasaviya* programme). He decided to strengthen this programme through its implementation by *Grama Niladharies*. He also doubled the cash value of food stamps, initiated a programme providing school uniforms and midday meals, and a programme to establish 200 garment factories in rural areas (Dunham and Kelegama, 1997, p. 182).

¹³ In four villages studied, the operational tasks of the irrigation system were managed by a *vel vidane*, either in addition to a farmer organisation, as a temporary solution while the farmer organisation was dissolved, or operating instead of a farmer organisation.

Co-ordination mechanisms

At present, there are various co-ordination committees in which local governmental organisations and farmer organisations are participating. The most important three committees are discussed below. The turnout at the meetings of these committees is usually quite low (sometimes below 50%). The reasons given for not attending the meetings range from communication problems, other duties, disinterest, to a lack of financial compensation for travel costs and travel constraints.

The Agrarian Service Committee Council¹⁴ (ASCC) at divisional level consists of the Divisional Officer, the Agricultural Instructor, the Animal Husbandry Officer, the Agricultural Development Officer and ten representatives (office-bearers) of Farmer Organisations at divisional level. The ASCC is responsible for the maintenance of the ASC buildings and advises the Divisional Officer in decision-making with regard to facilities for farmers, such as credit facilities, tractor rent, and training programmes for farmers and office-bearers.

The Agrarian Development Council meets once a month and consists of the same people as the ASCC plus all the govi niyamakes and a representative from each Farmer Organisation. Their task is to discuss issues related to farming, fisheries, animal husbandry, land problems, crop failure, tank rehabilitation and village rehabilitation.

The Divisional Agricultural Committee meets once a month at the Divisional Secretariat and consists of more than fifty officers,

¹⁴ Prescribed by the Agrarian Service Acts of 1979 (no. 58), and 1991 (no. 4).

including the Divisional Officer and the Agricultural Instructor, an officer of the Agricultural Development Authority, the Chairman and another member of the Pradeshiya Sabha, the Grama Niladharies of the Thulanas¹⁵ within the Division, govi-niyamakes, Samurdhi niyamakes, Samurdhi Managers, a representative from the Agrarian Service Committee Council, a bank manager and a police officer. Their task is similar to that of the Divisional Agricultural Committee to discuss issues related to farming, fisheries, animal husbandry, land problems, crop failure, tank rehabilitation and village rehabilitation. Information from this meeting is passed to the meeting of the District Agricultural Committee.

5.6 Government Programmes

The Guaranteed Price Scheme

With the Guaranteed Price Scheme (GPS) for rice, initiated in 1948, the government intended to stabilise paddy prices by preventing them falling below a guaranteed price and thereby increasing the domestic production of rice. Additionally, it would provide the government with the means to obtain rice from the local market for distribution under the rice-rationing scheme, and to maintain a degree of income equality between the agricultural and non-agricultural sector (Ratnayaka, 1992, p. 79). The GPS was administered by the Department of Agrarian Services until 1971, and then taken over by the Paddy Marketing Board (PMB) and involved the purchase, storage and milling of paddy.

¹⁵ A thulana (also referred to as a GN Division) consists of a cluster of villages.

Around 1996, the Paddy Marketing Boards (including in Anuradhapura) ceased to purchase paddy, as they faced substantial financial deficits. The losses were mainly the result of mismanagement, corruption and spoilt stocks. They purchased for high prices (above the market price) and sold at low prices. The maintenance of paddy stores was not efficient, the rice distribution system was not efficient and the rice was of a low quality at the local distribution points (see Dharmaratne and Hathurusinghe, 1999, p. 7). In 1990, the UNP government decided to close down the PMB. It sold 61 buildings and reduced the staff from 2560 to 550. Dissolution of the PMB was pressed by the World Bank, which was in favour of further privatisation of the agricultural sector. The official resolution for the dissolution of the PMB was subject to fierce political debate in Parliament and defeated in April 2000 (see box 5.2).

Box 5.2: Abstract from the minutes of the debate in Parliament on the dissolution of the Paddy Marketing Board

“Vasudeva Nanayakkara (PA - Ratnapura district) said:

“What has happened today? The paddy prices have plummeted to Rs. 6.00. This is what the World Bank wanted. The reason to dissolving the PMB so hastily is because the government has to attend the [World Bank] group meeting in May. It is to please the World Bank that all this is done. The Parliament nor the Cabinet do not know the dealings between the World Bank and the Finance Ministry. It is absurd to say that the PMB is to be closed because of corruption. Then the Cabinet should be dissolved first of all because it is the highest place of corruption.”

Source: ‘In parliament on Wednesday: Dissolution of the Paddy Marketing Board and Appointment of liquidators’ by: Nanayakkara, W.; Abeywardena, K. in: *The Island, Thursday 6th April, 2000, p. 2*

Commercial Wholesale Establishments (CWEs) are supposed to take over some of the tasks of the PMB, but they are not seen by farmers, government officers or by the politicians as adequately equipped to do so.

The agrowell programme

The Ministry of Agriculture and Lands has an island wide programme on agrowells. More than 12000 agrowells have been constructed since 1989, when the Ministry started with pilot projects. By April 2000, 6000 agrowells had been constructed in Anuradhapura district under the agrowell programme, or 50% of the total number of agrowells planned across the Sri Lanka. The wells are implemented through the Agricultural Development Authority, the PRDP, and through the provincial Ministry of Agriculture. The Agricultural Development Authority receives annually Rs. 35 million for implementation of the programme.

The programme aims to develop dry-zone rain-fed agriculture by the construction of open shallow dugwells for the use of groundwater as a source of supplementary irrigation. It provides a subsidy of Rs. 30,000 for the construction of a private agrowell. The conditions are that the beneficiaries should first dig the well themselves, according to particular specifications. Upon inspection of the agrowell, subsidies are granted to applicants. The initial expenses (which are not subsidized) can add up to approximately Rs. 30,000 for renting machinery and hiring labourers. The selection of beneficiaries is made by the agricultural officers at the AGA office.

Additionally, a number of other organisations have been involved in agrowell development, including: the Ministry of Social Services (100 wells in Anuradhapura); IRDP projects; the Ministry of *Samurdhi*; and several non-governmental organisations (NGOs) such as *Sarvodiya*.

Land titles and the Jayabhoomi programme

Land development, land tenure and colonization have always been at the centre of Sri Lanka's most heated political debates, and land ownership has been a source of income generation and wealth accumulation. This is not only in recent times, as can be seen in the following fragment:

“The Governor and the Council, the military, the judges, the clergy and one half of the civil servants penetrated the hills and became purchases of crown lands. The East India Company's officers crowded to Ceylon to invest their savings and capitalists from England in every packet... The rush for land was only paralleled by the movement toward the mines of California and Australia” (Sir Emerson Tennant cited in Ganewatte, 1994, p. 9).

The Land Development Ordinance of 1935 is described as a landmark in terms of land tenure, and was formulated by the government as an instrument for the distribution of crown land, making it available to the rural poor farmers and middle-class population for systematic development. The Minister of Agriculture and Lands¹⁶, D.S. Senanayake wrote at that time:

¹⁶ Later to be the first Prime Minister following Independence.

“It is the duty of Government not merely to protect and conserve the land: it is now recognised that it is no less its imperative duty to alienate it in the best possible manner with a view to advancing the prosperity of the people of the country” (D.S. Senanayake, 1935, p. 3).

The Land Development Ordinance provided lease of crown land in perpetuity, under the proviso that the allottee was not allowed to divide the land among his children (to prevent fragmentation), nor to mortgage the land, or to dispose of it without government permission (Ganewatte, 1994, p. 11). Some of these conditions have been removed with amendments to the Land Development Ordinance¹⁷. At present, the government issues several types of deeds for land: short-term leasehold, permanent leasehold and freehold and *Swarnabhoomi* / *Jayabhoomi* grants¹⁸: Applications for land are channelled through the GN and the Divisional Secretariat. Freehold ownership is a clear private title, with rights to sale, mortgage and fragment. Long-term leasehold reflects land with a licence for permanent cultivation or development. Annual permits or LDO licences for cultivation and occupation are issued by the Divisional Secretary.

Swarnabhoomi (1982-1994) and *Jayabhoomi* land grants (1994/ – present) provide a more permanent land title to applicants by replacing short-term permits with a grant for a private title. Under these regulations, encroachment on to land, proof of the actual exploitation of the land and a temporary permit are required in order

¹⁷ Land Development Ordinance, No. 16, 1969.

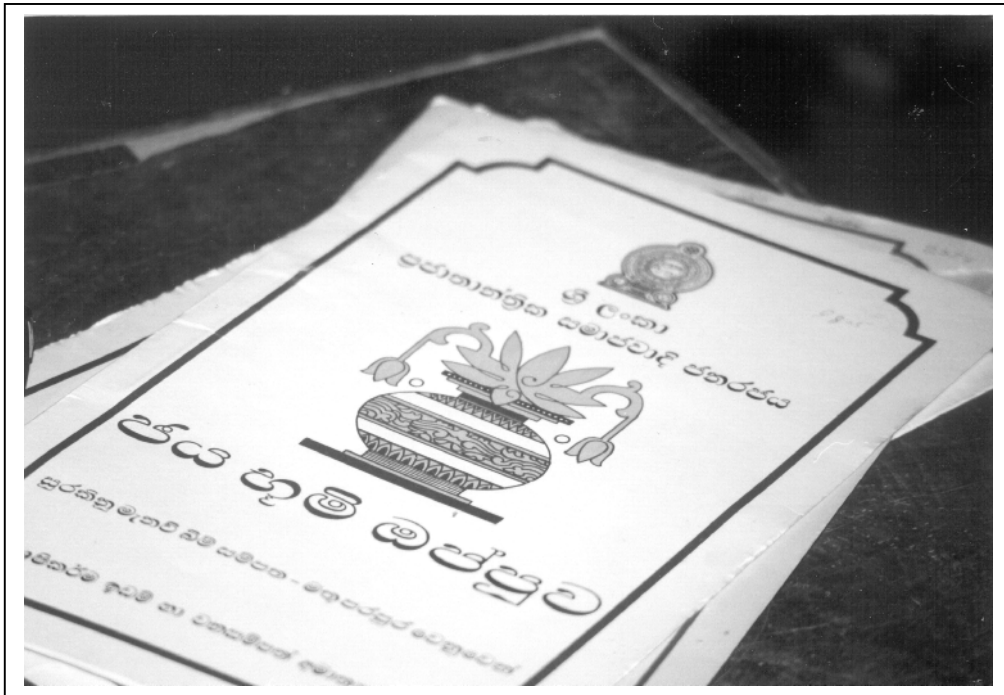
¹⁸ Several other types, which are less relevant for the purpose of this study are: long-term lease under the State Land Ordinance (e.g. 30 years for development of industrial activities in Eppawala); temple lands, and wastelands.

to obtain a full title to the land. *Pimbure* covers ancestral lands of a group of landowners which are usually located in the original part of the command area. Their names are registered at the secretariat but without private titles.

There are four types of allotments: homesteads or homegardens, highlands, paddy lands, and chena lands. Chena fields are encroached-upon state lands (either classified as ‘wastelands’ or as ‘forest reserve’). Although cultivation on chena is illegal without a permit, the government tolerates this cultivation as it provides farmers with an important additional source of food and income. Paddy land refers to land in the command area of a tank, although land in homesteads or highlands may also be used for paddy cultivation. In the case study areas, all paddy land is owned either under freehold (mostly in purana wela), pimbure (purana wela), permanent leasehold (in purana wela and akkara wela) or Jayabhoomi titles (mostly akkarawela).

Highlands is land at slightly higher elevation, usually located to the left or right side borders of the command area, or land outside the village boundaries, sometimes irrigated by means of agrowells. Highland are usually cultivated with annual permits or without any permit. Homesteads refer to the residential areas on which the houses of the owners are located. The homesteads are usually freehold or permanent leasehold, but, in some cases encroached land, previously encroached land with an annual permit, or land with a Jayabhoomi title.

Photo 5.1: Jayabhoomi certificate



Credit facilities

There are several organisations through which farmers can apply for credits, the Agrarian Services Centre, the Divisional Secretariat, the banks, farmer organisations and private traders (*mudulalis*).

Some farmer organisations provide seed-paddy and agro-chemicals to their members on a credit basis. This enables them to obtain agricultural inputs before cultivation, and pay back immediately after harvesting. Similarly, mudulalis provide agricultural inputs on a credit basis under certain conditions, and again these expenses are then deducted from the earnings at the end of the cultivation season. Some mudulalis provide credit through an innovative yet exploitative form

of sharecropping (ande-tenancy). If farmers do not have sufficient financial means to start cultivation, the mudulali may provide the farmer with all the agricultural inputs and finances required and, after harvesting, the farmer pays back half of these expenses plus 50% of the yield.

To obtain agricultural credits from the Department of Agrarian Services or from a bank, farmers need the approval from the Divisional Officer. When farmers request individual credits, a credit committee within the farmer organisation may advise the Divisional Officer on the agricultural qualities of the farmer, his or her financial situation, and the chances he or she will pay back on time. Without the signature of the Divisional Officer or the recommendation of the Farmer Organisation, farmers are unable to get any loans from the banks under the Agricultural Credit Scheme.

Agricultural credits from the Divisional Secretariat also require the recommendation of the farmer organisation. The main criterion for agricultural credits is the ownership of paddy land in the command area of one of the common tanks. In some areas, the Agrarian Services Centre has terminated its credit facilities, due to the high number of defaulters and outstanding debts.

Crop Insurance and Farmers' Pension Scheme

The Agricultural Insurance Board handles various insurance schemes; (a) Crop Insurance Scheme, (b) Livestock Insurance Scheme, (c) Farmers' Pension Scheme and (d) Fishermen's Pension Scheme. For the purpose of this study, the first insurance scheme is by far the most relevant, as it provides farmers with insurance against crop damage

and crop failure. Crop damage and failure are not only related to weather conditions, but also caused by cattle and elephants.

Poverty alleviation programmes

Recent governments have put much emphasis on poverty alleviation programmes. Subsequent chapters will demonstrate how these programmes are related to farmers' livelihoods and to irrigation management. President Premadasa (1989-1993) introduced the *Janasaviya* movement as a poverty alleviation programme. He aimed to alleviate poverty by a welfare scheme and a savings programme. Identification of recipients was based on socio-economic surveys executed by field officers, the Grama Niladhari and Janasaviya agents. The agents were appointed by regional politicians, and paid for by the Divisional Secretariat.

The allowance provided through the *Janasaviya* programme was linked to obligatory participation (*shramadana*) in for example road construction, cleaning and strengthening of tank bunds, and cleaning of the roadside. Only people with a monthly income below Rs. 700 were eligible for the programme. Each household received Rs. 2,500, which included Rs. 1,000 for direct subsistence, Rs. 458 to be deposited in a household savings account for times of need and Rs 1,042 placed in a separate account in the National Savings Bank (Central Bank of Sri Lanka, 1990, p. 71)¹⁹. Under the Janasaviya

¹⁹ According to some of the respondents, the monthly allowance paid to a family was only Rs. 1475, of which Rs. 475 had to be saved each month. After two years, the recipients would get Rs. 250 interest per month from savings. In Walpola, respondents mentioned receiving food stamps worth Rs. 250 – Rs. 1000, depending on the family size.

programme, governmental organisations not only provided money and a savings programme, but also initiated land consolidation and tank rehabilitation. In Kulikkada, the Grama Niladhari promised highland to 60 Janasaviya beneficiaries (heads of households) in the village, and informed them that they could apply for a licence or deed at the Divisional Secretariat. Upto 1999, no deeds had yet been granted. However, some tanks have been rehabilitated under the '15,000 project' of the Janasaviya programme.

A similar programme was initiated by the PA government in 1994. The *Samurdhi* programme aims at poverty alleviation through the involvement of the rural poor in development of rural infrastructure and rural enterprise. Samurdhi mobilisers, most of whom are political nominees, are responsible for the selection of (pro-PA) beneficiaries. Participation in shramadana activities is obligatory for recipients, but voting for the ruling party is 'appreciated'. The allowance again depends on the size of the family. For a family of one or two persons, the monthly allowance is Rs. 250, with 3 family members Rs. 500, and with more than 3 family members it is between Rs. 500 and Rs. 1000. Of the allowance paid to recipients, a monthly deduction of Rs 25 is taken for insurance.

The People's Bank provides loans to the leaders of small beneficiary groups for common works, agriculture, animal husbandry or cultivation of OFCs; and individual loans to rural enterprises (between Rs. 5000 and Rs. 50,000). The leaders of the small beneficiary groups gather as a '*Samurdhi balekaya*' (Samurdhi taskforce) at the GN divisional level. In some areas the facility of providing loans to small groups has been terminated due to the lack of repayment.

Under the Samurdhi programme, the government provides money through the divisional secretariat, through the decentralised budget, through Urban and Municipal Councils and through Pradeshiya Sabhas for village improvement, such as cleaning of tank bunds, desilting tanks, and road rehabilitation. As of April 2000, approximately 4000-5000 tanks had been rehabilitated under the Samurdhi programme.

The latter government scheme provides payments through a drought relief programme, the *Sanahadare* programme. This programme was also based on participation in community work in return for payments. Fifteen days of participation (mornings only) provides Rs. 1200 for 5 family members; Rs. 900 for 3 or 4 family members; Rs. 600 for 2 family members and Rs. 300 for one person. The monthly income for recipient families should be less than Rs. 2000, and the cultivation of seasonal crops should have been disrupted or damaged for at least two consecutive seasons due to drought. Furthermore, they should have no alternative source of income other than agriculture or related activities, and their crops should not be covered by any insurance scheme. Officially, Samurdhi and Janasaviya recipients are not eligible for extra relief under this scheme.

All three programmes have received severe criticism, for being ineffective, heavily politicised and abused by officers. In the case study areas, these influences were clearly visible (see chapter 9). In an effort to clarify the current government's position on poverty alleviation, the Minister of Sports, Youth Affairs and Samurdhi, gave his view on his concerns [...] with the poor:

“In our studies, we have found there are several types or categories of the poor. One category is those who could escape or get over poverty if investment capital is provided to them. They have the desire, dedication and strength to do so. There is another category who due to poverty itself are habitually lazy. It is necessary for those people to be weaned of this virtual addiction to laziness and lack of initiative, and provide them with investment capital... There is another category, who due to poverty itself have become seriously addicted to liquor and gambling. They amount to about 30 or 34%” (Business Today, April 2000, p. 39).

Despite his concern for the social impacts of alcohol and gambling, a key feature of the same Samurdhi programme is the Samurdhi lottery which helps to fund the social security allowances under the programme. In 1999, the net profit of this lottery was Rs. 200 million (US\$ 2.7 million) after meeting all expenses.

Protection against wild animals

The government’s involvement in providing facilities to the farmers is not restricted to the ineffective guaranteed price scheme, crop insurance, rural credits, pension schemes, drought relief and social security. The government is also concerned with the farmers’ vulnerability to elephants and other wild animals, particularly in border areas. To protect their crops, farmers can apply for shotguns and a license through the Grama Niladhari, the Divisional Secretariat, the Government Agent or with a letter of recommendation from a Member of Parliament.

5.7 The farmer organisation in the institutional setting

The farmer organisation is embedded in the institutional setting, which consists of several layers and competences as described in previous sections. The figure below provides an overview of those organisations which are of direct relevance to farmers in minor irrigation systems in the case study areas. The Provincial Councils were only marginally involved in minor irrigation at the time of the study. The *Pradeshiya Sabhas* are the locally elected authorities charged with the regulation, control and administration of all matters relating to public health, public utility services and public thoroughfares within the Pradeshiya Sabha Area²⁰.

Requests for rehabilitation under the Samurdhi Programme, and applications for subsidies under the Agrowell Programme are channelled through the Divisional and District Secretariat and to an extent through the Pradeshiya Sabha.

In 2000, there were 40 Agrarian Service Centres (and 37 Divisional Officers) in the Anuradhapura District. The responsibilities of the Agrarian Research Centres were described in section 5.5.

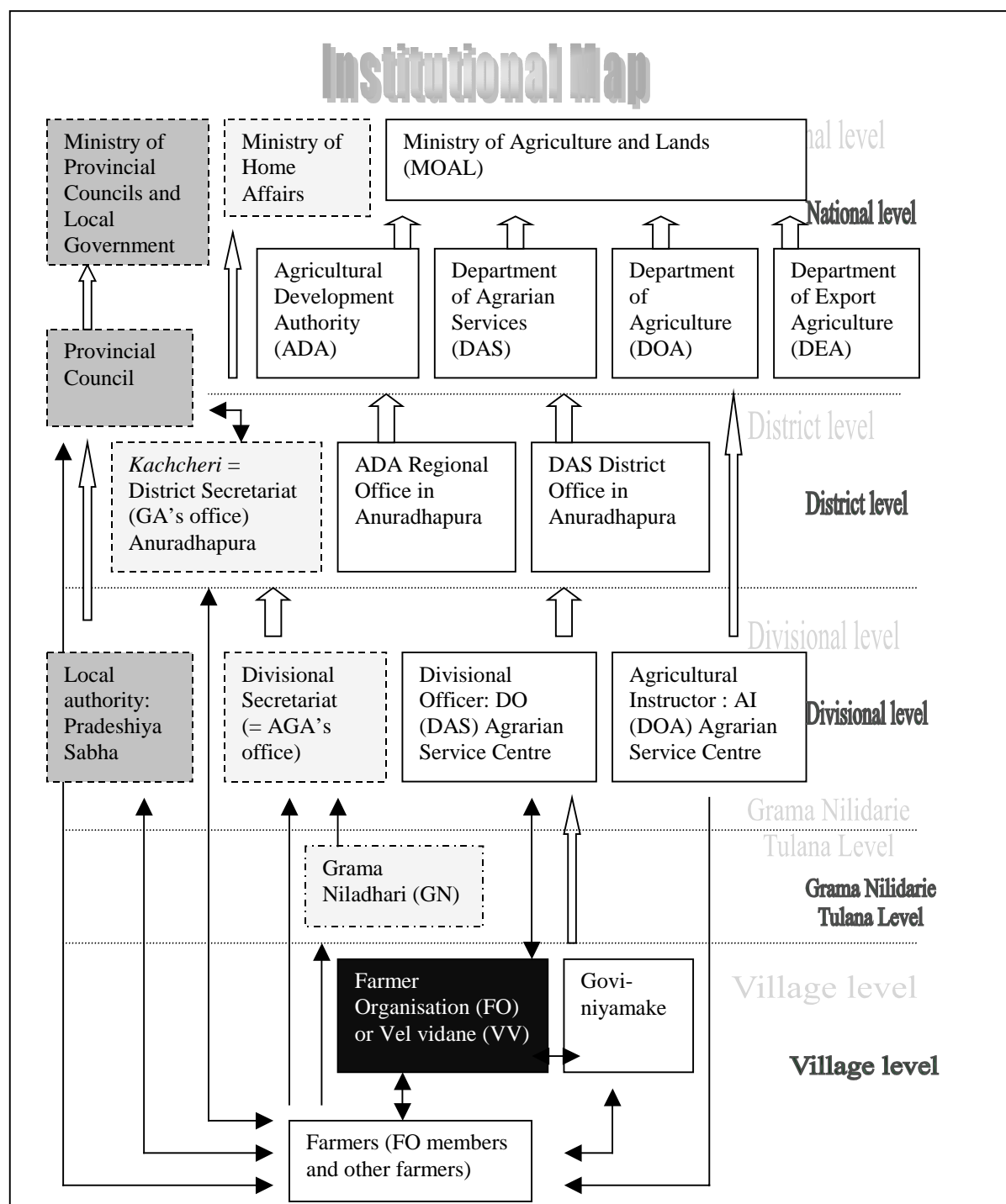
The Divisional Officer (DO) plays a central role in the contact between the government and farmer organisations at the divisional level. The main tasks of the DO are: (a) contact with the office-bearers of the farmer organisation about the organisation and timing of the kanna meetings; being present at the kanna meetings; (b)

²⁰ Pradeshiya Sabhas Act, no. 15, 1987, art. 3.

implementation of decisions taken in kanna meetings which require legal follow-up; (c) assisting farmer organisations and solving problems between farmers; (d) stimulating farmers to cultivate the entire command area; (e) establishing arrangements for maintenance with the farmer organisation that has responsibility for minor repairs and maintenance; (f) rehabilitation of tanks and the co-ordination and implementation of rehabilitation projects; (g) providing facilities to farmers through the farmer organisation; (h) collecting leasehold tax (*akkara lease*) from land under permanent leasehold through the govi niyamakes; (i) acquisition of funds for maintenance of the Agrarian Service Centre building; (j) if requested by farmers, writing letters of recommendation for the provision of assistance for agrowells to the Agricultural Development Authority and letters of recommendation for credit to the banks; (k) participation in meetings of various organisations; (l) preparing annual work plans.

The District Office of the Department of Agrarian Services is responsible for the construction and rehabilitation of minor irrigation systems, training services, and for providing agrarian services to farmers. The staff directly involved in these tasks consist of Technical Officers/ Technical Assistants (TO/TA), engineers and Institutional Organisers (IO).

Figure 5.1: Institutional setting of the farmer organisation



Ch. 6 Livelihood strategies

“It was August, in the scorching heat of summer. The entire land was in the throes of a haze of heat. The winds were dry and biting into the skin and the sky was overcast with the incessant smoke of forest fires. The mid-day sun was blinding. Despite these conditions the land had to be prepared for cultivation. The people had to carefully burn the scrub jungle..., toil hard to clear the debris, make fences to ward off wild animals, find seed and prepare to cultivate.” (Karunaratne, 1998, p. 107)

This quotation is illustrative of the harsh conditions under which the population in the case study areas tries to make a living. In his thesis on the village *Pul Eliya* – located only few kilometres from Walpola – Leach was very clear about the driving forces for members of the farming community:

“Here again the ideal model of society and the empirical facts are distinct [...] the Pul Eliya community does not only operate within an established framework of legal rules, it also exists within a particular man-made ecological environment [...] The interpretation of ideal legal rules is at all times limited by such crude nursery facts as that water evaporates and flows downhill.” (Leach, 1971, p. 9).

It is in this context that this chapter will look at the livelihood strategies employed by households which are strongly motivated by seasonal vulnerability and the unpredictability of income-generation through cultivation (see chapter 4). The following sections elaborate

in more detail on how the livelihood strategies of farmers are geared towards a reduction in vulnerability and towards an increase in income security through other income generating activities. This chapter does not set out to give an analysis of the livelihood strategies, but serves merely as an overview providing information that will be helpful in understanding the strategies discussed in chapters 7, 8 and 9. To facilitate understanding, some key-words should be kept in mind for the following chapters: access to labour, credits, subsidies, jobs, and other means of income-generation.

The Sustainable Livelihood Framework refers to two sets of strategies: strategies to influence access to and control over resources, and strategies to reduce vulnerability (chapter 2, section 2.9). The combination of strategies discussed here aims to reduce vulnerability and insecurity. There are five related livelihood strategies among landowners, cultivators and tenants which can be derived from the case study material. These are:

1. Subsistence agriculture in combination with cash crop cultivation;
2. Minimisation of investments, and maximisation of profits from cultivation;
3. Securing access to means of production;
4. Securing income generating opportunities;
5. Acquisition of land.

The subsequent sections (6.1 to 6.5) will discuss each of these strategies in turn¹. However, before continuing with the overview of strategies, it is helpful to provide background information with regard to some of the categories of farmers. A more detailed categorisation of individual farmers will be provided in chapter 8. At this stage, such classification would be rather excessive, in particular because this chapter primarily focuses on households, rather than individual farmers. In this chapter, four groups will be distinguished. The last group is specifically mentioned because they face higher expenses for cultivation if they are unable to rely on male relatives for assistance. The four groups (categories) are:

- a. Households with more than the average acreage² of paddy land, often divided among several tanks, and that have equipment (tractor, water pump) and / or means of transport (tractor, lorry, truck). This applies to 3% - 5% of the households within each village (rH-MoP);
- b. Households with near average acreage of paddy land, regular opportunities for cultivation (approximately once a year), but no control over means of production other than land. (aH-nMoP);
- c. 'Vulnerable' households: households who have land in areas that suffer chronically low cropping intensities, households with less than one acre of paddy land and no control over means of production other than land, or are landless (vh-nMoP);

¹ Because of the overlap of strategies among different categories of farmers, the choice is made to present the findings per strategy, and not per category of farmers.

² Average acreage is between 1 and 2 acres of land.

- d. Female headed households³ with average acreage of paddy land, regular opportunities for cultivation, but no control over means of production; female headed households who have land in areas with chronically low cropping intensities; female headed households with less than one acre of paddy land and no control over means of production other than land; and female headed households without land (fhh-nMoP).

The categorization of landless together with landowning households in the third category is quite unusual but can be justified as follows. Families with less than one acre of paddy land and families with land in areas with chronic low cropping intensities are almost as dependent as landless farmers on credits, day-labour opportunities, additional employment or other means of income generation. Without other means, it is almost impossible to survive, as will be shown in section 6.2 where an example is given of the costs of cultivation and the annual income from cultivation for a female headed household. In some years, they may be able to earn a reasonable income from cultivation, but in most years, the income from cultivation is too low to survive.

Kabeer emphasises that there is considerable semantic confusion due to interchangeable uses of concepts such as access, ownership, entitlement and control. She indicates that various authors have interpreted control in terms of either (a) ownership; (b) decision-

³ In addition to widows and divorced women, there are also a few *de facto* female heads of household whose husbands are either not present (due to temporary jobs elsewhere and temporary migration), or suffering from a chronic disease or is disabled.

making; (c) control in relation to self-reliance and (d) control as choice (Kabeer, 1999, p. 444-445). Control is defined in this thesis both in terms of ownership and authority (in terms of decision-making with regard to the use and household management of resources). For a more detailed discussion on property and control, several other authors can be consulted, such as Parkin (in: Giddens, 1982), Amartya Sen (1985), Dasgupta (1993).

6.1 Subsistence agriculture in combination with cash crop cultivation

Paddy is cultivated both for home consumption and as a cash crop. Due to the large water requirements, it is cultivated predominantly in the command areas of tanks, but there is also some additional paddy cultivation in a few home gardens or highlands that border the command areas. Due to the soil typology of the land in the command area, there is only a limited range of crops that can be cultivated in this area. In addition to the cultivation of paddy in the command area, almost all farmers cultivate a variety of other food crops in chena fields, home gardens or highland, such as fruits, vegetables, pulses and grains. These other field crops are cultivated to supplement their food requirements and to be sold as cash crops to the market. Due to the rising costs of living and debts acquired since the early seventies, a shift has occurred from cultivation of crops for home consumption to cultivation of cash crops. The most common cash crops cultivated in chena, highlands and home gardens are: chilli, aubergine, maize, sesame, black gram, cowpea, pumpkin, soybeans, bananas and mangos.

The choice of cash crop is determined by several considerations, such as prices, and the predictability of prices, personal experience and experience of other farmers, crop requirements (in terms of water, soil, and agro-chemicals) and labour input. Table 6.1 below gives an overview of the weight given to the various factors in the choice of crops according to one of the respondents. This table shows that the price of seeds and agro-chemicals, the expected price and its predictability of the agricultural products are important considerations in the choice of crops. Based on these considerations, one would expect that farmers would be eager to use the option of selling their output to the Paddy Marketing Board (PMB), and that farmer organisations would be active in collective arrangements with the food processing industry, to get a guaranteed price for the crops other than paddy. Both expectations proved to be unrealistic.

The choice - before the closure of the PMB in Anuradhapura in 1996 - not to sell their stock to the Paddy Marketing Board but rather to the mudulalis was based on several considerations. First of all, the mudulalis were closer than the co-operative shops or the PMB, which made transport easier. Moreover, many households had credits from the mudulalis for agricultural inputs. They were compelled to sell their paddy to the mudulali even if they got a lower price from the mudulali than from the Paddy Marketing Board⁴.

⁴ Prices paid by merchants fluctuate either below or above the Guaranteed Price, and they pay according to the variety. 1999 prices from the *Mudulali* were: Naadu: Rs. 9 per kg. (3 - 3½ month variety); Red naadu: Rs. 20 per kg (4 months variety, small supply); short term Samba (Rs. 9 per kg., 3½ months); long term Samba (Rs. 12.50 per kg , 4 months).

Table 6.1: Relevance of various factors for choice of crops

<i>Factor</i>	<i>Not important</i>	<i>Partly Impor- tant</i>	<i>Very Impor- tant</i>
Demand for product among local population		√	
Location of the nearest market to sell product	√		
Presence of corporate buyers	√		
Supply/competition by other farmers	√		
Opinion of other farmers		√	
Experience of other farmers with the crop			√
Personal experience in cultivating a crop			√
Water requirement and water availability			√
Suitability of the land available for the crops			√
Soil conditions and fertility		√	
Risks of plant diseases		√	
Requirement to apply fertiliser, pesticides etc		√	
Local availability of the required seed varieties, fertilisers, pesticides and weedkillers			√
Prices of the seed varieties and agro-chemicals			√
Risks of loss due to animal consumption			√
Need to hire tractors; rate of renting tractors		√	
Market price at start of cultivation season		√	
Expected market price after harvesting			√
Predictability of the market price		√	
Guaranteed minimum price for selling			√
Vulnerability of yield to drought conditions		√	
Reliability of the yield			√
Access to loans or credit	√		
Labour input required		√	
Possibility of using input family labour			√
Storability	√		
Domestic consumption			√
Less input more yield			√

The co-operative shops purchase paddy (on behalf of the Paddy Marketing Board) only after the Sinhalese New Year in April, whereas the farmers are expected to repay their debts before the New Year. Equally important, they need money to buy new clothes and gifts for relatives and friends to celebrate the New Year.

With regard to the second expectation, it was observed that in only a few cases did the farmer organisation act on behalf of the farmers to establish a collective arrangement for the purchase of their products. These were not always successful as can be seen from the following example:

“The farmer organisation was supposed to purchase soybeans from the farmers and to sell them for a good price to a company in Galenbindunuwewa. This company processed beans into various soy-products. The marketing officer who acted on behalf of the farmer organisation and the International Water Management Institute (IWMI), agreed a price with this company.

Despite this arrangement, the company approached individual villagers to purchase their yield directly for Rs. 18.50 per kg, whereas the Farmer Organisation promised to pay them only Rs. 18.00 per kg. The villagers started to wonder whether the marketing officer was making a profit of Rs. 0.50 per kg. for his own benefit, as the market price for soybeans was also Rs. 18.50. When they expressed their doubts, the marketing officer and the office-bearer of the farmer organisation lost their temper and chased the company away because it had not acted as agreed. Because of the argument between the company and the marketing officer, the company did not purchase the yield from the farmers or from the farmer organisation, and the stock

of soybeans was finally destroyed by mice” (fieldnotes Padikkaramaduwa, 1999).

This experiment left the farmers in Padikkaramaduwa with debts, after the processing industry refused to purchase the stock.

6.2 Minimisation of investments and maximisation of profits from cultivation

Although all households aims to maximise profits from cultivation, one should make a distinction between the strategies of the most vulnerable groups of landowners, and the groups who have more food and income security through easier access to, or control over, means of production. As indicated in the introduction to this chapter, the two most vulnerable groups include female headed households, households with small plots of land in areas with chronically low cropping intensities, and those families with less than one acre of paddy land and limited access to means of production. Their strategy can be characterised as minimising investments. Risk avoidance in cultivation is inherent to their vulnerable position. They are unlikely to risk high investments, or to start cultivation when there is a significant risk of crop failure. Farmers with easy access to, or control over, means of production are able to invest more and to take more risks (moral hazard in economic terms). Their fallback position in the event of crop failure is considerably better than that of the first group.

Having said this, it is interesting to consider the actual agricultural investments involved. The agricultural investments have increased

considerably since the introduction of the High Yield Varieties and the increased mechanisation of agriculture in the seventies. Before the introduction of High Yield Varieties - when ploughing, levelling and threshing were still done by buffaloes rather than tractors - the costs of cultivation ranged from Rs. 50 to Rs. 100 per acre. The farmers separated off part of the paddy as seed paddy for the following year and they hardly made any use of fertilisers (except for the dung and urine from buffaloes) or agro-chemicals. For the use of buffaloes for ploughing, levelling and threshing, farmers paid 40 - 50 kg. of paddy per acre⁵ to the buffalo owner. The cultivation of traditional varieties is not longer possible due to the disappearance of these varieties after the successful introduction of High Yield Varieties⁶.

At present, the expenses for paddy cultivation range between Rs. 5000 and Rs. 12,000 per acre⁷. Tractor rents, agricultural inputs and labour charges are expensive. The charges⁸ differ somewhat among the case

⁵ 2 to 2½ bushels per acre. 1 bushel is almost 21 kg.

⁶ The government introduced these varieties to the farmers through Agricultural Extension Officers, and by subsidising agricultural inputs. The subsidies were later greatly reduced. Fertiliser (*Urea* for paddy cultivation) is still subsidised and heavily promoted through the National Fertiliser Scheme.

⁷ These figures are based on information from respondents. Dharmaratne and Hathurusinghe (1999, p.10) estimate Rs.12,000/acre under major schemes.

⁸ These are approximately: ploughing: Rs. 1200; levelling (by tractor): Rs. 1800; making field bunds with the help of labourers: Rs. 800 (1 day, 4 persons); seed paddy: Rs. 1000; sowing: Rs. 800; fertiliser: Rs. 1700; agro-chemicals: Rs. 1500; harvesting: Rs. 1500; threshing: Rs. 1200, cleaning canals, fencing, building watch huts and watching at night at a rate of around Rs. 150 - Rs 200 per labourer per day. Some respondents did give lower prices for the agricultural inputs. At the time of the study, the exchange rate was approximately: Rs. 70= 1 US\$.

study areas and depend on the type of seed paddy, the type and amount of fertiliser and agro-chemicals used, the use of hired labour, and the choice between manual levelling or levelling by tractor. In a good *maha* season, the yield ranges between 2000 and 2600 kg. per acre (100 – 125 bushel/acre) as compared to 1250 or 1460 kg. per acre (60 or 70 bushel/acre) with traditional rice varieties.

A simple calculation immediately illustrates the vulnerable position of female heads of households who have no male relatives or relations (neighbours, friends) in the village on whom they can rely for ploughing, fencing, watching the fields at night and threshing.

A widow with 3 children to take care of, who has 1 acre of paddy land, will probably need between 700 and 800 kg. of rice per year to feed herself and her 3 children⁹. Assuming that the yield from her plot is 2000 kg. of rice (which is appropriate in a rather good season), this leaves her with 1200 kg. – 1300 kg. of rice to sell. Assuming she chooses to do the levelling herself (manually), to sow herself, and to participate with others in reciprocal exchange of labour (*attam*) for harvesting, then her expenses are still likely to range between Rs. 7000 and Rs. 8000. If she is not able to transport the paddy to the nearest town, she then depends on the mudulali to collect it from her house for a lower price than the market price. If she gets Rs. 9 per kg.,

⁹ According to estimates by some of the respondents, the annual amount of rice required for a family with 2 parents and 3 children ranges between 900 and 1100 kg. of rice. Estimates based on average consumption (Consumer Finance Surveys, Central Bank of Sri Lanka) indicate a lower per capita consumption, a little over 100 kg. per capita per year (see Dharmaratne and Hathurusinghe, 1999, p. 10; Mapa, 1999, p. 3).

this means that she will receive Rs. 10,800 to Rs. 11,700. Deducting her initial costs, this leaves her with an annual income of Rs. 3800 to Rs. 4700 (US\$ 54 or US\$ 67) from paddy-cultivation. No wonder that she is not eager to replace family labour with hired labour, and that she chooses to minimise the use of tractors¹⁰.

Maximising the use of family labour by spreading labour

Maximising the use of family labour is a common strategy among the most vulnerable group of landowners (see photo 6.1 and 6.2).

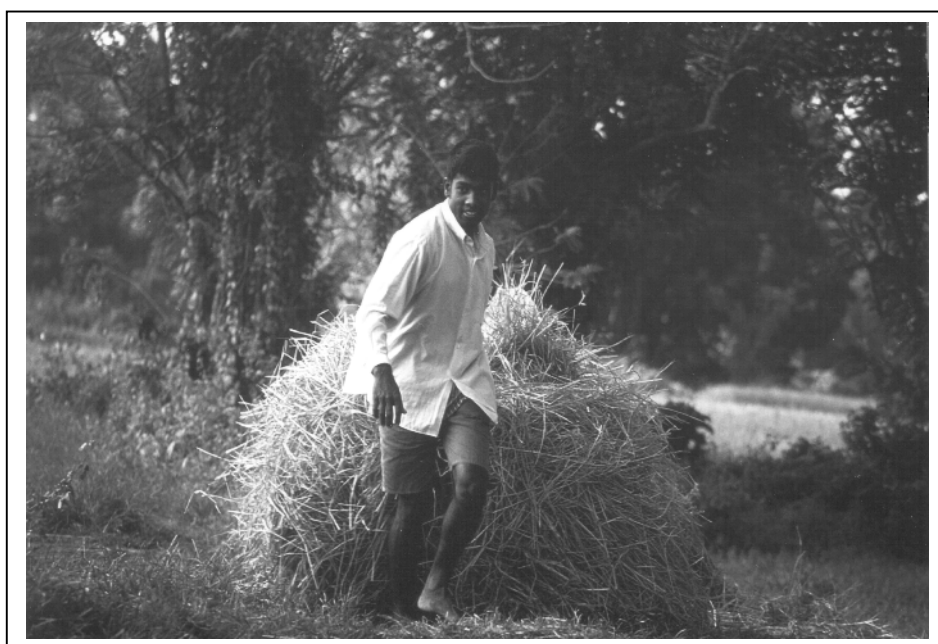
Photo 6.1: harvesting paddy, using family labour



¹⁰ This scenario is quite exceptional. Most female heads of household in the case study area were widows who could rely on assistance from male relatives or relations (in particular neighbours and friends) for ploughing, fencing, building watch huts and watching at night, and threshing. Their expenses are approximately Rs. 4200 which leaves them with an annual income from paddy cultivation of approximately US\$ 94 -US\$ 107. The total consumer expenditure per spending unit (household) in North-Central Province was almost Rs. 7000 per month in 1996/97 (Central Bank of Sri Lanka, 1999, p. 20).

They choose to maximise involvement of family labour and use reciprocal exchange of labour with relatives, friends or neighbours and a minimum involvement of hired labour, to minimise the expenses.

Photo 6.2: transport of paddy to the threshing floor, using family labour



Consequently, 75% - 85% of the women in the case study areas were actively involved in paddy cultivation, in chena cultivation and in home gardening. Table 6.2 provides a general overview of the activities in which men and women are involved. The opportunities for spreading family labour are restricted by a gender-based division of labour in the case of paddy cultivation. In their 'own' paddy fields¹¹, women are involved in all activities *except* ploughing, threshing, spraying, fencing, building watch huts and watching the fields at night.

¹¹ Paddy land which is registered in their name, their husband's, or their parents'.

Table 6.2: Gender-based division of labour in agricultural tasks

Activities (p = paddy, c = chena)	Paddy cultivation		Chena cultivation		Day- labour (paddy, chena)	
M = men; W = women	M	W	M	W	M	W
Slash and burn (c)			√		√	
Land preparation (p, c)	√	√	√	√	√	
Ploughing by tractor (p)	√				√	
Cleaning, construction of field bunds (p)	√	√			√	
Cleaning canals (p)	√	√			√	
Levelling (manually) (p; c)	√	√	√	√	√	
Levelling (tractor) (p)	√				√	
Sowing (p, c)	√	√	√	√	√	Chena
Diverting water to fields (p)	√	√			Owner	
Applying fertiliser or spraying pesticides/ weedkillers (p, c)	√		√	√	Owner	
Weeding (p, c)	√		√	√	Chena	Chena
Planting or transplanting (p, c)		√		√		√
Fencing (p, c)	√		√		Rarely	
Building watch huts (p, c)	√		√		Rarely	
Watching fields at night (p, c)	√		√		Rarely	
Harvesting or plucking (p, c)		√		√	Rarely	√
Threshing (p)	√				√	
Transporting (p, c)	√		√		Owner	
Selling products in town (p, c)	√		√	√	Owner	
Selling products at home (c)		√		√	Owner	

At present, the non-involvement of women in particular cultivation activities is determined by intra-household gender relationships, prevailing perceptions of male and female responsibilities, their own preferences, their respective skills to operate equipment and

machinery, their mobility, the required physical strength and the timing of the activities (day or night).

Until the buffaloes were replaced by tractors approximately 30 years ago, threshing was usually performed during the night to avoid the heat of the day and this did not encourage women's participation. Despite the changed method for threshing and its timing, it is now performed mostly during daytime, women are still not allowed to enter the threshing floor. There is another, very particular, reason why women are not involved on the threshing floor. There is a legend that explains this tradition:

“The farmers have an agreement with god *Puliyar* not to allow women on the threshing floor. *Puliyar* didn't have a female partner and therefore he didn't like women. The threshing floor is thus considered to be a sacred area and women are afraid that - if something happens to their family (e.g. death, illnesses, private problems) and they have been on the threshing floor - men will blame them for that reason (they caused the anger of god *Puliyar*)” (field notes, Punchikuluma, 1999)¹².

The cultivation of most of the other field crops in chena or home gardens does not require the use of tractors.

¹² Although the entire population within the case study areas is Buddhist, their offering rituals and religious norms are primarily related to Ganesh (*Puliyar*), a Hindu god. These rituals are integrated into the Bhuddist practices in the case study areas.

This enables women to cultivate these other field crops (both for home consumption *and* as cash crops) independently from men and to contribute directly to the family income. Schrijvers observed in the late seventies and early eighties, that decision-making with regard to the choice of chena crops and with regard to expenditure was predominantly a man's affair. Furthermore, she indicated that the women lost control over the products from chena cultivation, due to the lack of opportunities to transport the goods to the nearest towns (Schrijvers, 1985, p. 135). This situation has since changed somewhat. Women's involvement in selling other field crops (OFCs) is more common now than in the past. Smaller amounts and proportions (volume, amount and weight) of inputs and products reduce the transportation requirements when compared to paddy. Moreover, tradesmen come to the villages to purchase and collect particular fruits and vegetables (Molen, van der, 2001, p. 14).

In contrast to the most vulnerable groups of households, among the households who are less vulnerable (who have higher income security either through regular cultivation of paddy, through cultivation of cash crops or through off-farm employment), there is an increased tendency to hire labour instead of using reciprocal exchange of labour. This is even more pronounced in households with control over the means of production. This is related to the time investment and the reciprocity nature of such activities. Some farmers do not want to create long-term dependency relationships or to be in a dependent situation themselves.

6.3 Securing access to means of production

The overview below gives an impression of the access to resources for the four categories of households described in the introduction of this chapter. *Access* to resources can be obtained through ownership (e.g. of land and machinery), through kinship relationships (joint cultivation of land by husband and wife; children cultivating their parents' land), or through market arrangements (tenancy, mortgage arrangements). Naturally, this overview is somewhat simplified since it does not give any indication of the transaction costs¹³ involved in gaining access to machinery, credits or transport. Furthermore, one important aspect is not included here: the availability of (family) labour. This is related to the composition of households and families, the age of children and other occupations they might have, which differs across all categories.

Table 6.3: Access to resources

Category/ Access to:	Land	Water	Tractor pump	Financial resources	transport
A [rH-MoP]	√	√	√	√	√
B [aH]	√	√	R/s	C	R/s
C [vH]	(√)	(√)	R/s	C	R/s
D [fhh]	(√)	(√)	R/s/h	C	R/s/h

[rH-MoP: richer households, control over Means of Production; aH: households with average acreage of land; vH: vulnerable households; fhh: female headed household from second or third groups; √ = access / (√) = variable / C = credits / R = renting/ h = using hired labour/ s = sharing]

¹³ Transaction costs are the cost of arranging, monitoring and enforcing a contract (van Steenberg, 1997, p. 26).

The sub-section on financial resources will be followed by information on farmers' use of the guaranteed minimum price scheme, and their access to subsidies for agrowells. These sub-sections will reveal that, paradoxically, access to the guaranteed minimum price scheme, or access to subsidies for the construction of an agrowell, requires financial reserves.

Access to water

There is a well-defined group of farmers with property rights and usufruct rights who have access to water from the irrigation system. These are landowners with freehold or permanent leasehold titles and their relatives who cultivate on their behalf. The timing and physical location of permitted water withdrawal is determined by the condition of the physical infrastructure, the location of land, the rotational distribution of water and – in some cases – by the decision of the farmer organisation to cultivate only part of the command area. Occasionally, these restrictions are successfully sidestepped by farmers by the illegal withdrawal of water at night.

Landless farmers can get access to land and water either by the cultivation of the land which is registered in their parents' name, or by entering into an arrangement for tenancy or private leasehold. In a typical cultivation season, the number of tenants ranged between five and fifteen in each of the case study areas, although this number fluctuates each year. Private lease arrangements are less common, usually less than five within each case study area.

Although it is not intended to give an economic analysis to explain this difference, an interesting study by Ghatak and Panday shows why

sharecropping arrangements are more likely to emerge than fixed rental contracts. They argue that sharecropping is a contractual arrangement that optimally trades off the costs of inducing the tenant to undertake higher effort against lower risks (Ghatak and Pandey, 2000, p. 303-326). In addition to the insights mentioned by Ghatak and Pandey, other factors also play a role in the case study areas. For example, fixed rental contracts are attractive to landowners who are not able to cultivate the land themselves (e.g. due to illness), who do not have children who can cultivate the land on their behalf, and who also do not have the financial means to provide the agricultural inputs to the cultivator at the start of the cultivation season. Furthermore, the study by Ghatak and Pandey is based on moral hazard in both effort and risk in the presence of limited liability. However, when there is a close (kinship) relationship between tenant and landowner, the liability is likely to be higher (and the moral hazards attached lower) than in the situation where landowner and tenant have no relationship with each other.

Access to seed paddy, fertiliser and agro-chemicals

For access to seed paddy, fertilisers and agro-chemicals, as well as credits for the agro-chemicals, the mudulali plays a central role. Alternatively, almost all farmer organisations promise to provide seed paddy, fertiliser and pesticides on a credit basis. For some landowners, this is sufficient motivation to apply for membership of the farmer organisation. However, many are disappointed once they realise that these are only promises. Only a few farmer organisations actually do succeed in providing agricultural inputs on a credit basis. Members of the farmer organisation who do not own or cultivate land in the command area are not entitled to this service, and have to appeal to

office-bearers for their requests to be accommodated. The decision of the farmer organisation on whether to grant them these favours is based on individual judgements from the office-bearer(s) or the committee, who may consider the individual skills of the farmer, the reliability of the yield from the homegarden or highlands, or personal relationships with the applicant.

One of the women interviewed was disenchanted by the unwillingness of the office-bearers to listen to her complaints and requests. She cultivates paddy land belonging to her brother who has been ill for a long time. Additionally, she also grows paddy and vegetables in her home garden with water from an agrowell. As a member of the farmer organisation, she attends the meetings regularly. She and her husband who is a bus driver, migrated to this village 20 years ago. She said:

“I know that I am not the legal landowner of this land, but the chairman doesn’t even want to listen to my questions and problems, because my name is not on the shareholders list. I don’t seem to have the right to ask for his attention to the problems I face; I don’t get the same benefits of the farmer organisation. This year, I only received half of the seeds, fertiliser and pesticides on credit as compared to the members who have paddy land themselves. They said that this was because the yield in my homegarden is less reliable with rainwater cultivation, even though we have an agrowell. I don’t think this is fair. After all, I also pay the membership fees and comply with the cultivation calendar. I equally participate in maintenance activities, such as cleaning of the canals, and in the collective maintenance activities, to remove weeds and bushes from the bund of the tank” (fieldnotes Padikkaramaduwa, 1998).

Access to equipment and machinery

Only a few families in each village have a waterpump, tractor and/or threshing machine themselves. The ownership of such equipment and machinery provides an additional source of income-generation for a group of landowners and some mudulalis. Almost all farmers hire tractors and threshing machines from this group of families or the mudulalis. Although Agrarian Service Centres also have tractors for rent the number of tractors is quite limited, and none of the farmers in the case study areas indicated that they used this facility.

Access to financial resources

There are several strategies for obtaining access to financial resources¹⁴, such as through mortgage arrangements, private market arrangements, or through personal agreements with family, friends and wealthier households. Some farmer organisations also play a role in the provision of credits for agricultural purposes. Dasgupta indicates that villagers use different channels to obtain credits for particular purposes (Dasgupta, 1993, p. 242). This is clearly also the case in the case study areas, where the large majority of villagers take credits from the mudulali for agricultural purposes, but rely on relatives, friends and wealthier households for credit for other purposes. Therefore, it is important to make a distinction between (a) financial resources required in crisis situations, (b) financial resources for agricultural purposes, (c) financial resources for consumptive purposes or family obligations and (d) subsidies for agrowell construction.

a. Loans secured on land

One option available to landowners who are immediately in need of a large sum of money is the temporary transfer of their land, or some of it, to another party. In return, the new ‘owner’ will pay the original owner an agreed one-off sum. The amount will largely depend on the potential of the land, its size, fertility, and the sum of money required. No rent or annual fees change hands; the new ‘owner’ is able to cultivate the land and use or sell all the crops produced as he or she sees fit. These loans secured on land are also referred to as ‘mortgage arrangements’ by some of the respondents.

In theory, such arrangements continue until the original owner is able to repay the loan. However, a few temporary landowners use these arrangements to extend the size of their landholding, by claiming the land to be theirs and demanding an ownership transfer¹⁵. In other cases the transfer of ownership is proposed by the original owner him or herself, when it is clear that he or she will not be able to repay the money in the foreseeable future.

b. Credits for agricultural purposes

Agricultural credits for the purchase of seed, fertiliser and agro-chemicals can be obtained either through the mudulali, the bank, and -

¹⁴ Access to financial resources from poverty alleviation programmes was already discussed in Chapter 5 and will again be discussed in chapter 9.

¹⁵ Respondents indicated that if after several years the debtor is not able to pay his / her debts (depending on the contract), the temporary landowner could make an official claim to transfer ownership. When the debtor is willing to transfer the land, they can make the necessary arrangements through the GN and the AGA. Otherwise, the temporary landowner can demand his money back, and if the debtor is unable to pay, he can start court proceedings.

in some but not all cases - through the farmer organisation or through the Agrarian Services Centre.

The mudulalis are the main providers of agricultural inputs on a credit basis. The purchase of seed paddy, agro-chemicals, and on occasions also tractor rent is thus intertwined with the provision of credit. An estimated 80% to 90% of the farmers (both landowners and tenants) gain their agricultural credit from the mudulalis. One of the respondents indicated why they rather depend on the mudulali than on credits from the bank¹⁶:

“The mudalali doesn't charge interest¹⁷ for borrowing fertiliser, seed or agro-chemicals. When people borrow money from the mudulali, they can get it immediately and he doesn't ask for any documents or a deposit. People think that it is a waste of their time and money if they try to get credit from the bank or DAS; they have to go to several times to obtain these credits, and speak to two, three or even more officers. This takes too much time. Borrowing from mudalali is much quicker and easier than borrowing from banks. The mudalali's rules and conditions are not too strict and they can accept some excuses or extend if one cannot pay back them on time” (fieldnotes Pudukkuluma, 2000).

With this background, it is apparent why landowners without a regular income and landless farmers avoid taking credits from banks. Those

¹⁶ With interest rates of 11% - 15% per month.

¹⁷ Not all mudulalis are so considerate. A few mudulalis do charge ‘interest’ similar to or even higher than that of the bank. This is later deducted from the yield.

with higher income security are less vulnerable to these risks and are able to take more advantage of loans from banks.

In the case study areas, the farmer organisations, banks and Agrarian Service Centres are much more reluctant to provide credits for highland or chena cultivation, than for paddy cultivation in the command area of the tanks. This concurs with earlier observations by Dasgupta, who states that – in most poor countries – the credit market is particularly ruthless towards the assetless, which means that the landless are especially constrained in their ability to undertake investment activities (including agriculture). He explains why credit schemes are so open to high rates of non-repayments. This is not only related to the risks of crop failure and declining prices for agricultural products, but also related to ‘politically motivated’ debt-forgiveness (Dasgupta, 1993, p. 538).

c. Credits for other purposes

The informal credit system has a dominant role, in particular for those credits which are not related to agriculture but for consumption or family obligations. There are a number of other credit facilities, such as credits from the Samurdhi Bank (interest of 6% per month) for Samurdhi recipients. In some of the villages there are small saving groups among women (*seettu*). Furthermore, there are special arrangements to pay for funerals through the Funeral Society in each village.

d. Access to subsidies

The availability of water in both homesteads and in the command area can be improved by the construction of privately owned agrowells.

Despite the subsidies provided under the agrowell development programme, the construction requires a large initial investment and is therefore not feasible for all farmers. Most farmers only start construction of an agro-well if they are confident and assured by those with the proper connections that they will actually receive the subsidy. One of the respondents said:

“I dug an agrowell as required and asked the Divisional Officer to inspect this as part of the procedure for getting the government subsidy. He told me first to fill in a form and to ask Mr. X (Senior politician at national level) for a letter of recommendation. With such a letter the inspection of the well would no longer be required. Without that letter, I would not get any support.” (fieldnotes Kulikkada, 1999).

Access to labour

Access to labour can be secured in three ways: through the use of family labour, through participation in reciprocal exchanges of labour, also referred to as *attam*, and with hired labour. Attam is used only for particular activities and subject to a gender-based division of labour. Not surprisingly, female heads of households without male relatives in the area have the most difficulty in securing access to labour. These issues are discussed in more detail in the next chapter, see section 6.2 (on the use of family labour), section 6.5 (on day labour) and section 7.2 (on attam).

Access to transport facilities

Transport of purchased goods, or of products to be sold is inevitably a part of market-related activities. Male farmers increase their access to

transport by making arrangements with other farmers. They load the tractors collectively in small groups and transport their products to the towns. They usually sell their products at the nearest market provided that the price is similar to that of markets further away. Transportation to markets outside the area (for example to Dambulla) is quite rare, yet occurs when the higher price for the farm produce clearly outweighs the time investment and transportation costs.

Although women's involvement in the sale of some fruits and vegetables has increased over recent years, their involvement in the marketing of paddy is still very limited. This is related to their limited access to means of transportation, and also to the strenuous labour involved in loading and unloading the carts or trucks. Women who can call on male relatives for such activities, are not very eager to take over these activities, since it involves strenuous labour, an extra burden on their workload, and it does not match with the accepted gender-based division of tasks (Molen, van der, 2001, p. 14-16). Essentially, female heads of households depend on male relatives, or have to make arrangements with the mudulali, to transport their produce to town.

6.4 Acquisition of land

The percentage of paddy landowning households among the total number of households shows a wide variation across the case study areas: around 50% in Surukkuluma and Pudukkuluma, between 60% and 70% in Nallamudawa and Indigehawewa, between 70% and 80% in Kulikkada and Padikkaramaduwa, and over 80% in

Wellamudawa/Punchikuluma, Ihalegama, and Walpola (see also chapter 4, table 4.1).

Ownership of paddy land is strongly male dominated. The percentage of female landowners as compared to male landowners is in all case study areas no more than 35%. The main cause of this gender-bias is related to the decisions of parents with regard to inheritance. They pass the land on to those children who look after them during their old age. In most cases this is one of their sons and his wife, who settle nearby or move in with them after marriage. This type of arrangement is referred to as *diga* marriage (patrilocal). In the case of *bina* marriages, the couple settle at or near the wife's parental house (matrilocal)¹⁸. Walpola has the highest percentage of female landowners (35% percent) which is related to (i) a large number of widows, due to illness, loss of lives of people joining the army, and the violence during the JVP periods and (ii) a large number of matrilocal marriages (est. 25%).

Ownership of paddy land is not only relevant as a resource for income-generation, but it also determines the opportunities for participation of farmers in, and their entitlement to benefits from, the farmer organization. The land in the command area of a tank is usually fully occupied. Due to the scarcity of paddy land, purchase of

¹⁸ Data analysis of the levels of education and the type of marriage in Walpola suggests a possible relationship between level of education of both spouses and *bina* marriages. Almost all the women in Walpola who have a *bina* marriage arrangement, have an educational level which is equal to or higher than the educational level of their husband. To make a more accurate statement on the relationship between level of education and *bina* marriages, quantitative methods (surveys) would be more appropriate.

such land is virtually impossible. Notwithstanding the scarcity of land, a number of strategies can be observed, either for acquisition of land or for consolidation of one's perceived entitlement to land. These include:

- a. Extension of the command area;
- b. Fighting confiscation of land by outsiders;
- c. Legalising encroached land.

a. Extension of the command area

Extension of the command area often follows rehabilitation activities. Farmers and farmer organisations frequently request that the project or governmental organisation involved in rehabilitation to raise the spill and bund as this increases the water capacity of the tank. Such an increase enables an extension of the command area. This strategy is quite common. For example, a rehabilitation project for one of the tanks in Walpola enabled cultivation in a previously abandoned part of the command area. In Pudukkuluma, after rehabilitation of the Panichchakalla tank, four landowners in the command area of Panichchakalla extended the Command Area by another twenty-five acres, and six to eight landowners cleared another twelve acres of land in the command area of Pudukkuluma. From these, and other, examples it is clear that landowners with easy access to, or control over, machinery, tractors and bulldozers are usually the ones who are able to take such action. There is a thin line between development and confiscation of land. There is an informal rule, that the person who first cleared and developed land, has the right to that land¹⁹.

¹⁹ In relation to *chena*, this is referred to as the *gambalaya* principle, i.e. the first right goes to the opener-up of 'jungle land'.

Having invested much time and effort, he should not be deprived of that land afterwards, even though he took opportunities away from others. The landowners who have cleared land, appeal to this principle when their actions are resisted by others. For example, in Indigehawewa, a project's intentions were to allocate land to landless farmers. However, other landowners claimed it as theirs after clearing and preparing the land.

b. Confiscation of land by outsiders

In some cases, there is a distinct argument between two (groups of) farmers about legal ownership. One group cultivates land, to which another group has customary rights but for which there is no deed. The next quote gives an indication of such a situation.

“Originally, there were 25 landowners of land under Puakpitiya, but some time ago, two people from Huruluwewa settlements (Hurulu Colony) captured lands under Puakpitiya. First, after a long drought, they asked to be ande-tenant but after the first year they wanted to continue cultivation and refused to leave. Now this case is pending in court. The original landowners complained to the Assistant Government Agent and Land Development Officer, but the colony people bribed the Grama Niladhari, the Assistant Government Agent and the Land Development Officer²⁰. Initially, the Assistant Government Agent promised his support, but after receiving these bribes they displaced the deeds” (fieldnotes Padikkaramaduwa, 1999).

²⁰ Accusations of this kind are usually expressed by those who feel strongly disadvantaged. As such it might be part of a strategy to get outside support. In this case the counter argument was that the people from Padikkaramaduwa just claimed the land to be theirs, they did not have any legal document to prove it.

c. Legalising encroached land

The Jayabhoomi programme enables legalisation of encroached land, with short-term permits (see chapter 5, section 5.6). There is a wide use of applications for Jayabhoomi grants, in particular for home gardens and ancestral paddy land. The gender-inequity in terms of landownership, referred to before, is also present in some of the legal provisions with regard to permanent leasehold under the Land Development Ordinance²¹ and under the Jayabhoomi programme. Jayabhoomi paddy land can be divided among as many children as desired, but only in minimum plots of 1 acre for minor schemes. This causes a lot of frustration and disputes within families after the death of the permit-holder. This is not without consequences, and leads to actions by the sons and daughters who feel surpassed. Government officers mentioned that some women come to them, crying and begging, and asking why they do not get the same rights as their brothers.

6.5 Securing access to income-generation

Many families in the case study areas do not have any paddy land or only a very small plot (less than 1 acre). Some others have paddy land in the command area of an abandoned tank or a tank with chronically

²¹ These provisions require the nomination of a successor. If no successor has been nominated, and the permit-holder dies without leaving behind a spouse, the priority is (in order of priority): sons, daughters, grandsons, granddaughters, father, mother, brothers, sisters, uncles, aunts, nephews, nieces. Land Development Ordinance, rule 1, 3rd schedule; in: Legislative enactments of the Democratic Socialist Republic of Sri Lanka, revised edition, Vol. XI, 1980; 3rd schedule; Agriculture and Lands Legislation, Vol. XI, Chapter 251-301, p. 434.

low cropping intensities. For such households who live in areas with limited cultivation opportunities, it is essential to have access to other means of income.

Day labour opportunities

The most common alternative is day-labour. These opportunities are usually available in areas which fall under one of the irrigation schemes of the Mahaweli programme. The percentage of men and women working as day-labourers varies across the seasons and over the years, and there is variation among the different case study areas. It is highest during the yala-season, during long periods of droughts, and in areas with chronically low cropping intensities. The opportunity for individual bargaining and negotiation is rather limited. The wages for labour are hardly negotiable, yet there is variation depending on the type of activity, gender²², the location²³ and other facilities, such as meals and transport. With a few exceptions, men and women are not able to negotiate the conditions or payments for day labour on an individual basis. One particular condition is negotiable and often negotiated upon as shown in the example from Pudukkuluma:

²² Between Rs. 150 and Rs. 175 per day for men and between Rs. 125 and 150 per day for women. The reason given for the lower payment is that the work performed by women is physically less demanding.

²³ There is a difference in conditions and payment for activities within and outside the village. The wages are usually higher further away from the village. Although labour within the village is scarce during the land preparation and harvesting season, the fall-back position of hired labourers is insufficient to demand higher wages.

“In general *kasippu* [liquor] has become an essential condition for labourers. Especially for threshing paddy, workers ask the owner "do you provide *kasippu*, otherwise it is very difficult to work during whole night, and we will feel sleepy." (fieldnotes Pudukkuluma, 2000)

Off-farm employment

Due to a lack of rains, and the limited capacities of the tanks, cultivation is – even in the main cultivation season– often impossible. Even when cultivation is possible, the income from cultivation may still be too low to feed the entire family. One respondent said:

“I am both a farmer and a fisherman, but I can’t make a living from farming alone. I have more income security and a higher income from catching fish. The income from catching fish in Nachchaduwa is approximately Rs. 8000 per month. In addition to catching fish, I cultivate paddy in maha-season, and other field crops in chena during the yala-season with an agrowell. People can survive by catching fish, but cultivation is highly unreliable” (fieldnotes 1999, Wellamudawa)

As a consequence, men, women, sons and daughters look for other income generating activities, whether this is through participation in day labour or in off-farm employment opportunities. There is a large difference between the villages in the percentage of the population involved in occupations other than farming, with the lowest percentage in Nallamudawa (9%) and the highest percentage in Wellamudawa / Punchikuluma (40%). Large landowners with control over the means of production, access to trade, or good relationships with government officers and politicians often function as intermediaries to provide villagers with temporary work.

The options open to, and considered by, men and women are determined by several factors, such as level of education, mobility, and the job opportunities in the area. The most common income-generating activities other than farming are: cattle raising, working as housemaids in Middle East countries, in garment factories, for the army and police, and brewing or selling liquor.

Gender-based division in off-farm employment

As with the gender-based division of labour in farming, one can observe a *de facto* gender-based division in off-farm employment. Men tend to choose employment with the army, police, the Railway Department, the Electricity Board, or the Ceylon Transport Board. Some are working as masons, others as carpenters or fishermen. Those men who choose the army are generally young and unmarried. After marriage, most of them look for other job opportunities, where there is much less danger of losing one's life or limbs. Many young and unmarried women work in garment factories or working as housemaids in Middle East countries (some of whom were married and had young children). Some jobs attract both men and women, such as teaching and as government servants.

Employment clusters

There is a distinct pattern of employment 'selection' in some villages, most notably in Wellamudawa and Punchikuluma (army and Middle-East); Indigehawewa (army); Kulikkada (garment industry) and Pudukkuluma (army, garment industry). These clusters emerge due to:

- The proximity of the village to employment opportunities;
- The expected earnings as compared to other jobs;
- Village level connections / recruitment for obtaining jobs;

- Promotion among friends and relatives.

The first consideration may be overruled by other factors, as is apparent when looking at the large number of women in Wellamudawa and Punchikuluma working as housemaids in the Middle East²⁴:

“Two villagers work as recruiters for Middle East agencies and they try to recruit women from this village. Furthermore, women promote it among each other, providing their sisters with some money for tickets” (fieldnotes Punchikuluma, 1999).

Working as a housemaid in the Middle East is very attractive to these women and their families, as the earnings vary between Rs. 9000 and Rs. 12000 per month²⁵. It is the dream of prosperity, and a way out of poverty and despair. The strategy of working in the Middle East rejects the popular theory of risk-avoidance. After all, even though the earnings are attractive, the choice to migrate to the Middle East can hardly be categorised as a ‘risk-avoiding’ strategy²⁶.

²⁴ 15 women from Wellamudawa/Punchikuluma were employed in the Middle East in 1999, and 45 who migrated in the past, had returned.

²⁵ The costs for the ticket are deducted from the initial salary.

²⁶ Going abroad implies a lot of uncertainty. A few women who returned reported the type of problems they faced: confiscation of their passport by the family they work for, failure to disburse salary for several months, or verbal and physical abuse. In most cases, they can not rely on much assistance from the Embassy, nor from the recruitment organisation that arranged their employment in the Middle East.

Clusters of other income generating activities

Another response strategy to the harsh conditions under which the population tries to make a living, is the illegal production and sale of liquor, in particular in Kulikkada, Wellamudawa and Punchikuluma, and Indigehawewa. Correlated to this is the high consumption of liquor among the male population in those villages.

“One of the sons of M. [referring to a previous Vel Vidane, one of the largest landowners] is the big boss of kasippu brewing in this village. Approximately 20 families depend for their livelihood on brewing and selling liquor. When the police come to the village, supporters of those brewers will inform them in advance so that they have time to hide everything. The people who are most involved are protected by X’s people [senior politician at national level²⁷]. Especially young people get addicted to Kasippu, and five or six of them have already committed suicide. Due to the drinking problems, many wives have become breadwinners, working as hired labourers, working in the garment industry or cultivating chena” (field notes Kulikkada, 1999).

In addition to the production of liquor, which is limited to these three low-caste villages, there are some other ‘clustered’ means of income-generation in two of these villages: cattle raising (Kulikkada) and fishing (Wellamudawa and Punchikuluma).

Differentiation in income-generation

A large proportion of the farming households try to secure their income through the differentiation of income-generating activities.

²⁷ The initials are changed to prevent recognition.

Among landowning families who are involved in other off-farm activities, one can observe job-differentiation among the family members, but which still allows for sufficient family labour during good cultivation seasons.

Households with control over means of production also adopt this strategy, though in a different way. One can observe a difference between the two groups: whereas the large majority of farming households aim for income-differentiation in order to survive (primarily subsistence-driven), the strategies of landowning families with control over means of production are to maximise their gains (profit-oriented). This is reflected in the more entrepreneurial nature of the activities of the latter group, and involves cash-crop farming, cattle-raising, trade, or the production and sale of liquor.

6.6 Resource features and response strategies

Based on the discussion of strategies in this chapter, two tables will be presented here. Table 6.4 should be read in combination with information in chapter four. It gives a summary of the most common response strategies of farmers in terms of diversity, dependency on HYVs, accessibility, vulnerability and the availability of land in the command area of the tank (Adapted from Jodha in: Berkes, Folke and Colding; 1998; ch. 11). Table 6.5 gives a summary of the strategies of households, comparing the four categories of households and their respective strategies. This second table serves as a springboard to the discussion in the final section: the impact of government policies on livelihood strategies.

Table 6.4: Resource features and response strategies

Resource features	Response strategies
<p>Diversity: Combination of lands in the command area of the tank, highlands and chena fields, and homesteads. Narrow range of cropping options in command area due to soil typology.</p>	<p>Spatially and time-wise diversified activities. Irrigated and rainfed agriculture. Subsistence agriculture and cash crop cultivation in command area, chena, homegarden, highland</p>
<p>Dependency on HYVs: vulnerability to seasonal fluctuations and crop failure exacerbated by dependency on HYVs which require high agricultural investments</p>	<p>Minimisation of hired labour, use of family labour, spreading labour; crop choice largely based on time and financial investments and risks</p>
<p>Accessibility of MoP: Limited availability of Means of Production (machinery, credits, transport) within village. Mudulali plays central role in access to agricultural inputs and credits.</p>	<p>Access secured through ownership, kinship relationships or through market arrangements. Hardly any use of access to resources through Agrarian Service Centres or banks.</p>
<p>Vulnerability: high dependency on rainfall and condition of irrigation infrastructure. Food and income security vulnerable to seasonal fluctuations</p>	<p>Differentiation of income generation within the household, and securing access to other income-generating activities. Gender-based employment opportunities</p>
<p>Availability land in Command Area: Access to new paddy land almost impossible.</p>	<p>Consolidation of land by legalisation and intra-household negotiation (conflict). Extension of command area by households with machinery.</p>

Table 6.5: Livelihood strategies among various categories of households

<i>Strategy/ Category</i>	<i>Subsistence and cash crop cultivation</i>	<i>Minimisation of investments / maximisation of profits</i>	<i>Securing access to MoP and financial resources</i>	<i>Acquisition and consolidation of land</i>	<i>Other income-generating activities</i>
Households with control over means of production	Main focus on cash crop cultivation, both paddy and other field crops	Maximisation of profits, use of hired labour, selling products to PMB	Agricultural inputs through mudulali, some use of institutional credits	Extension of command area (in exceptional cases claiming land under mortgage)	Income from renting machinery, agrowell cultivation, trade, cattle, control over liquor production
Households with average acreage and no control over means of production	Subsistence agriculture in combination with a few cash crops	Maximisation of agricultural output, hired labour and family labour, less attam	Agricultural input/ credit from mudulali or FO; renting machinery, using subsidies for agrowells	Jayabhoomi, consolidation of rights	Employment in government or private sector, day labour, Middle East, employment of sons and daughters, sale of liquor
‘Vulnerable’ landowning and landless households, no control over means of production	Primarily subsistence agriculture (both paddy and some OFCs)	Minimisation of investment by using family labour and attam	Agricultural input/ credit from mudulali or FO; renting / sharing machinery	Jayabhoomi, consolidation of rights	Day-labour, employment of sons and daughters, Middle East, sale of liquor
Female headed households, no control over means of production	Primarily subsistence agriculture (both paddy & OFCs)	Minimisation of investment by using family labour and attam	Agricultural credits from FO and mudulali; renting machinery, hiring labour	Jayabhoomi, consolidation of rights	Day-labour, employment sons and daughters

6.7 Impact of government policies on livelihood strategies

There is a high dependency on rainfall and the condition of the irrigation system for cultivation. However, it is important to emphasise that there is an equally high dependency on other means of income generation.

Despite government policies to improve the livelihood of the rural population, only a few programmes have had a positive impact on the conditions for cultivation in the case study areas. One of the most eye-catching policies has been the introduction of High Yield Varieties in the seventies. This increased the yields significantly, but simultaneously it increased the need for agricultural investments. The net outcome of this – in particular in the more commoditised economy – is an increased dependency on credit. Previously, it was shown that there is a strong reluctance among most farmers to take credits from institutional sources (such as banks and projects). Dasgupta observed that:

“The growth of impersonal market transactions in poor countries is necessary for long-run improvements in the standard of living. Both history and economic analysis tell us this. [...] Other institutions, such as kinship and the village community, as mediator of production and exchange in economic goods [...] are by the nature of things thin [...] Transactions in these institutions are personalized. Thinness is a weakness [...] because power relations are overly personalized. Consequently, they are highly asymmetrical” (Dasgupta, 1993, p. 143).

However, in the case study areas, it is precisely the personalized nature of the transactions with the mudulalis, with large landowners and with kin which gives the most vulnerable group respite in the event of crop failure, illness, or other misfortunes. Leach said: “the interpretation of ideal legal rules is at all times limited by such crude nursery facts as that water evaporates and flows downhill” (Leach, 1971, p. 9, see first page of this chapter). One could easily add:

‘the ability of farmers to pay back their credit on time is at all times limited by such crude nursery facts as that crops will fail when rainfall is insufficient, and that elephants are not likely to consider the contractual obligations of the landowner whose field they enter’.

One could ask whether the Crop Insurance Policies are not sufficient to take away that risk, but there is a lack of confidence among the farmers that this programme will actually disburse money in times of crop failure or crop damage. Other government programmes face similar problems in reaching the most vulnerable groups of farmers.

For example, the Guaranteed Minimum Price Scheme (when still applied) and rural credit schemes are not a feasible option for the most vulnerable group of farmers. The Agrowell Development Programme provides the farmers with a means to reduce their vulnerability and to increase food-security. However, a successful application under the Agrowell Development Programme requires that the initial investments are made by farmers themselves, something which is beyond the financial reach of the large majority of farmers.

Most government policies that aim to reduce this vulnerability have in fact benefited the wealthiest among the rural population in the case study areas, not the poorest. Those landowners with more than the average acreage of land, with control over the means of production, and a sufficient financial buffer, have access to credit schemes from institutional sources, and only they were able to use the Guaranteed Minimum Price Scheme. Furthermore, they have the means to extend their land in the command area after rehabilitation of the tanks, and they can afford to invest in the construction of agrowells, for which they receive additional subsidies. Moreover, they are able to invest in more different entrepreneurial activities.

The strong reliance of the most vulnerable group of farming households, and of the households with average acreages, on credit and other means of income generation has a major impact on their strategies in the formal and political domain. This will be demonstrated in chapters 8 and 9. In addition to these strategies, there is a wide range of cooperative strategies aiming to share and exchange resources, in particular land and labour. These will first be discussed in chapter 7.

Photo 6.3: threshing with a threshing machine



Ch. 7 Exchange strategies and co-operation

“Do you believe in devils, ghosts or black magic? This is a story about black magic. There was a person who practised black magic in the village of *Wewagama*¹. He died some years ago from heart disease, yet his wife and children are still living here. He was very jealous of the people when they tried to improve their living conditions. He didn't like to see that people giving their children a good education, and was jealous of them if they got a good yield from the field, that some were successful in getting another job, purchased more cattle, or that a newly-married couple built a new house.

Except for 2½ acres of paddy land, he didn't have any source of income and from cultivating these lands he had to feed 7 children. All the time they borrowed their daily needs and money from neighbours. This situation created more jealousy in his mind and he started with black magic by using some traditional spells (harm caused by magic) to stop other people from being successful in improving their living conditions. People said that he used the ash of burnt dead bodies, chanted mantra to the ash and then sprinkled or sprayed it into the relevant places, which was either in the paddy field, in the houses, the home gardens or the cattle sheds. Then, without reason, people started getting illnesses which could not be cured, cattle died, marriages collapsed, crops were destroyed, and some people moved away....” (Fieldnotes, confidential source).

¹ Fictitious name for one of the case study villages, the factual information is slightly adjusted to prevent identification.

The story² indicates very clearly that the socio-cultural environment cannot be captured easily in a few indicators and surveys. The entire story started with the observation that “this village has a post office, a school and also a bus service, but we can’t imagine why we feel such loneliness?” A small remark, which might seem arbitrary from a scientific point of view. It does not fit in with the rational models of behavioural theory (rational choice theory), nor with the CPR literature which tries to predict and explain human behaviour based on the design of irrigation management systems (chapter 2). Yet, whether or not this story is completely accurate, it does give an indication of the intensity of jealousy and distrust within a particular community. This is likely to influence co-operation and reciprocal exchange between people.

That is why this chapter refers not only to socio-economic or socio-cultural indicators, but also to trust and distrust, to unwritten rules, and to customary practices, which affect mutual exchange, co-operation and collective action in relation to cultivation and irrigation management. Co-operation is required throughout the cultivation season, and goes beyond collective action in maintenance, or compliance with the rotational distribution system. It is required for the planning and coordinated implementation of the cultivation schedule, for securing a smooth water flow through the canals, for protecting the fields against crop damage by elephants and cattle, for preventing water loss, and achieving successful cultivation.

² This ‘story’ should not be read as a folk-tale or legend, since it was provided as information about intra-village tensions. Only part of the story is produced here, the remaining part deals with the response of the local population to these spells.

It is important to make a distinction between different forms of ‘co-operation’, such as (i) networking; (ii) alliances; (iii) exchange of resources; (iv) collective action and (v) compliance with the rules. Networking is defined as the use of personal relationships or contacts within government organisations or with politicians to obtain access to resources. Alliances refer to co-operation with the purpose of securing one’s position, or to affect the position of others. The exchange of resources refers to the exchange of land, labour and financial resources between individual households and within the farming community. Collective action refers mainly to collective action in maintenance activities. Compliance with the rules refers to compliance with the cultivation schedule, farmers’ participation in maintenance activities and other duties, and their compliance with the agreed upon system of water distribution.

This chapter is structured in line with the four central features discussed in the social capital theory (see chapter 2, section 2.6). It refers in somewhat different words to connectedness and groups as discussed in section 7.1. Subsequently, it pays attention to reciprocal exchange of land, labour and financial resources in section 7.2; to temporary redistribution of land within the farmer organisation in section 7.3; to compliance with common rules, norms and the use of sanctions in section 7.4, and to relationships of trust and distrust in section 7.5. One relevant aspect of the socio-cultural and socio-economic setting, the patron-client relationships within the community, is touched upon briefly in this chapter but will be discussed more extensively in relation to the formal strategies in the following chapter.

7.1 ‘We are all relations’

Kinship relationships

‘We are all relations’ is a commonly used expression in the case study areas. This expression is not a mere genealogical observation; it reflects also production and property relationships. Based on publications by Obeyesekera and Leach, Moore indicates that “kinship categories and relationships are used or manipulated to achieve particular representations of inter-personal relationships, and thus with the ‘tactical use’ of kin terms” (Moore, 1981, p. 579). Regardless of the exact genealogical boundaries, kinship is essential in mutual support, exchange of land and labour resources, and facilitates co-operation in larger groups. Moore suggests a reversed relationship, where potential kinship is ‘realised’ through cooperative activity of some kind, and that for practical reasons it is mainly neighbours with whom exchange of labour is effected. The inter-personal relationships can be seen as extended-kinship³. In a detailed study on the *kachcheri* bureaucracy (the District Secretariat) in Sri Lanka, Raby observes that:

“Moral ties spring from the face-to-face community setting with its emphasis on kinship, village affiliation, and friendship, all expressed in the idiom of kinship....” (Raby, 1985, p. 8).

These moral ties, and the mutual expectations resulting from these ties, are reflected in the observation “He / she is a *good* relation of mine”. This is used to make a statement about either previous co-

³ Which is not the same as extended family relations.

operation or favours, or one's expectations with regard to future favours⁴.

The tactical identification of someone as a 'good relation', without co-operation or support actually having materialised in the past, and without clear kinship or affective ties, is often related to the perception of the other as an intermediary to particular resources. The face-to face characteristic that Raby refers to is important not only in enhancing co-operation and mutual support, but also because it is an essential feature of patron-client relationships which will be discussed in the next chapter.

Kinship functions as a support network during crisis situations. It refers to bonds of affection, obligation and responsibility, and raises expectations with regard to gift-giving and in-kind assistance, most obviously during the New Year holiday season. Adult children who have a regular income from off-farm employment⁵ are a major source of income and income-security to other family members. They buy luxury items for the family, contribute to the daily subsistence needs, pay for medicinal costs, and they often make a substantial contribution for the construction of a brick house, a new roof or a private dugwell. For many

⁴ In particular when such statements are made in the presence of this particular relative or relation. This corresponds to previous observations by Moore: "a statement of kinship is a statement of actual or desired social relationships". The word 'relation' leaves open whether or not someone belongs to the same family (Moore, 1981, p. 584). In this thesis relative refers to a family member related by blood or marriage, and a 'relation' could refer to either a relative or to an unrelated person with whom one has a friendly relationship or with whom one shares a working relationship. In some cases the relation is a person who one could say has acquired some of the privileges and liabilities normally associated with a relative.

⁵ These children are no longer necessarily living in the same area.

families in the case study areas, such financial support is essential in times of drought. The availability of financial reserves among particular family members creates obligations to support other family members. The financial consequences of such support have been documented clearly by Gamburd⁶:

“Women’s wages earned abroad, initially earmarked for large purchases such as buying land and building a house for a nuclear family, often came to support the everyday consumption of the extended family....In a situation of uncertain income, extended networks of family co-operation provided a measure of security. At the same time, demands from needy relatives often drained the savings of momentarily affluent individuals, especially successful female migrants” (Gamburd, 1998, p. 280).

The expression ‘in a situation of uncertain income’ seems to refer in this case, to temporary situations. In the case study areas, this situation is more or less a permanent state of affairs.

The younger generation thus has an essential role in income-supply for the entire household. This role is not reserved for young men. The high participation of young women in the garment industry, and the high rate of women migrating to the Middle East from some villages indicate that - at household level and within the family - there is a high acceptability of women entering the labour market.

⁶ With reference to Sri Lankan women migrating to the Middle East.

In order to find off-farm employment, young men and women⁷ ask their relatives and relations whether they know of any employment opportunities. They ask their relations to put in a good word for them, to provide them with a letter of recommendation, or to assist in any other way. Kinship and friendship relationships are extremely important for one's access to jobs⁸. According to one publication on this subject, 47% of the poorest women find a job through friends, and almost 37% find a job through relatives (Malhotra, DeGraff, 1997, p. 389)⁹. Even though the publication's focus is on only part of the labour force, it gives a good indication of how important 'relations' are in terms of finding off-farm employment.

The local elite

The chances of finding employment are greatest among people with a large network of relations, such as office-bearers and *vel vidanes*, local government officers, *mudulalis*, or large landowners. Roberts refers to this group as the 'local elite' which consists of: (a) those who have access to occupations such as registrars of marriages, the village headman, notaries, or schoolmasters in rural areas; (b) the *mudulalis*, millers and other petty entrepreneurs; and (c) the landed proprietors (Roberts, 1974, pp. 558-559).

This characterisation comes close to the Weberian distinctions of (a) status groups and social class; (b) commercial class and (c) property class (Giddens and Held; 1982, p. 69-73).

⁷ The young and educated population was found to be more active in searching for off-farm employment than other groups among the farmer community.

⁸ In addition to one's qualifications, skills and political preference.

Roberts rightfully indicates the overlap between these segments, which is manifest in some of the examples in chapter 8 (section 8.2). This overlap is not merely coincidental. It emerges due to investments by the first and second groups in landed property; and equally through the selection of village headmen from the group of large landowners within the farming community. One can observe such an overlap also within these three groups, particularly within the first and second groups.

Selection of leaders

The formal rules, which determine one's eligibility as office-bearer are: residence in the village, ownership of paddy land, and being literate. According to these rules, almost all shareholders who are members of the farmer organisation would be eligible to be an office-bearer of the farmer organisation. In reality, one can observe a virtual order of eligibility of potential candidates in almost all case study areas.

The selection of office-bearers or vel vidanes [hereafter referred to as 'farmer representatives'] is done through a process of nomination¹⁰ and consent, in some cases through a show of hands, which does not allow for anonymous voting. For generations, the strategy of farmers has been to select the most experienced persons and families for the position of vel vidane or other leadership positions. Age, wealth and the amount of land were seen as indications of 'experience'. Female landowners were not eligible

⁹ The research of Malhotra and DeGraff is based on quantitative research.

¹⁰ Often suggested by former farmer representatives.

for the office-bearer positions, and this has not changed over time¹¹.

At present, most respondents indicate that the criteria for selection of office-bearers and vel vidanes is based on qualifications and personal characteristics, such as having experience (indicated by age, wealth or amount of land) and being active in the community. However, in most cases, the choice of leaders in community-based organisations still reveals a continuation of a line of leadership based on patrilineage. Box 7.1 gives an indication of the influence of kinship in Pudukkuluma and Padikkaramaduwa.

When looking at the outcome of the selection procedures, and the characteristics of the selected leaders, one can only conclude that the criteria that really matter are: (i) kinship, (ii) landholding, and (iii) one's presumed access to government officers or politicians. The large majority of the representatives are closely related to former representatives (vel vidanes / office-bearers), have relatively large landholdings, are supporters of the ruling party, and have good relationships with local government officers or with the local authorities.

¹¹ One of the constraints, which reduce women's eligibility to zero, is their limited mobility. Women's mobility is restricted by safety considerations, the inappropriateness of travelling alone at night, lack of access to transport and their limited capability of riding bicycles, mopeds and motorbikes. Community based perceptions of female skills and characteristics also play an important role.

Box 7.1: kinship relationships among farmer representatives

Relationships among office-bearers Pudukkuluma (2000)

The Chairman is a member of Pradeshiya Sabha of Mihintale, the largest landowner of area (almost 35 acres), a retired Grama Niladhari, and has close friendships with politicians. His father was a previous vel vidane in Panichchakalla. The secretary is a retired Grama Niladhari, a large landowner, is rich and well known. His father was a vel vidane for 48 years. The secretary's father is the younger brother of the father of the chairman, which means that the chairman and the secretary are first cousins. The treasurer is a retired school principal, a large landowner and also rich. The secretary's maternal mother and the treasurer's paternal mother are sisters. In other words, the treasurer is a cousin of both the chairman and the secretary of the FO. The current vel vidane is the chairman's elder son.

Relationships among vel vidanes in Padikkaramaduwa (1999)

Mr. R. is mudulali in Padikkaramaduwa and vel vidane for Padikkaramaduwa. He succeeded Mr. K, one of his cousins who is a large landowner. Mr. K. succeeded his father, Mr. Kp, as vel vidane of Padikkaramaduwa. Mr. Kp. succeeded his uncle, Mr. T, who is the great-uncle of Mr. K. Mr. K., previously vel vidane of Padikkaramaduwa maha wewa, is at present vel vidane of Dambegaswewa. Until recently, this position was held by another mudulali, Mr. S., who is the elder brother of Mr. K, and has been vel vidane since the sixties.

For example, in several instances, villagers chose a former Grama Niladhari (who resided in their village) as vel vidane or chairman of the farmer organisation. This could be a strategic choice, considering the facts that Grama Niladharies have easy access to

government officers, local government authorities and politicians; and with the institutional changes in mind that some Grama Niladharies have a background as Cultivation Officers (see chapter 5). Some villagers strengthen their relationships with the Divisional Secretariats (AGA offices) and with politicians. Through these relationships, some villagers successfully promote their son or daughter to be appointed as *govi-niyamake* or *Samurdhi-niyamake*.

In other words, one could say that the selection of representatives is based – to a large extent – on the network of these representatives, which enables them to maximize access to state resources for the farmer organisation. The strategies to enhance one's individual access to resources¹² are based on maintaining good relationships with the office-bearers or other members of the 'local elite'. In some of the case study areas, there is a high dependency by small landowners and landless farmers on the larger landowners¹³ and *mudulalis* for the provision of credit, renting tractors, labour-opportunities and sharecropping arrangements, and also for their access to state resources. These dependency relationships (patron-client) will be discussed in more detail in the following chapter.

There are some exceptions to these informal criteria for the selection of farmer representatives, in particular in Nallamudawa and Walpola where the office-bearers were relatively young (below 45 years of age), had average landholdings (2-3 acres) and

¹² Such as for agrowell subsidies, farmers' pensions, credit programmes, Jayabhoomi certificates, or for receiving guns. These guns are provided by the government for protection against elephants (see chapter 5).

¹³ Office-bearers and *vel vidanes* are often selected from this group.

where they did not have personal relationships with politicians, not even after they were selected. In Nallamudawa, the committee of the farmer organisation was composed of people from several political parties. Also in Padikkaramaduwa, there was little political influence¹⁴. In both Nallamudawa and Padikkaramaduwa, some villagers complained about the absence of political relationships, as this limited their successful requests for rehabilitation and other projects.

Landless households

Landless households, who depend solely on chena cultivation and day-labour, are extremely vulnerable. Their indebtedness to others is more or less structural. The income and food security of smallholders is also rather limited, in particular if cultivation of their land is only possible every two or three years. Their dependency towards others fluctuates strongly, and is – more often than in the case of landless farmers - based on reciprocity of exchanges. They are able to enter into arrangements for the reciprocal exchange of labour, sharing arrangements with regard to land, and to participate in bethma. Furthermore, they have a wider range of credit providers they can turn to for their initial agricultural investments, as was indicated in section 6.3.

Even though the landless do not have formal access to the farmer organisation, their access to state resources (land titles, jobs, credits, subsidies) is not completely blocked.

¹⁴ Defined in terms of the intervention of politicians in project allocation, by the preferential treatment in distribution of resources along political lines by farmer representatives, and by the use of political relationships to intimidate people and continue illegal practices.

First of all, landownership, or membership of the farmer organisation, is not necessarily a criterion for one's access to state resources through (the extra-curricular brokerage by) farmer representatives, even though the government has defined landownership as a formal criterion for the distribution of resources. A clear example was the distribution of guns for agricultural purposes. Although, formally, only landowners are entitled to a gun and licence, others had access to these guns and licences, through their 'good relationships' with the farmer representatives.

Secondly, the landless have access to state resources through government officers, most importantly through the Samurdhi-niyamakes. These are – as are farmer representatives – intermediates in obtaining state resources through the patronage system. When fulfilling the formal criteria for accessing poverty alleviation measures, it seems only a minor sacrifice to vote for the ruling party if this will secure future access to the distribution of resources through the Samurdhi Programme. Naturally, where these government officers are susceptible to gift giving and participation in profitable arrangements, the landless households are again in a weaker position when compared to landed households.

Most farmers assume that office-bearers and other members of this 'elite' are in the position to grant them particular favours, and hope that they are willing to lobby for their interests in seeking assistance from government officers and politicians. The large landowners – conversely – are dependent on farmers through their need for day-labour at peak times and for the maintenance of their position within the community. Dependent farmers try to create

goodwill by gifts, expressing sympathy, compliance, by being active in common activities, or by changing their voting behaviour in line with the recommendations of these patrons. Goodwill can be seriously damaged as the result of activities which go directly against the interests of the office-bearers, *vel vidanes* or their sons and daughters¹⁵. Without assistance, their access is not completely denied; they may still apply through the formal procedures, yet the chances for access to the necessary government officers¹⁶ and speedy approval are much reduced (see Raby, 1985, p. 11).

The dependency relationship between smallholders and larger landowners, or *mudulalis* has been discussed extensively in the literature on patron-client relationships (see chapter 2). The nature of these patron-client relationships shows much variation across the case study areas, ranging from 'friendly' to 'exploitative' ones. For example, some of the *mudulalis* were not charging any interest for the agricultural inputs provided on a credit basis, while others were charging at interest rates of more than 18%. In the next chapter will be demonstrated, how dependency relationships affect farmers' behaviour in the decision-making process of the farmer organisation.

Exclusion of outsiders

Kinship-ties are not only very important for those who claim to be well related, but also for the minority of households who do not have kinship-relationships in the village. These families are usually

¹⁵ For example, one of the villagers in Kulikkada started an awareness raising campaign against the use of *kasippu*. This was not appreciated by the son of the *vel vidane* who was accused of being involved in *kasippu* brewing.

¹⁶ The accessibility of government officers is usually quite problematic. Their presence in the office is quite unpredictable.

referred to as ‘outsiders’¹⁷, whereas members of the other families are referred to as ‘villagers’. Moore rightfully observed that the “social universe is conceptually divided into kin and non-kin” (Moore, 1981, p. 584). The employment of the word ‘outsider’ literally refers to one’s place of origin (from outside the village), yet, in the interpretation of respondents, it encompasses a wider range of meanings. It explains one’s social position in the community, the lack of a social network, caste differences, and one’s limited rights and eligibilities. Families who migrated to the village from another area are consequently pointed out as ‘outsiders’. The location of their house is usually on the village boundary, which is almost symbolic of their social isolation.

The difference between ‘villagers’ and ‘outsiders’ or between kin and non-kin is important in understanding the limited access of these outsiders to various resources. The social network - consisting of kin and relations - is essential in giving people access to means of production and other resources and the financial investments required. Although those outsiders who are members of the farmer organisation and who own land, have equal entitlement to the benefits of the farmer organisation they are not invited to meetings. However, they are not excused participation in collective maintenance (shramadana). They are also disadvantaged (cheated upon) in the distribution of goods and services by the farmer organisation and other organisations. The absence of a social network with the other villagers prevents them from seeking moral support.

¹⁷ Perera also gives a very clear description of the attitudes of original villagers towards outsiders and vice versa (Perera, 1985, p. 112-116).

These strategies are not exceptional when compared to other societies. Parkin, for example, emphasises that strategies of exclusion are the predominant mode of closure in all stratified systems (Parkin, 1982, p. 176). He describes exclusionary closure as a “form of collective social action which, intentionally or otherwise, gives rise to a social category of ineligibles or outsiders” (Parkin, 1982, p. 176).

Caste

The development of friendly relationships and mutual support (the first strategy) – and the chances for co-operation and entering into production and property relationships - are to a large extent influenced by caste differences. All villages in the case study areas are homogeneous in terms of caste. Brow mentions that, prior to the British overthrow of the Kandyan kingdom in the early nineteenth century, each village in Anuradhapura District was inhabited by members of only one caste (Brow, 1981, p. 707). This pattern has not changed in the case study areas. Table 7.1 provides an overview of the caste in each of the villages.

The ranking of caste is not absolute, and shows variation across various areas (coastal area, upcountry, low country). Therefore, it is not without controversy. Within the case study areas the caste order is: Govigama (or goyigama) same gé, Govigama, Hakgediya, Rada and Berawa. Within the govigama, which comprises 49% of the population, there is a further subdivision into Radala (landowners), Govi (cultivators), and Patti (cattle-caretakers).

The reference to occupations is nowadays symbolic; most activities are only performed on ceremonial basis. Even within the farmers’ sub-caste, there are further subdivisions. The smallest divisions of

caste resemble supra-kinship relationships (across 10 to 15 villages in the wider area). Marriage-alliances are more likely within these sub-divisions at the micro-scale. Farmers who originate from one of these villages are also considered to be relations, and this facilitates co-operation.

Table 7.1: Overview of caste in the case study areas

<i>Village</i>	<i>Caste</i>	<i>Explanation</i>
Nallamudawa	Govigama same gé	Farmers high caste
Indigehawewa	Hakgediya	Conch-flute players
Wellamudawa	Rada	Laundry
Punchikuluma	Rada	Laundry
Padikkaramaduwa	Govigama	Farmers
Walpola	Govigama	Farmers
Kulikkada	Rada or Berawa ¹⁸	Laundry or drum-players
Pudukkuluma	Govigama	Farmers
Surukkuluma	Govigama	Farmers
Ihalegama	Govigama	Farmers

Locality and group formation

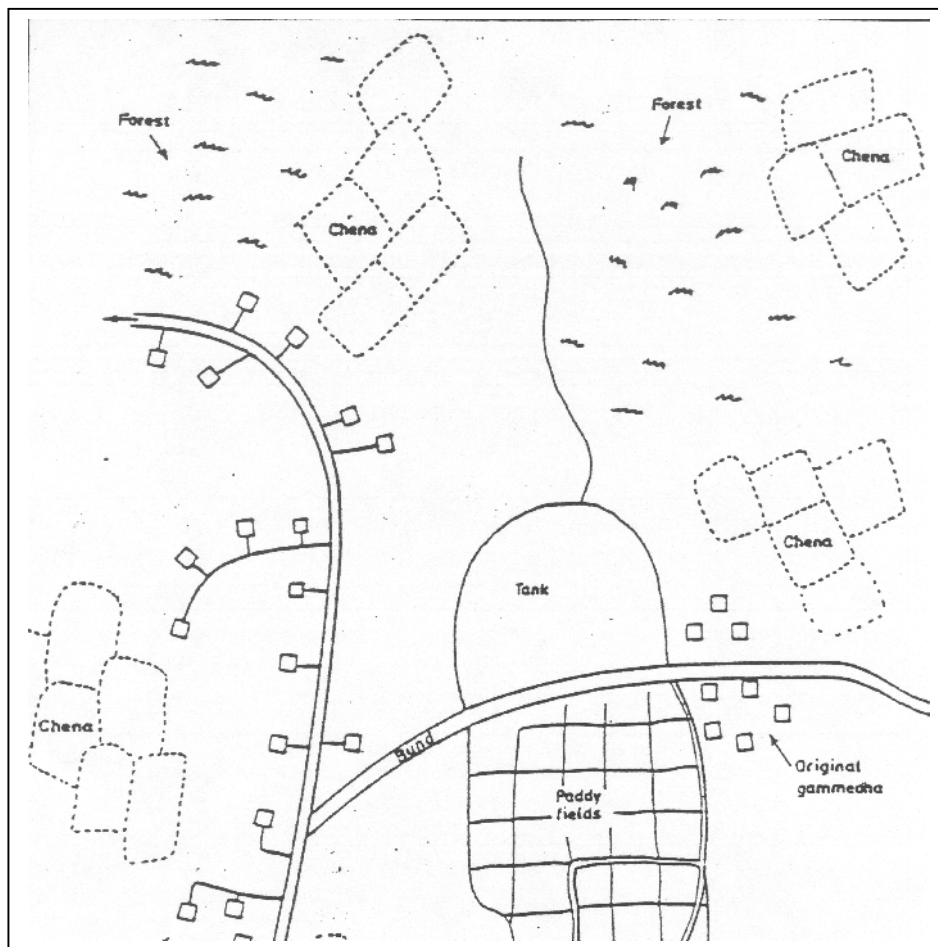
The virtual location matching the statement that ‘we are all relations’ is *purana gama*, which refers to the oldest part of the village where the initial villagers and their families settled¹⁹. In

¹⁸ Unfortunately, the interview data did not provide absolute clarity about caste in Kulikkada. Almost certainly it is lower caste, most probably either Rada or Berawa.

¹⁹ *Purana gama* refers to the original settlement within a village, but when the word is used in relation to other villages, it means ‘traditional village’. This difference is particularly important when there is another new settlement nearby, under one of the major irrigation schemes. E.g. Padikkaramaduwa (*purana gama*) is not the same village as Padikkaramaduwa (*colony*).

some case study areas, such as Kulikkada, these families are the most influential in the farmer organisation, and most vocal in expressing their opinions and demands. Purana gama is located much closer to the tank bund than the newer part of the village (see figure 7.1).

Figure 7.1: layout of purana gama (old village)



Source: Lund, 1993, p. 21

The location of paddy fields in purana wela and akkara wela is equally important. Leach argued that it is in particular the layout of purana wela [the old field] which determines group formation.

At present, the layout of fields under *purana wela* and *akkara wela* has become less dominant in the formation of *attam* groups. Nonetheless, it does affect the strategies and preferences of particular farmers with regard to particular decisions.

The layout of fields indicates who benefits most from temporary redistribution of land, who ‘pays’ the most, and who benefits most from cultivation of a particular part of the command area when this is not redistributed. This will be discussed in the next section.

7.2 Reciprocal exchange of land, labour and financial resources

The previous chapter provided information on the economic strategies of farmers, but did not elaborate upon the reciprocal exchange of resources within households, and families or between households. There are various forms of such strategies with regard to land (*thattumaru*, *kattimaru*), with regard to labour (*attam*) and an exchange of agricultural inputs for part of the yield (sharecropping). Most of these strategies are applied by households with small landholdings and with very limited financial means. This suggests that the exchange of resources is based on necessity. This impression is further strengthened by the reduced involvement in *attam* among those households who do not belong to the most vulnerable group of households.

Sharecropping

Sharecropping is – in the Sri Lankan context referred to as *andetenancy*. As already noted in chapter 5, the Paddy Land Act of 1958 intended to regulate the relationship between landowners and tenants, and to protect the tenant by the provision that the

landowner could demand only a maximum of 25 % of the yield, instead of the usual 50%. The Paddy Lands Act has not had any impact on the tenancy arrangements within the case-study areas. Without exception, all landowners demand 50% of the yield. The only variation is with regard to which of the initial expenses for cultivation are paid for by the landowner, and which are paid for by the tenant. This can make a large difference, since the initial expenses represent 60 to 70% of the yield (see section 6.2).

The Paddy Land Act has also not been successful in preventing mudulalis from establishing an innovative (and very profitable) form of ande-tenancy. In a few villages, such as Indigehawewa and Kulikkada, there is an adjusted form of ande-tenancy, referred to as '*mudulali-tenancy*'. The agricultural inputs are provided by the muduladi on a credit basis, the farmer cultivates his own paddy field, and the yield and initial expenses are shared after harvesting. Obviously, this arrangement is much less favourable than borrowing agricultural inputs (from either the farmer organisation or the mudulali) without paying interest.

Another resourceful adaptation to the traditional ande-tenancy arrangement is the 'share-cropping' arrangement for brewing liquor²⁰. Other forms of sharecropping are also possible in combination with for example thattumaru or bethma:

“What sometimes happens is that someone who has a lot of land to cultivate (for example several shares within the same family), and who participates in bethma, will give a quarter acre for use to

²⁰ Under such arrangements, a person with sufficient financial resources (usually landowners with control over means of production) makes the investments and provides the equipment required for brewing *kasippu*, and then receives part of the profit made from the sale of *kasippu*.

someone else, who will use it as a nursery for onions. This person then gives some of the young onion plants to the bethma share-owner. The bethma share-owner uses these young plants on another part of the land he can cultivate” (fieldnotes, Padikkaramaduwa, 1999).

Apart from these traditional and innovative sharecropping arrangements, a few private lease-arrangements are reported between households. The difference to ande-tenancy is that the landowner pays none of the initial agricultural expenses, and that – after completion of the harvesting – they receive 10 to 25 bushels per acre. The lease is determined by factors such as: seed variety²¹, the season (maha / yala season), the soil fertility, and mutual (friendship) relationships. This form of tenancy is referred to as *bade*-tenancy²². Some respondents mentioned the ‘lease’ or ‘mortgage’ of cattle, under which the cattle-owner gives his or her cattle in temporary care to someone else.

Leach observed, in Pul Eliya, that the landlords and ande-tenants were usually close kin, and that the economic implications were thus quite different from the situation if the landlords and tenants were more distinct. He referred to the Paddy Lands Act of 1958 as an ‘astonishing piece of Marxist legislation’ (Leach, 1971, pp. 242). Brow made similar observations, when he stated that:

²¹ The short-term variety of 3 or 3 ½ months has a lower yield than the long-term variety of 4 months.

²² Bade-tenancy involves a fixed-rental contract, where the rent is not proportional to the yield, as is the case of ande-tenancy. Ghatak and Pandey (2000) compared the characteristics of different contracts, including fixed wage contracts (wage-labour); fixed-rental contracts (bade-tenancy) and sharecropping (ande-tenancy), and analysed optimal contract choice in agriculture.

“Among fellow villagers sharecropping was represented as an act of friendship and mutual aid between kinsmen and caste fellows. It formed part of a pattern of reciprocity and cyclical reproduction whereby the village continuously reconstituted itself as a relatively egalitarian community of status equals” (Brow, 1981, p. 708).

However, he adds that between members of different castes the sharecropping relationship was not based on such egalitarian terms:

“Between members of different castes, by contrast, although sharecropping was conducted on the same material terms, it was represented by landlords as a customary service owed them by their status inferiors” (Brow, 1981, p. 708).

In relation to these comments by Leach and Brow, two observations seem appropriate at this stage. The fieldwork in Anuradhapura district between 1997 and 2000 demonstrated that sharecropping is not restricted to close kin, even though respondents say that there must be some degree of trust for them to enter into a tenancy arrangement. There is some variation across the case study areas, but on average there are between 5 and 20 ande-tenants per year (maha kanna only) within each village.

Brow referred to an important aspect of the caste system, which directly affected sharecropping arrangements. He indicates that the pattern of intercaste sharecropping was a hierarchical top-down relationship. Govigama people did not work as tenants for lower-caste people. He observed that the material and ideological aspects of this hierarchical structure retained vitality within Anuradhapura district, despite a century of increasing bureaucratisation under British rule (Brow, 1981, p. 708). The reluctance of Govigama

people to work as ande-tenants for lower-caste people was not referred to in the case study areas, probably because most sharecropping arrangements were within village boundaries and between villagers (whether or not kin).

What some of them did refer to explicitly – and in that way the observations of Brow are still very much valid – was their reluctance (shame) to work as day-labourers for lower-caste people, *in particular* the shame if ‘their’ women participated in day-labour activities for lower-caste people. Given the fact that day-labour opportunities are usually located outside the village boundaries, or in the Mahaweli schemes²³, then caste differences are likely to occur.

“The women in this village don’t participate in day-labour because people believe that it is a shame for the men of this village to depend on women. Furthermore, people who live in this village are very proud of their caste. Therefore they think it is not suitable to send women for day labour” (fieldnotes Pudukkuluma, 2000).

This shows that caste and gender relationships are interrelated²⁴. For these high-caste villagers it means that their options for income-generation through day-labour activities are much more limited than for people from lower castes²⁵.

²³ Occupied by settlers from upcountry, many of whom belong to lower-castes.

²⁴ Gender-relationships also interact with kinship relationships, property and level of education. Marriage arrangements often reflect such interconnections (e.g. Moore, 1981, p. 585).

²⁵ It has to be emphasised though, that this reluctance was only mentioned by some of the respondents, and did not result in significantly lower percentages of villagers participating in day-labour. Nonetheless, in some of these villages, such as Padikkaramaduwa, there was a clear geographical

Attam

Another form of co-operation between farmers from different households is *attam*. This refers to the reciprocal exchange of labour between farmers, for particular farm-activities such as ploughing, sowing, making field bunds, harvesting, threshing, cleaning chena plots, planting, and picking chilli²⁶. Attam-groups are gender-based groups consisting of approximately 5 to 10 people, depending on how many people are willing to participate. In particular the most vulnerable farming households, including the landless, have a particular interest in the continuation of attam, as this enables them to minimise the investments for subsistence agriculture. The gender-based group activities among women were found to strengthen mutual relationships and mutual support²⁷.

Traditionally, all farmers who cultivated within the same paddy tract formed a group, who rotated their activities from one landholding to another (Ulluwishewa and Tsuchiya, 1984, p. 118). Ulluwishewa and Tsuchiya were not the first to observe this pattern. Leach had already argued that the basis of corporate grouping in the organisation of such exchange of labour is locality of one's paddy fields (Leach, 1971, p. 7). His conclusions are based on detailed analysis of co-operation among landowners in different sections of the command area, on the operation of

clustering of day-labour activities outside the village boundaries. Villagers worked in two particular *colonies*. This might be related to a combination of factors (distance, wage, transport arrangements), but it might also be related to caste factors. The field-material did not include information on these colonies.

²⁶ Female groups are involved in harvesting (paddy, millet), picking (chilli, cowpea) and weeding. Male groups cooperate in making field bunds, levelling, ploughing, sowing, threshing, and slash and burn for chena.

²⁷ Also likely for male groups, but not observed.

irrigation channels, labour organisation and the organisation of the threshing floor.

At present, the basis of attam co-operation is still strongly based on locality within the command area, or on the locality within the chena fields, but less dominant than it used to be. Many respondents indicate that they cooperate with neighbours, friends and relatives. The group size and group composition fluctuates. People get sick, get married, women get pregnant, or men and women become involved in (temporary) jobs. As it becomes more difficult to form attam groups, the composition of the group becomes less locality-bound.

Photo 7.1: women working as part of an attam-group of seven



Ulluwishewa has already discussed out in great detail the rapid disappearance of attam during the eighties, and its replacement by hired labour. Although attam has not yet completely disappeared in

the case study areas, it is subject to disintegration and replaced by hired labour. The large majority of households prefer to hire labourers, as this reduces their own investment of time. This means that attam is nowadays mostly practised among those families who cannot afford to hire labourers.

Thattumaru / Kattimaru

Thattumaru is the rotational cultivation of one plot of land by several children within one household. One of the children cultivates the entire plot for one season, the next season another son / daughter will cultivate the entire plot, etc. *Thattumaru* prevents the division of land into smaller and smaller plots. In each village, *thattumaru* is applied on average by 4 or 5 families with small landholdings. *Kattimaru* refers to rotation of parts of the land among sons and daughters. This can be used when part of the land belonging to one family is infertile, whereas another part is more fertile. *Thattumaru* and *kattimaru* are both practiced to prevent conflicts among children, although not always successfully. *Thattumaru* is subject to creative arrangements, such as selling one's share to one's brother or sister, or in combination with sharecropping or a private lease.

Thattumaru is most likely to be practised when further fragmentation of lands within a family is no longer feasible. *Kattimaru* is less likely with very small plots of land, and more likely when a family has land at several locations. With the increased fragmentation of land, *kattimaru* has almost disappeared.

7.3 Exchange of land within the farmer organisation

Whereas the previous strategies were mainly exchange strategies within and between small groups of households, there is another strategy which involves the exchange of land among all the landowners of land within the command area of a tank: *bethma*. Although this was already briefly referred to in previous chapters, it will be discussed in more detail in this section.

Bethma

Bethma refers to temporary redistribution of land where only part of the command area is cultivated under a system of rotational distribution²⁸. If the water level in the tank is not sufficient for cultivation of paddy over the entire command area, farmers can choose between (a) non-cultivation, (b) cultivation of part of the command area (*purana wela* or *akkara wela*), (c) *bethma* or (d) the cultivation of other field crops (OFCs) that require less water. *Bethma* can be applied, either during the main cultivation season, or during the dry season when the water level is sufficient to cultivate part of the command area. The Divisional Officer, the Grama Niladhari, the farmer organisation or the *vel vidane* or individual farmers may propose temporary redistribution of land, so that all landowners can cultivate at least a small plot of land.

The entitlement to land under *bethma* is based on a combination of formal and informal arrangements.

²⁸ There is also a more formal form of *bethma* in large scale irrigation systems, which is implemented top-down, and which refers to rotation between cultivation of the left bank or the right bank (one season the left bank, the next season the right bank). In this thesis, I only refer to the more traditional form of *bethma*, as applied in the case study areas.

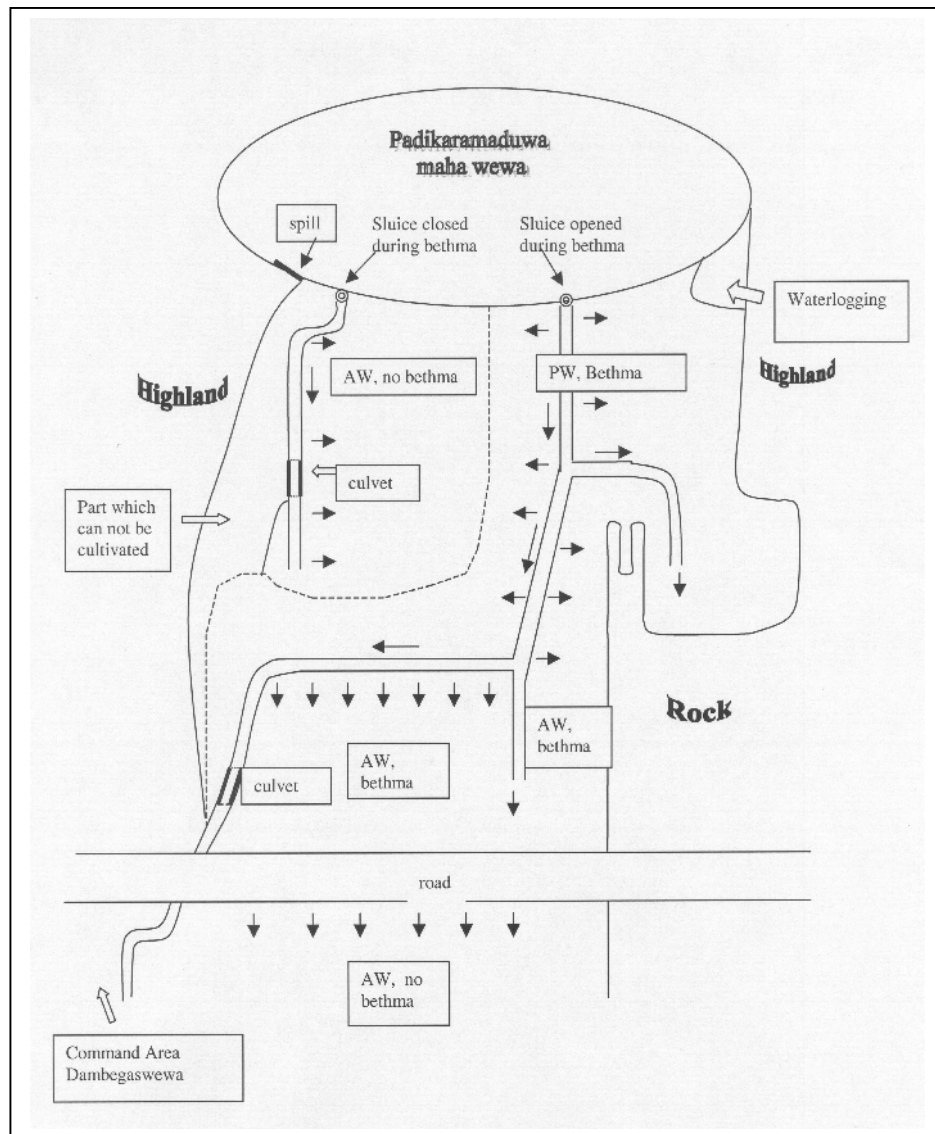
The simplest rule used to determine who is entitled to land is that only shareholders are entitled to land under bethma, provided that they are present at the meeting, or represented by their spouse or children. Land which is allocated under bethma may be cultivated by either the shareholder, or by others with mutual agreement. Bade and ande-tenants who cultivate land for only one season have to make an individual arrangement with the landowner.

The use of bethma in minor irrigation systems is rather exceptional. In some cases, bethma had not been practiced for 20 or 25 years and only recently successfully applied again (Kutukuluma 1996, Indigehawewa 1998/99, Wageyakuluma, 1998, Walpola 1993, 1999, Padikkaramaduwa 1996, 1997, 1998). This is related to a number of factors, most prominently the lack of co-operation by large landowners. However, other factors also play a role, such as the decision-making process²⁹, the large investments, and the layout of the fields. The layout of the fields is most important in considering the viability of bethma. An example of the part of the command area used for bethma is shown in figure 7.2. AW refers to akkara wela, PW to purana wela.

The fact that – in most case study areas – bethma had not been practiced for such a long period corresponds to the game-theoretic point of view, according to which farmers' preference will primarily be based on individual gain. However, the recent revival of bethma is difficult to explain from this perspective.

²⁹ Several farmers complained that, in the past, the vel vidane had more authority to decide in favour of bethma, whereas nowadays the farmers can no longer come to an agreement.

Figure 7.2: Padikkaramaduwa command area



The following scenario is argued from such considerations. If a selective group of families (probably the initial settlers) has large amounts of paddyland in either purana wela or akkara wela, then this group is likely to be strongly in favour of cultivation of only part of the command area, but not under bethma. If one group of families has large amounts of land under purana wela and another

group of families has much land under akkara wela, bethma is also not likely to materialise, due to disagreement on which part of the command area should be cultivated. Bethma would thus only appear feasible if almost all landowning families have most of their land under purana wela (or in exceptional cases akkara wela) in more or less equal shares.

It is likely that part of the reason why bethma has not been practiced for such a long time is related to the increasing commercialisation of agriculture. Before the introduction of high-yield varieties and the introduction of tractors, the agricultural investments were considerably lower, which facilitated bethma. In some of the case study areas, bethma has recently been encouraged by outside actors, such as the Divisional Officer or project organisations. This – at least to some extent – explains why one can observe a revival in bethma.

There are two options for redistribution of land under bethma: proportional and non-proportional. The actual plot size or percentage is subject to the number of shareholders, the size of the Command Area allocated for cultivation, and the water level in the tank. The rule for proportional redistribution of land is usually set at 25 % of the size of one's own landholding, sometimes with a minimum size of 0.25 acres to accommodate the very small landowners. The land available under non-proportional distribution is usually 0.25 acres for each shareholder. With the non-proportional distribution of land, small landowners whose landholding does not exceed 1 acre are effectively ensured of at least 25% of their original area, whereas larger landowners may end up with a much smaller proportion. With proportional distribution of land, small landowners end up with shares they

consider too small for profitable cultivation. In this case, they are expected to give their share to others. It is interesting to see how, in Indigehawewa, a choice is made between proportional and non-proportional distribution. This is quite exceptional.

“When both akkara wela and purana wela can be cultivated, the land is divided according to proportional distribution, meaning that someone with 2 acres of land gets twice as much as someone with 1 acre of land. When only purana wela can be cultivated, the distribution of land is arranged according to equal shares, because the entire part which can still be cultivated is too small for applying proportional distribution”. (fieldnotes Indigehawewa, 1998).

As expected, small landowners and larger landowners had different preferences between the rules for redistribution of land. An interesting strategy was reported in Padikkaramaduwa, large landowners were said to increase their total share by dividing the land among all their children³⁰.

7.4 Rules, norms and sanctions

One of the main concerns, strongly reflected throughout the CPR literature and the social capital literature, is over effective co-operation, the conditions for co-operation, general compliance with the rules, and conflict resolution. The extent to which farmers comply with these rules is influenced by several factors. With

³⁰ It is difficult to tell whether the division of land was in fact based on another rationale, such as increasing the households' voice in the meetings of the farmer organisation.

reference to Levi (Levi, 1988, p. 52), Ostrom builds on the term ‘quasi-voluntary compliance’, according to which strategic actors are willing to comply with a set of rules when they perceive (a) that the collective objective is achieved, and (b) that others also comply (Ostrom, 1990, p. 95). This ‘quasi-voluntary compliance’ can be observed in the case study areas. Farmers are willing to participate in maintenance activities and other duties, when they perceive that this results in proper maintenance and adequate protection of their fields, and when they perceive that the majority of others also comply.

In the case study areas, free-rider behaviour is not structural and not (yet) threatening the maintenance of the irrigation infrastructure. Ostrom queried whether sending a child below the age of ten or an adult over 70 to do heavy physical work met this rule. (Ostrom, 1990, p. 100). The respondents, unfamiliar with the work of Ostrom, answered spontaneously, complaining about those who sent their small children or their elderly parents for shramadana work. There is no formal rule, which states that it is not allowed, yet one can observe moral disapproval of such opportune behaviour. The planning and implementation of the cultivation schedule, and the operation and maintenance of the minor irrigation systems is determined by a combination of formal and informal rules and norms. These are:

1. Attending kanna meetings;
2. Complying with the cultivation schedule and the cultivation area;
3. Participation in maintenance activities;
4. Participation in activities to protect the fields;
5. Refraining from taking water without permission.

1. Attending meetings

Attending the meetings gives farmers a chance to discuss the planning and implementation of the cultivation schedule, and how the scheme should be operated and managed. The most common causes of low attendance rates at meetings were dissatisfaction among a large group of members about the functioning of the farmer organisation, the failure of the farmer organisation to provide benefits to its members, to organize pre-cultivation meetings; and suspicion of misallocation of funds. The consumption of liquor by men was perceived by several female respondents to be a structural cause for non-participation in meetings and an overall lack of co-operation:

“On the request of the Divisional Officer, the Farmer Organisation published notices about a kanna meeting, but people didn't gather for that meeting. They just started to do the work individually. Liquor is a major problem that explains why their attitude has become like that” (fieldnotes Indigehawewa, 1998).

2. Complying with the cultivation schedule and the cultivation area

Deviation from the cultivation schedule has two main causes. *Being late* with completing particular activities is usually caused by a lack of finances and other constraints to make the proper arrangements in time, such as renting tractors and finding labourers. Starting *too early* with particular activities is a problem with farmers who have easy access to, or control over, machinery and equipment. A few of these farmers tend to start land preparation after the first rains, before the kanna meetings are held and to complete their activities in advance of the cultivation schedule. This allows them to cultivate ‘as they like and what they like’, and diminishes the likelihood of temporary redistribution of their land. It might even allow them to cultivate long-term varieties

which have higher yields than short-term varieties. In Indigehawewa, Walpola and Kulikkada, large landowners blocked the option of bethma by early land preparation.

“Several farmers complained that, even though the chairman of the farmer organisation expressed several times that he was in favour of applying bethma, this option was taken away from them by the behaviour of a close relation of the previous vel vidane. This farmer had a relatively large piece of land (10 acres), of which 6 acres were within the command area of the tank, and considered for bethma. As he also owned two tractors and a threshing machine, he had been able to start harvesting well in advance of the agreed date in the cultivation schedule. As a result, he completed harvesting, and started with land preparation before the kanna meeting for the next season could be held. He was well aware of the commonly accepted norm that crops, which have already been sown, should not be left to parch, even though he did not comply with the rules. As a result, the decision was taken to cultivate only that part of the command area, but not under bethma” (fieldnotes Walpola, 1999).

As indicated in this example, cultivation outside the command area and early land preparation is facilitated by a widely accepted *norm*, that crops which have already been sown should not be left to parch. This explains why some farmers appear to take high risks by investing in early land preparation or by the preparation of land outside the agreed area. They estimate that the chances are very low that the farmer organisation will actually deny them access to water. They reckon that they can convince the farmer representatives that their crops should not be left to parch after all the investments made. Not all of them get away with this. In the case mentioned here, the response of the farmer organisation was to cultivate only that part of the command area in which his land

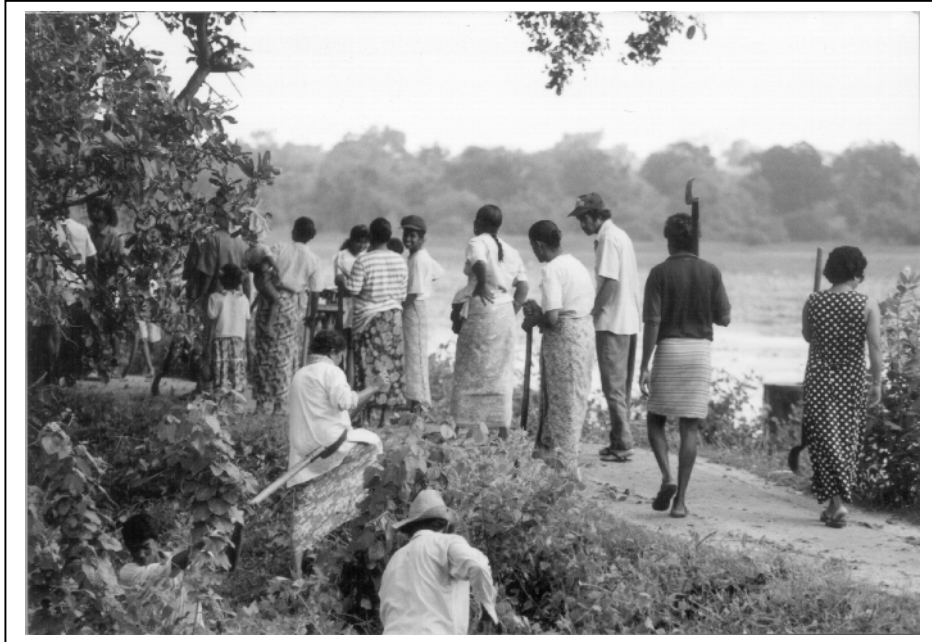
was located (purana wela) but not under bethma. In Indigehawewa however, the farmers (with the assistance of the Divisional Officer) decided to cultivate OFCs in purana wela under bethma, while the plot of land of the chairman, who already prepared his land for paddy cultivation, was left out. In Kulikkada, the farmers' response was to give up all cultivation, including the plot which was already sown.

Early land preparation results in more problems for the farming community than when farmers are delayed with their activities. The excess water from their fields cannot be used by downstream farmers who have not yet started cultivation. Similarly, by early harvesting and threshing, they open the fences to allow their tractors to pass. The smell of paddy residues attracts elephants and cattle into the field, and this results in crop damage for the other farmers who have not yet completed their cultivation activities.

3. Participation in maintenance

Shramadana refers to collective maintenance activities, and is the most commonly practiced method for removing bushes and weeds from the top of the bund, to clear the path which gives access to the tank and the sluices. *Shramadana* is much less voluntary than is generally assumed, it is compulsory for members of the farmer organisation, and certain *shramadana* activities are compulsory for Samurdhi-beneficiaries. All members of the farmer organisation are required to send at least one representative from their household to participate in *shramadana*, an activity which usually takes a few hours. Free-rider behaviour consists of not showing up for *shramadana* (without excusing oneself) or sending young children or elderly people as representatives of the household.

Photo 7.2: Shramadana in Walpola, 1999



Observations revealed that, although participation in shramadana is not the most popular activity among men and women, the social nature of this collective effort does contribute to the willingness of individual landowners to participate in shramadana activities. With some exceptions³¹, free-rider behaviour is occasional rather than structural. One of the reasons is that the small population (less than 150 households on average) enables easy identification of those who are regularly absent. The daily face-to-face contacts, and social control within the community, play an essential role in this. Participation in the maintenance activities is further enhanced as it creates goodwill among office-bearers for granting services and favours. Even though it is not structural, many farmers did

³¹ In the case of Kulikkada, free-riding seems to be endemic among the local elite with regard to fencing, participation in building watch huts and watching at night.

emphasise that there is an increase in free-rider behaviour when compared to the past.

4. Protection of fields

Fencing, building watch huts, and taking on rotational shifts in watching the fields at night, is much less subject to free-rider behaviour than participation in maintenance activities. The rotation of shifts takes place in small groups of 6 to 10 farmers. During each night, the watch huts for the other tracts are also manned. If one of the huts is not manned, the farmers present in the other huts are likely to notice this, and they are likely to inform other group members.

Free-riding is also prevented by the severe consequences for farmers if these tasks are not taken seriously. Failing to do one's shift leads to strong disapproval from the others. Most problems in this respect were found in Kulikkada, where several respondents stated that only the people at the boundary of the command area performed their duties as required, since their crops are the first to be destroyed by trespassing cattle and elephants. This suggests³² that it is the vulnerability of the location of one's plot that determines co-operation in the protection of fields.

5. Refraining from taking water without permission

Most farmers emphasise that the water distribution is such that they do not face water scarcity provided that everyone complies

³² Another explanation could be that the location of the land of large landowners is in the middle part of the command area. The interview material did not disclose the exact location of the lands of this group of landowners.

with the cultivation schedule³³. If the water levels are too low, the farmer organisation decides not to cultivate at all. It is especially those farmers who were delayed in completing the land preparation activities who run into problems, especially as they are not always granted additional time for irrigating their fields. In contrast to some other studies, the misappropriation of water is tolerated within reasonable limits, as long as it does not affect the other farmers too much³⁴. An overview of the rules and the actual situation is provided in table 7.2.

Table 7.2: rules, compliance and sanctions

<i>Rule</i>	<i>Actual situation</i>
1. Attending meetings	Low turn-out in four villages; no sanctions applied
2. Complying with cultivation schedule and the cultivation area	Early land preparation and cultivation of land outside cultivation area by a few landowners; limited enforcement through sanctions
3. Participation in maintenance activities	Some extent of free-riding in shramadana, no sanctions applied
4. Participation in protection of fields	A few defaulters; strong disapproval; no sanctions applied
5. Refraining from taking extra water without permission	Appropriation of water tolerated within limits. Appropriation of water for cultivation of highland not allowed. Limited enforcement through sanctions

³³ The decision to cultivate under rotational distribution, or to cultivate only part of the command area is based on pre-defined minimum water levels. Given the high investments needed in paddy cultivation, the farmer organisation is not inclined to take the risk of starting cultivation when there is a large chance of crop failure. Cultivation of part of the command area is only considered feasible if the minimum water levels have been reached.

³⁴ Most likely, this is taken as a ‘fact of life’ and thus taken into account in the estimation of the acreage which can be cultivated successfully.

Potential conflict is prevented by the lenient attitude of many office-bearers, granting individual requests for extra time to irrigate their fields.

Increase in violations of rules and free-rider behaviour

Notwithstanding the previous conclusion that violation of the rules, and free-rider behaviour, is not yet threatening the functioning of the system, there is an increase in free-rider behaviour and deterioration in rule compliance. One of the main causes for this is hardly, if at all, addressed in the irrigation literature or in the CPR literature. The deterioration in rule-compliance is, in some villages, repeatedly attributed to the consumption of liquor. This results in increasing hostilities among farmers within the community as well as within the farmer organisation. Women frequently reported that they do not go to any meeting or gathering after 14.00 due to the presence of drunken men. Additionally, the participation of men in maintenance activities (cleaning the canals, cleaning bunds, shramadana) decreases with their intake of liquor. In other words, it results in the decrease of quasi-voluntary compliance to the rules.

The involvement of farmer representatives (or their relations) in the production and sale of liquor, and the intimidation that represses resistance, further affects the trust of individual farmers in the functioning of these representatives. The consequent lower levels of trust, and higher levels of fear, affect the power relationships within the farmer organisation and the potential for conflict within the farmer organisation.

Against this background, it is important to note that community norms rather than formal rules distinguish which deviations are

tolerated and which are not. The following actions are generally tolerated:

- a. Non-structural free-rider behaviour;
- b. Non-intentional violations of the rules, e.g. due to illness or when farmers have not been able to make the proper arrangements in time;
- c. Taking water without permission, in particular by those farmers mentioned under (b).

Table 7.2 reveals that sanctions are rarely applied. The mechanisms for conflict resolution with regard to such deviations are quite informal and successful, and aim at the execution of tasks, compliance with the rules and a reduction of the chances of further escalation. The choice of informal mechanisms for conflict resolution are based on (i) a long tradition of conflict management through the authority of the vel vidane; (ii) the high transaction costs of rule-enforcement by fines or through the court; and (iii) the chances that the defaulter will involve political actors to support his case, which results in escalation. However, with regard to certain types of rule violations, these informal mechanisms fail. These are:

- a. Structural (repeated) violations of the rules / free-rider behaviour;
- b. Intentional violations, such as early land preparation, resulting in private gain at the cost of others;
- c. Roaming cattle which damage the crops of other farmers.

In addition to the violation of the above mentioned rules, there are also other 'offences'. For example, the wastage of water by office-bearers or vel vidanes (such as by continuous flow instead of rotational distribution, lack of monitoring, not closing sluices at

night) is perceived as a more serious offence than the occasional withdrawal of water by individual farmers without permission. Similarly, farmers are not pleased with the actions of others who use the water in the tank for cultivation of highland, such as in Indigehawewa:

“The most sensitive subject with regard to water management is at this moment related to illegal pumping from the tank. Some people are pumping water from the tank to highlands. These are both landless people who are not FO members, and also some members who started cultivation before the kanna meeting without adhering to the times set by the kanna meeting, and who finished harvesting earlier than the other farmers. If people would adhere to the agreed upon schedules, and not do those illegal activities, they could even cultivate in the yala-season.” (fieldnotes, Indigehawewa, 1999).

The reluctance to apply formal sanctions to the second type of rule violation (such as fines, denying water, or cancellation of membership) creates tensions among the farmers, even more so when the farmer representatives or the large landowners are the main defaulters.

7.5 Relationships of trust

The expression ‘We are all relations’ seems to characterise the village as a community with strong kinship bonds and, consequently, without conflicts. It seems to confirm the ideological (romantic) view of the traditional harmonious community, as previously noted in chapter two. In reality, however, distrust and disapproval are as much embedded in village and kinship

relationships as trust and mutual approval. Just recall the story at the beginning of this chapter.

Trust - the belief and confidence in other agents to behave as expected, despite uncertainties, risks and the possibility for them to act opportunistically - plays a central role in the farmer organisation. One of the key indicators of trust among farmers was found to be the attendance rate at meetings. A low attendance rate was often based on dissatisfaction and a lack of confidence in the functioning of the farmer organisation. In Wellamudawa, the lack of confidence in the vel vidanes resulted in their replacement:

“I started two years ago as vel vidane, succeeding C. and S. who had shared the duties as vel vidane for Wellamudawa. During the previous kanna meeting, we discussed how much acreage could be cultivated, whether only purana wela or only akkara wela should be cultivated. I proposed to start with purana wela, and after 1 month to start cultivation of akkara wela as well, because I knew that a water level of 4 feet would be enough for cultivation of at least 12 acres of land, but C. and S did not agree. The Divisional Officer asked the other farmers for their opinion and most of them indicated that they preferred my proposal. The Divisional Officer also asked S. and C. whether they still wanted to bear the responsibility as vel vidane and as chairman of the farmer organisation. The farmers then asked the Divisional Officer to appoint me as vel vidane of Wellamudawa. The problems of the previous couple were: (i) weak water management, they didn't provide water on time and didn't close sluices on time; (ii) weak maintenance of sluices and canals and the bund; (iii) they gave priority to issuing water to their own fields and (iv) the activities and timing were different from what agreed upon in kanna meeting” (fieldnotes Wellamudawa, 1999).

The intentions and integrity of the office-bearers or vel vidane, and their opportunistic behaviour are frequently grounds for distrust. Particular events, such as the preferential distribution of benefits among relations of the office-bearers as occurred in most case study areas, and the lack of information about the allocation of funds nourishes feelings of frustration, distrust and envy.

The extreme consequences of a lack of trust are the dissolution of the farmer organisation or the replacement of office-bearers. The extent to which these have occurred over the past few years is alarming. Table 7.3 shows an overview of the farmer organisations, in the year of establishment, whether or not (and in which year) they were dissolved or in which year their representatives were replaced, and the cause of instability. In this table, corruption refers *specifically* to corruption in relation to tank rehabilitation projects. Through sub-standard and shoddy execution of the rehabilitation works, contractors are able to make a profit, and keep part of the finances for themselves.

In several case study areas, the contracting work was executed through the farmer organisation. Therefore, the table also includes a column on the most recent tank rehabilitation projects which were implemented with the involvement of the farmer organisation. In the column headed 'cause of instability', a combination of factors is sometimes given. The direct cause of dissolving the farmer organisation, or for replacement of farmer representatives, is given as first (*in italics*).

Table 7.3: Establishment and dissolution of farmer organisations

<i>Village / year that FO was established</i>	<i>Rehabilitations through FO</i>	<i>Dissolved/ inactive</i>	<i>Cause of instability</i>
Nallamudawa 1991	Halmillikuluma 94/95 Kiriammunukole 1998	No	n.a.
Indigehawewa 1993	1997-1999 all tanks (scheduled or done)	Yes, 1999	<i>Corruption; kasippu</i>
Wellamudawa 1989/90	Wellamudawa 1993; Punchikuluma 1998	Contested leadership 1998; VV replaced '99	<i>Poor performance, selective rehabilitation; corruption, kasippu</i>
Walpola 1993	Kudawewa 1996-97 Hinguruwewa 1996-97	Yes, 1999	<i>Corruption, inactive chairman;</i>
Kulikkada 1991; Farmer Committee & VV since 1994	Kuratiyawewa 95/96; Gadolwewa 1998	Yes, still inactive	<i>Clash between cattle-owners and landowners; corruption, kasippu</i>
Pudukkuluma 1995	Pudukkuluma, 1997	No	n.a.
Padikkara-maduwa 1990	Dambegaswewa 1993/94	Dissolved Replaced in 1996	<i>Corruption and poor performance upto 1996</i>

The table shows that it is not only distrust of the capabilities and integrity of the office-bearers, but that also disapproval of particular behaviour either by office-bearers, vel vidanes or other farmers plays a role. This reduces the commitment of individual farmers to participate actively in the farmer organisation, to attend meetings, and to comply with all the rules. The brewing and selling of liquor, strong suspicions of corruption, and the focus of other members of the farmer organisation on personal enrichment were strongly criticized by some of the population.

7.6 Hidden resistance

The strong disapproval of such behaviour, and the expression of this in the interviews, was expressed mostly by small farmers who were in a dependent position vis-à-vis the large landowners or office-bearers³⁵. As such, it can be perceived as a strategy in itself. Scott refers to this as ‘the infra-politics of subordinate groups’. He indicates that virtually every instance of personal domination is related to a process of appropriation in the form of labour, grain, cash or service. Systemic subordination is said to provoke a desire to strike or speak back to the dominant class within a society (Scott, 1997, p. 313-315). Scott is not the first to observe this; Weber refers also to this³⁶. Parkin observes that exclusionary closure of a particular group of ineligibles or outsiders, induces countervailing action by the negatively privileged, challenging the prevailing system of allocation and distribution of resources. (Parkin, 1982, p. 176; see also section 7.1). He continues by stating that:

“all this indicates the ease with which the language of closure can be translated into the language of power. Modes of closure can be thought of as different means of mobilising power for the purpose of engaging in distributive struggle” (Parkin, 1982, p. 177).

³⁵ To counteract criticism, several office-bearers / *vel vidanes* employed another strategy, explaining in great detail that they actually wanted to pass on the responsibility to others, but that this was not allowed by the other farmers who were very satisfied with their functioning.

³⁶ Weber stated that “such group action may provoke a corresponding reaction on the part of those against whom it is directed” (Weber quoted in Parkin, 1982, p. 176).

Many of the stories about personal enrichment and corruption, which were recorded during the period of the fieldwork, are without doubt to some extent a reflection of subordination and exclusion, challenging the prevailing system of distribution. Strategies to dissolve the farmer organisation or to replace farmer representatives are the strongest available to deprive such farmer representatives of their position as the person in control over the distribution of resources.

In the case study areas, the frustration with the behaviour and strategic actions of farmer representatives, some of their relations, and government officers, is found to be related to the appropriation of material and non-material resources which 'belong' to the farming community. The most prominent examples of such appropriated 'goods' are: funds for the rehabilitation of the irrigation system, food packages for labourers in the rehabilitation works, plants distributed by donor organisations, the confiscation of land after extension of the command area, the 'appropriation' of donor funds to rehabilitate that part of the infrastructure which benefits the dominant group and – not insignificantly – the 'appropriation' of exclusive relationships with politicians, giving them a further advantage by increasing the dependency relationships.

In the next chapter, I will show how farmers respond to such domination by a small group of landowners within the realm of formal decision-making. Beyond the organisational boundaries, their options are restricted to criticism and raising doubts. This does not imply that all these stories are necessarily inaccurate; many are expressed out of anger with the situation. However, their frustration is nourished by their feeling of being disadvantaged in

comparison to other farmers. The categories, to whom this applies in particular are ‘outsiders’ and temporary members without paddy land and smallholders who vote for the UNP or the JVP.

However, resistance to the dominant groups and farmer representatives within the case study areas was not only expressed by those who were excluded from the distribution of particular resources. Much information about illegal activities, corruption and intimidation was provided by a group of young, male and well educated farmers, who had more options for finding alternative employment. That such strategies are not without risks, was indicated quite clearly:

“When someone talks about that, they come to their house and threaten them with knives. Those people are also involved in illegal liquor, and they just don't care.” (confidential, 1999)

In some cases, members of the local elite use similar strategies to incriminate each other. Former office-bearers or *vel vidanes* accuse the present office-bearers of corruption and malfunctioning (and vice versa). For example, a vice-chairman of a dissolved farmer organisation said that he had successfully convinced the Commissioner of the Department of Agrarian Services of the need to rehabilitate two of the tanks in the village. However, he was frustrated to see that the other office-bearers and officers had used the works for private gain. He lost part of his homegarden due to the construction of an access road to the tank, without receiving any compensation. Furthermore, in the rehabilitation, they poured concrete over the old sluice in the spill which used to provide

water to his land. His anger was expressed in a long litany of complaints and accusations (of which only part is produced here³⁷):

“All officers, that is the Technical Assistant (TA), the engineer, the Institutional Organiser, the Technical Officer and the office-bearers of the farmer organisation of *Salvenia wewa* and *Lassene kuluma* are corrupt. Only the Divisional Officer was not corrupt, but he couldn't do anything about it either. The TA had his own contracting company, and got the rehabilitation work for his company through the name of the treasurer since he couldn't be the direct beneficiary. Therefore, all the money went to the TA. When officials or politicians come to the village, they show them the head end of *Lassene kuluma*, and provide them with good food and alcoholic drinks and they either don't get to see the reality, or they keep quiet because they are being treated so well. I complained to the Minister and other departments, but I haven't yet received any reply.

The current Chairman of the Farmer Organisation has only 0.5 acre of paddy land under *Lassene Kuluma*, but cultivates 3 acres, including plots in the spill area and in the reservation area. Before this started, there was a canal through the reservation area to ensure that spill water could be diverted without destroying crops. Now that the chairman has taken this land for cultivation there is no canal anymore. If the tank spills, the water has no proper way out and will cause flooding of the entire command area. Additionally, the office-bearers are stealing food packages.

The last time, every one worked for 6 days, and attended a meeting on the 7th day. Therefore they had the right to receive food

³⁷ The offices to which these government officers belong and the location of these offices are deliberately left out here, and the names of the villages are replaced by fictitious names: (*Salvenia wewa* means: tank of flowers and *Lassene kuluma* means beautiful tank).

packages for 7 days of work. However the office-bearers filled in that they themselves had worked for 21 days, and received food packages for 21 days, while all the others received only 6 days worth” (confidential, 1999).

Farmers who are fed up with the functioning of the vel vidane or office-bearers are quite successful in forming alliances with former vel vidanes or with officers for the purpose of replacing the office-bearers or vel vidanes according to the official procedures.

7.7 Impact of co-operation and trust on irrigation management by the farmer organisations

Previous sections have demonstrated that co-operative management of land and water resources is essential for securing one's food and income-supply. According to the bodies of literature on social capital and on community-based management of irrigation systems, shared value systems and moral codes are expected to result in co-operative resource management. This is then eagerly used to explain farmers' co-operation in irrigation systems. Although it is difficult to deny the value of shared value systems and moral codes, this is slightly beside the point considering minor irrigation systems. The shared value systems and moral codes do not explain why farmers in the case study area enter into co-operation. They enter into co-operation agreements because of their shared history, the understanding of 'community contractual obligations' and the experience that such co-operation has been productive in the past.

Chapter two (section 2.3) referred to Dasgupta, who argued that the popular image of village tanks as common property resources vulnerable to over-extraction and free-rider behaviour is not correct. He stated that local commons, such as village tanks, are easy enough to monitor, and that their use is often regulated in great detail by the community, either through the practice and enforcement of norms, or through deliberate allocation of use (Dasgupta, 1993, p. 290). The game-theory models within the new institutional literature and – to some extent – the social capital literature, fail to recognise these characteristics and tends to present co-operation as something unexpected, perhaps even against all odds. This chapter has shown that mutual co-operation and exchange are shaped by kinship, caste, friendship relationships, property, and the layout of paddy fields and chena fields. Mutual co-operation and exchange has declined with the commercialisation of agriculture, the introduction of the high yield varieties, and the introduction of buffaloes. The initial investments needed for agriculture have increased considerably, resulting in the greater indebtedness of farmers, in particular of the most vulnerable households and smallholders who do not have the financial resources to start cultivation without using credit.

The farmer organisation (or *vel vidane*) exists by virtue of co-operation between all the cultivators of land in the command area of a tank. The shared history, kinship relations and community practices, in the case study areas are sufficient to allow continued co-operation in irrigation management. Occasional free-rider behaviour, non-intentional violation of rules, or the withdrawal of water from the canal without permission are, for that reason, not perceived to be threatening the continued operation of the

irrigation management system. However, other factors are, as discussed in previous sections. Dasgupta continues to explain that:

“If you are steeped in social norms of behaviour and understand community contractual obligations you do not calculate every five minutes how you should behave. You follow the norms. This saves on costs all round, not only for you as an ‘actor’, but also for you as ‘policeman’ and ‘judge’. It is also the natural thing for you to do if you have internalised the norms. But this is sustainable only so long as the background environment remains pretty much constant. It will not be sustainable if the social environment changes suddenly. You might even be destroyed. It is this heightened vulnerability, often more real than perceived, which is the cause of some of the greatest tragedies in contemporary society.” (Dasgupta, 1993, p. 291-292).

Dasgupta suggests something, which proves to be at the crux of the explanation as to why there is so much ill-feeling over the consumption and production of liquor, in connection with the trustworthiness of farmer representatives, and in relation to the rule-compliance by other farmers. It not merely threatens the co-operation required for successful cultivation, but it is a threat to the social environment itself. Remember the quote in section 6.5 which mentioned that it is especially the younger generation which gets addicted to liquor, and that five or six people had already committed suicide!

The farmer organisation (or vel vidane) exists, not only by virtue of co-operation between all cultivators in the command area of the tank, but also by virtue of their trust in the capability and integrity of the farmer representatives in operation and management. The appropriation of ‘community resources’ in tank rehabilitation

projects clearly results in shared disapproval and a lack of trust. Moreover, the tank rehabilitation works were perceived as a measure to reduce vulnerability, a guarantee for cultivation during those years when rainfall is abundant. The superficial or selective rehabilitation is perceived as a violated promise by community members. They toil hard to reduce their vulnerability, and they are naturally disappointed once they realise that the promises have not come true. The next chapter will elaborate on the processes at work in tank rehabilitation projects which result in poor or selective rehabilitation of the irrigation infrastructure.

In other words, it is a combination of a violation of community norms, changed attitudes, disapproval of behaviour and lack of trust, which explains why farmers *refrain from* co-operation. The violation of community norms, changed attitudes, disapproval and lack of trust, engender strategies to dissolve the farmer organisation or to replace office-bearers, as was touched upon in previous section. How this materialises will be discussed in the next chapter.

Ch. 8 Formal strategies

No. 1304 of 1904

*To: the Government Agent of North Central
Province,
Anuradhapura*

*The humble application of Kaluhamy Kanwate,
Kodarikuluma in Kalagama North respectfully
sheweth that your honour's humble petitioner is
anxious to restore and improve the Crown Land
called Indigehaweewa situated near about the
aforesaid village and prays therefore that your
honour will be pleased to grant him a permit for
restoration and improvement under the conditions set
forth in Colonial Secretary's letter no. 147, dated
15 June 1887. And the petitioner will ever pray,*

14 July 1904,

This petition, sent to the Government Agent of Anuradhapura almost one century ago, could well have been written only a few years ago, even though the wording of the petition would be somewhat less servile and the petition would now be written in Sinhalese. It is one of the formal mechanisms available to farmers and farmer organisations in their strategy to mobilise external assistance, in this case for the rehabilitation of the irrigation infrastructure.

One would expect that the participatory process of decision-making in the farmer organisation would provide farmers with a wide range of opportunities to influence decision-making within the farmer organisation, e.g. by appealing to the operating rules and criteria, inquiring about the operating methods of the farmer organisation, by complaining about exclusion from benefits, and through formal procedures for selection and discharge of office-bearers and their re-election.

Although these opportunities are used to some extent during participation in the discussion with regard to the cultivation schedule and operational rules in the kanna meetings, many respondents indicate that they do not readily use such opportunities to question the behaviour of farmer representatives – unless they are really fed up. It is interesting to understand why they do not use these options when they disapprove of the operation and management, or of the behaviour of farmer representatives. Furthermore, it is important to understand how these processes are affected by collaboration between groups of farmers and farmer representatives, and other actors within their institutional environment.

The purpose of this chapter is not to give a complete overview of all the formal strategies¹ which have been employed by farmers, particular categories of farming households, and farmer organisations, but to provide an analysis of the processes at work, the context within which strategies can be explained, and the impact of these processes on the functioning of farmer organisations.

¹ Formal strategies refer to strategies which involve the intentional use of formal institutions (see section 2.8).

The chapter starts with a description of the context, which is relevant in understanding the different strategies of individual farmers and households across the case study areas. This includes, first of all, an overview of the options for participation in the decision-making process and a discussion of the dependency relationships in some of the villages from the patron-client perspective (section 8.1 and section 8.2).

This is followed by an analysis of the strategies in three of the case study areas (section 8.3). Given the strong negative impact of tank rehabilitation projects on the continuation of the farmer organisations in the case study areas (see previous chapter), section 8.4 will focus on the processes at work in tank rehabilitation programmes. This section is followed by a discussion of strategies in the legal domain in section 8.5.

8.1 Options for participation in the decision-making process

To understand the participation options for *individual* farmers representing their household at the meetings of the farmer organisation, a more detailed breakdown is required than the initial categorisation provided in chapter 6. The farmer categories are as follows:

- a. Male paddy landowners with control over means of production (MoP);
- b. Male landowners, no control over means of production²;

² With no control over means of production *other than* the land they own

- c. Male cultivators³, cultivating land registered in their wife's name;
- d. Male cultivators, cultivating land registered in their parents' name;
- e. Widow with paddy land, whose family has control over means of production;
- f. Widows/ other women in female headed households with paddy land whose family has no control means of production;
- g. Other female landowners (mostly bina-marriages) with no control over means of production;
- h. Female cultivators, cultivating land registered in their husbands' name;
- i. Female cultivators, cultivating land registered in their parents' name;
- j. Male and female ande-tenants;
- k. Male and female farmers, cultivating chena, homegardens or highland.

Table 8.1 provides an overview of people's options for participation in the meetings of their farmer organisation. This reflects the constitutional choice rules (Ostrom, 1992, p. 44-45) which determine one's entitlement to participation. The information in the table is based on an inventory of their *de facto* entitlements, which do not necessarily correspond to one's *de jure* entitlements. It is important to emphasise that these categories are not mutually exclusive. There is considerable overlap. For

³ A distinction is made here between paddy landowners and cultivators. When elderly or sick people are no longer able to cultivate themselves, this task is usually taken over by their children. The land remains officially registered in their parents' name. Similarly, some farmers cultivate land that is officially registered in the name of their spouse. These groups, who do not have land registered in their own name, are referred to as '*cultivators*'.

example, both husband and wife within a household may have land registered in their own names, or they may have some lands registered in one of their names and also cultivate their parents' land.

Furthermore, individual farmers act as representatives of farming households. Although, according to the prevailing gender-ideology in the case study areas, representation is perceived to be a 'male' responsibility, this does not imply that any benefits are primarily individual benefits for the person involved in representation. In most cases the entire household shares in the benefits from participation, in other words the male and female heads of households thus act as a member of the household rather than as an individual.

The columns are ordered from the most influential to the least influential. This starts with one's eligibility to be an office-bearer, followed by agenda setting. Agenda-setting refers to the opportunity to suggest or to block particular items on the agenda, such as the discharge of an office-bearer.

The opportunity to participate in discussion is at least as powerful as voting. Participation in discussion provides the possibility to challenge the rules and criteria, to remind others that they should comply with the rules and criteria, to inquire, to issue complaints and to make suggestions. However, observation revealed that it is a mistake to think that the farmers themselves are mostly 'in charge' of the meetings and the decisions taken, or that all have an equal input to the meetings. During a meeting, government officers (Divisional Officer/ Grama Niladhari / Agricultural Instructor) and office-bearers address the crowd, explaining the procedures and

their suggestions for the cultivation season. The input of farmers is generally quite limited. Finally, it is important to emphasise that voting is rarely used as a formal mechanism, and that when voting is applied this is done through hand raising, and is therefore not anonymous.

Table 8.1: Participation options for different categories of farmers

<i>Member</i>	<i>Eligibility as office- bearer</i>	<i>Agenda setting / steering discussion</i>	<i>Participatio n in discussion</i>	<i>Voting rights</i>
a. Male landowner; control over MoP	Yes	Yes	Yes	Yes
b. Male landowners, no control over MoP	Yes	Usually	Yes	Yes
c. Male cultivator, land registered in wife's name	No	Sometimes	Usually	Yes
d. Male cultivator, land registered in parents' name	No	Sometimes	Usually	Usually
e. Widow with paddy land, family has control over MoP	No	Through her sons / relatives	Through her sons / relatives	Yes
f. Widow/female head of household whose family has no control over MoP	No	No	Rarely	Yes
g. Female landowner, no control over MoP	No	No	Rarely	Yes
h. Female cultivator, land in husbands' name	No	No	No	Usually
i. Female cultivator, land in parents' name	No	No	No	Some- times
j. Male / female tenant	No	No	Rarely /No	No
k. Cultivator chena, homegarden, highland	No	No	No	No

This inventory shows that women have full voting rights if they have paddy land registered in their own name, and usually also when they represent their husband who has paddy land in his name. Yet, their attendance at meetings and their participation in the discussion is constrained by the prevailing gender ideology (see also Schrijvers, 1985, section 6.4; and Molen, van der, 2001, section 3.5).

The inventory further shows that only male farmers – and male landowners more so than cultivators - have the opportunity to steer the discussion and to influence the outcome of the decision-making process by the use of such mechanisms.

8.2 Power relationships between patrons and clients

In some of the villages, one can observe a high concentration of power among a few families who belong to the local elite (see section 7.1 for a definition of the term ‘local elite’). This concentration of power is most visible in Kulikkada but also present in other villages, including Wellamudawa, Indigehawewa, Pudukkuluma, Ihalegama and Surukkuluma. Box 8.1 gives an indication of the members who belongs to this local elite in Kulikkada.

The dependency relationships between this local elite and a large group of farming households in Kulikkada, shows much resemblance to the many cases described in the literature on patron-client relationships (see also chapter 2). Such relationships occur between actors of unequal status and power, they are based

on the principal of reciprocity, and the relationship is particularistic and private (Eisenstadt and Lemarchand, 1981, p. 177).

Box 8.1: An overview of patrons in Kulikkada

M., a previous vel vidane, offers 10-12 labourers work in the paddy fields during the main cultivation season, and employs another 15-20 labourers in chena each year. He has a tenancy arrangement with 3 ande-tenants, and 5 people have mortgaged their land to him, which is not without risks. Several families have already lost their land to him in such a way. He has a total of 14½ acres of paddy land, 8 acres of chena; and owns 150 cows. He owns a truck, has 2 motorbikes, and piped water in his house.

A good relation of his is Ma., father-in-law of M.'s son. He has 35 acres of paddy land and is, like M., a large cattle owner. Two of his sons have a tractor. They are on good terms with A., who was previously the Samurdhi-niyamake, and is now appointed as the govi-niyamake. A. is responsible for the selection of beneficiaries for sowing machines, housing loans, the farmer pension scheme and agrowell loans.

Then there is D., previously Grama Niladhari, and now vel vidane for Kulikkada, who offers work to 10 – 12 labourers, and is said to own the entire command area under one of the tanks and has land in the command areas of 2 other tanks (in total approximately 30 acres). J., son of M., has also been vel vidane, and is also a large cattle owner and owns approximately 17-18 acres of paddy land. Finally, there is Ja., the mudulali, who is M.'s elder brother's son, and has 17 acres paddy land, 4-5 acres chena, 25 cows and 2 tractors. Three of these families (M., A. and D.) have good relations with X., a senior politician at national level.

The patron-client relationships in Kulikkada are highly centralized and concentrated. Approximately one hundred households are in some way dependent on the local elite. Even though none of the households belonging to this local elite has a complete monopoly over the means of subsistence, there is a coalition⁴ between the ‘patrons’ (the large landowners, cattle-owners, traders) and the *niyamakes*, which creates a virtual monopoly over a variety of resources. The labour opportunities, financial resources and control over machinery (by the landowners and cattle owners) are combined with control over trade (by the *mudulali*) and control over the distribution of government resources, such as subsidies and applications (by the *Samurdhi-niyamake*).

The strong hold of this elite over labour opportunities within the vicinity of the village has a major impact on farmers’ behaviour, in particular of those farmers from the most vulnerable households (see chapter 6, introduction). An important group of clients falling within this category are female farmers who depend on additional income from day-labour opportunities, preferably not too far away from the village.

Similar patterns are apparent in some of the other villages, though not as extreme as in Kulikkada. In most other case study areas, the patron-client ties are more oriented towards particular benefits and spread between over several individuals with their own services and connections, such as shopkeepers, teachers, and *ayurvedic* physicians⁵. The different intensities of patron-client relationships across the case study areas confirm that these relationships thrive

⁴ This coalition is not trouble-free. There have been several instances in which some of these patrons have had conflicts.

⁵ Local doctor, practicing indigenous medicine.

particularly in sharply-stratified societies (Tarkowski in: Eisenstadt & Lemarchand, 1981, p. 177).

An important feature, present in almost all villages, is the strategic positioning of the elite's sons and daughters in village level organisations and government posts (e.g. as govi-niyamake or Samurdhi-niyamake). In general, the Samurdhi-niyamakes and the govi-niyamakes play a role as intermediates or agents in the contacts between individual households, the local government administration and the local authorities (Pradeshiya Sabha). This strengthens the position of families from the local elite. Another example from Wellamudawa:

“The chairman and secretary of the farmer organisation and H. have much leverage through their contacts with politicians and with the Pradeshiya Sabha officer. This officer lives in the village, and is the chairman's younger brother. The daughters of the secretary are Samurdhi-niyamakes. All three are PA supporters and they have a deal with some PA ministers and Members of Parliament.” (fieldnotes Wellamudawa, 1998).

In this example, the collaboration with politicians at national and local level strengthens the leverage of the farmer representatives. These features are characteristics of most of the villages in the case study areas⁶. The farmer representatives and the landowners with control over means of production manage to retain a strong position in the farmer organisation through their relationships with office-bearers, officials and politicians. These relationships will be discussed in more detail in chapter 9.

⁶ With the exception of Nallamudawa and Padikkaramaduwa.

Continuation and erosion of patron-client relationships

As mentioned earlier, there are clear differences among the patron-client ties in the case study areas, in particular with regard to the concentration of power. While observing the differences in the patron-client relationships across the case study areas, the question arises as to what extent these differences can be perceived as indicators for the erosion of patron-client relationships in a particular setting. In terms of this question, Scott indicates that patron-client relationships endure best in a stable setting that preserves existing power relationships (Scott, 1972, p. 100). Recalling Giddens' remark (section 2.8) that 'structures are both the medium and the outcome of the reproduction of practices', one could argue that the setting which preserves existing power relationships is both the medium (as argued by Scott) and the outcome of the reproduction of patron-client relationships.

The quote below indicates how large landowners in Kulikkada carefully try to thwart changes in the local setting which could endanger the existing power relationships. In 1993/94, a farmer organisation was established for the purpose of tank rehabilitation of Meegehawewa and Kuratiya wewa, and for a potential project from the Freedom From Hunger Campaign Board (FFHCB). Due to conflicts between cattle owners (including some of the patrons) and other farmers, the farmer organisation was replaced by a vel vidane in 1997. The vel vidane, who is assisted at times by an ad-hoc committee, successfully withstood pressure from the Divisional Officer to re-establish a farmer organisation.

“The big landowners can block the decision-making (majority) in the kanna meeting and will therefore never allow a change in the vel vidane to someone who is not supported by them. The

Divisional Officer and other officers are treated well with meals and drinks to keep them quiet” (fieldnotes Kulikkada, 1999)

A recent publication by Baland and Platteau (1999) offers an elaborate framework in which different scenarios of evolution and erosion are presented. These scenarios depend on (a) the state of the market for unskilled labour, (b) outside economic opportunities for the rural elite, (c) skill and responsibility requirements of agricultural practice, (d) extent of social control exercised by the rural elite and (e) new agrarian relationships which are likely to emerge. Based on this framework, one would expect an erosion of patron-client relationships in villages such as Wellamudawa and Punchikuluma where there are many more alternative economic opportunities for unskilled labour than in other villages. Yet, this does not seem to affect the villagers’ participation in day-labour activities (more than 50% involved) or the dominance of a small group of families within the village. The other factors also do not offer a sufficient explanation for the different patterns across case study areas.

One important factor is largely overlooked in the framework by Baland and Platteau. This is the extent to which an effective alliance between patrons, office-bearers, governmental officers and politicians allows the patrons to maintain their position. Such alliances, in which the rural elite operates as an agent in the provision and allocation of government subsidies, credits, allowances and services are very effective in maintaining patron-client relationships.

8.3 Strategic use of options in the decision-making process

The following three examples from Kulikkada, Padikkaramaduwa and Walpola reveal that the organisational structure defines the options and boundaries for participation, but that it does not determine the behaviour of individual farmers. The extent to which individual farmers use the opportunity for participation in the farmer organisation is strongly determined by the contractual arrangements and dependency relationships, by the nature of contacts with government officials and politicians, and by the interests of the actors participating. However, a cross-case study analysis at the end of this section, shows that it is a particular combination of factors which determines the actual behaviour of smallholders and vulnerable groups of farmers in the meetings of the farmer organisation.

Kulikkada

At the kanna meetings in Kulikkada, a small group of people dominates the discussion and take decisions – generally in their own favour. During these meetings, young people who cultivate their parent's land are not allowed to speak. Similarly, male cultivators without paddy land, whose wife owns the land, are also not allowed to speak in the meetings. Only the elder male representatives of those families who are descendents of the first settlers (mostly large landowners) are allowed to speak.

This creates a lot of pressure and frustration among cultivators and small landowners, in particular because the large landowners are the main defaulters when it comes to cleaning of canals, fencing, building watch huts and taking their turn in watching the fields at night. Even though many farmers are fed up with the activities and

actions of these leaders, they are not in the position to demand the selection of a new vel vidane. The small landowners and the landless argue that approximately one hundred out of the hundred and fifty families are in some way related to the vel vidane or his friends, and that they are afraid to distort the relationships with such families, as these are essential for their access to labour- and employment, tenancy, credits and subsidies.

“The large landowners are also big cattle owners and they also have their hold on kasippu brewing: they provide the inputs for the brewing and get part of the profit from brewing....Other villagers are too afraid to go against their opinion, also in kanna meetings, because they depend on them for their livelihood, such as credits, jobs and day-labour” (fieldnotes Kulikkada, 1999).

The group of large land and cattle owners eagerly take advantage of the opportunities which emerge as a result of such overall behavioural compliance. This includes free-rider behaviour with regard to maintenance duties, non-compliance with the cultivation schedule, and reducing the likelihood of bethma when water-scarcity occurs. By preparing their land in purana wela in advance of the kanna meeting, they prevent the temporary redistribution of land. This supports previous observations by Baland and Platteau, that wealthier users not only refrain from participating in resource-preserving collective actions (maintenance), but also attempt to undermine collective actions (bethma) to further their own private interests (Baland and Platteau, 1999, p. 782).

Table 8.2 is based on an analysis of the participatory behaviour of the vel vidane and the smallholders in Kulikkada. The behaviour of the two groups is related to contractual arrangements, their position or role in contacts with government officials, and their interests.

Table 8.2: participation behaviour of stakeholders in Kulikkada

<i>Stakeholders Kulikkada</i>	<i>Position and role of vel vidane, previous vel vidanes and relations</i>	<i>Position and role of smallholders and vulnerable households</i>
Contractual arrangements	Hiring labour, profiting from ande-tenancy, renting out equipment, trade, mortgagors	Engaged as day labourer, receiving credits, cultivating as ande-tenant, raised money through mortgage
Contacts with government officers / politicians	Intermediate, broker; strong relationship with politicians	Dependant on support by farmer representatives
Interests	Benefit, leverage and effective control	Continuation of access to resources
Behaviour at meetings farmer organisation	Suggest, take initiative, dominate discussion	Consent and compliance

Walpola

A very different situation is visible in Walpola, the neighbouring village to Kulikkada. Some farmers have been pressing for changes, carefully making use of their relationships. Instead of risking their own position, they sought the assistance of a former vel vidane⁷ in gaining his support.

“Last year, two tanks were rehabilitated by the World Food Programme. Sofar, the FO office-bearers have not yet presented the final budget to the members, and it is not clear why the profits

⁷ Who was vel vidane from 1963 – 1967 and during another two-year period; secretary of the School Development Society for 22 years; chairman of the Funeral Association; secretary for 11 years of the Govi Karakhe Sabha, the FO in the sixties; a member of the village council; initiator and secretary of the Co-operative shop society.

have not yet been transferred to the Common Fund of the farmer organisation. Therefore, people have some questions about this. We have gathered three or four times, but the chairman of the farmer organisation has never shown up. The Divisional Officer also didn't show up, although he was informed and it was his duty to come. The Divisional Officer and the chairman have had a close relationship since the start of rehabilitation; they even cultivate a plot of paddy land together.

At the request of all farmers, and in co-ordination with the Grama Niladhari, I again organised a general meeting before the last kanna meeting, and we decided to remove S. from his position as chairman of the farmer organisation. Unfortunately, the news reached S. before the meeting, and he went to the Divisional Officer. He told him (as a trick) that he didn't expect a majority to be present at the meeting, so there would be no point in the Divisional Officer going there [these decisions require a majority of the members *and* the Divisional Officer to be present at the meeting]. Therefore the Divisional Officer didn't come to the meeting. Because there is still no clarity about the budget, we hope that we can dissolve the Farmer Organisation and establish a new Farmer Organisation before the next cultivation season. Until the new Farmer Organisation can be established, we have appointed a temporary representative who functions as *vel vidane*" (fieldnotes Walpola, 1999).

The farmers in Walpola do not have to rely on the farmer representative for their livelihoods. The chairman of the farmer organisation has only average acreage of land and no control over means of production. Due to the absence of direct dependency relationships, and the possibility of mobilising support, another strategy emerges, one of questioning the behaviour and functioning

of office-bearers and using formal procedures instead of consent and compliance. This is summarised in table 8.3.

Padikkaramaduwa

Yet another strategy was followed in Padikkaramaduwa. Until 1996, the farmer organisation in Padikkaramaduwa focused on contract work such as road construction, maintenance of the tank, and repairing canals; but they failed to provide assistance to individual farmers, to organize general meetings (other than the kanna meetings) or to involve other farmers in the decision-making process. The former chairman of the farmer organisation (up to 1996) is the only large landowner in the village with more than 20 acres of land, divided over the three tanks.

Table 8.3: participation behaviour of stakeholders in Walpola

<i>Stakeholders Walpola</i>	<i>Position and role Chairman</i>	<i>Position and role smallholders and vulnerable households</i>
Contractual arrangements	-	-
Contacts with government officers/ politicians	Intermediate, good relationship with Divisional Officer	Individual applications, and through farmer representatives
Interests	Personal benefits from rehabilitation	Adequate operation and maintenance, continuation of access to resources
Behaviour at meetings of the farmer organisation	Avoids meetings which might harm his position	Participation in discussion, questioning chairman, secretary and treasurer

The vel vidane of Padikkaramaduwa is mudulali, and mortgagor to several villagers. Following financial irregularities and a lack of involvement from the divisional officer, a field worker (referred to

here as a *catalyst*) from the International Water Management Institute (the SCOR Project) began to raise awareness among the farmers, explaining the options available to them for dissolving the farmer organisation and electing new office-bearers. Based on this information, the farmers decided to follow the advice, resulting in the replacement of office-bearers, regular meetings, and improved financial management. This is reflected in table 8.4.

Table 8.4: Participation behaviour in Padikkaramaduwa

<i>Stakeholders Padikkara- maduwa</i>	<i>Position and role previous chairman</i>	<i>Position and role smallholders and vulnerable households</i>
Contractual arrangements	Hiring labour, mortgagor, purchasing land; vel vidane is mudulali, mortgagor	Engaged as day labourer, taking credit, raising money through mortgage
Contacts with government officers / politicians	No clear intermediate role, either with government officers or with politicians, failed to assist farmers	Individual applications, or through niyamakes, not through farmer representatives
Interests	Personal benefits from rehabilitation, mortgages and expansion of land	Adequate operation and maintenance, continuation of access to resources
Behaviour at meetings of the farmer organisation	Inactive in organising meetings other than kanna meetings, not interested in co-operation with the SCOR project	Originally compliant, upon intervention by catalyst from project, farmers started questioning corruption

Here we can observe how discontent with the functioning of farmer representatives is seen as an opportunity by an external actor (the catalyst) to mobilize protests against the existing farmer organisation. It is one of the few examples encountered where a participatory approach effectively achieves an improvement in the

local management capacity by raising collective consciousness (see section 2.2). A similar approach was visible in Pudukkuluma, where the Institutional Organiser pointed out to villagers that the technical officer had performed poorly in the rehabilitation works. How this affected further rehabilitation is discussed in the next section.

Table 8.5 below provides an analysis of the behavioural pattern of vulnerable groups within the case study areas. The contents of this table are primarily based on interviews in which farmers indicated that they were not able to oppose large landowners and others, because they depended upon them for their livelihood; interviews in which farmers indicated that some of the farmer representatives themselves were involved in the production of liquor, and that this resulted in threats for people talking about it; and on interviews in which people complained of their lack of alternatives because the behaviour of farmer representatives was backed up, either by the Divisional Officer (as in Walpola) or by senior politicians at national level (Indigehawewa, Kulikkada). External support thus refers to external support for the farmer representatives, not for the other groups.

Table 8.5: Behaviour of vulnerable groups within the case-study areas

<i>FO/ Features</i>	<i>Patron-client with farmer representatives</i>	<i>Liquor, relation FO</i>	<i>External support</i>	<i>Behaviour smallholders / vulnerable households</i>
Nallamudawa	-	-	-	Active participation, but women excluded
Indigehawewa	Moderate	Strong, also threats	Political support X	Absence, refraining from participation
Wellamudawa	Moderate	Strong, but no clear relation FO	-	Active, resistance with support of DO
Padikkaramaduwa	Moderate	-	-	Active participation, awareness-raising by SCOR project
Walpola	Not with farmer representative	-	DO supports chairman	Active, inquiries with internal support
Kulikkada	Strong	Strong, also threats	Political support X	Compliance, refraining from participation
Pudukkuluma	Strong	Moderate, no clear relation FO	Political support Y, Z	Compliance, consent with local elite

What this analysis reveals is that it is, in particular, *the combination* of (i) patron-client relationships between farmers and farmer representatives, (ii) the involvement of farmer representatives or their relations in the production of liquor and (iii) the strategic use of political support, which leads to vulnerable groups of farmers and smallholders refraining from active participation in, or opposition during, the meetings. The political support can be invoked actively (actions by politicians) or used passively (reminding people of what might happen if they ask for support from politicians). The most extreme example mentioned was the following:

“They can get revenge on people they don't like, by having them arrested for nothing. M.'s son once accused someone of having bombs in his house. He was arrested but nothing was found” (fieldnotes Kulikkada, 1999).

This overview shows that support by outside actors - here the Divisional Officer in Wellamudawa and the catalyst of the SCOR project in Padikkaramaduwa - can activate participation and opposition to poor performance or corruption. The input by, and presence of, government officers at meetings proves to be of strategic importance when it comes to controversial issues, which go beyond the cultivation schedule and water distribution, such as the malfunctioning of the farmer organisation and unequal distribution of, or access to, resources. Their presence is legally required for the election of new office-bearers, but they are also able to play a role as critical ‘agent’, asking farmers whether they are still in favour of the current office-bearers. In particular the Divisional Officers were found to play such a role, most of whom were well-aware of the problems in particular villages.

Based on the combination of factors in table 8.5, one would expect that the situation in Pudukkuluma to be as precarious as the situation in Kulikkada and Indigehawewa, while a previous overview (chapter 7, table 7.3) showed that the farmer organisation of Pudukkuluma was one of the few organisations which had not been dissolved recently. There are three different features which account for these seemingly contradictory findings. First of all, in Pudukkuluma, there were no accusations that the farmer representatives themselves were involved in corrupt practices related to tank rehabilitation projects. Moreover, the farmers and representatives were successful in their struggle against the corruption of a Technical Assistant.

Further, although the consumption of liquor in Pudukkuluma should not be ignored, there were no stories of intimidation or physical threats. Finally, and most importantly, the connections with politicians were with different persons than the politician referred to in Kulikkada and Indigehawewa. Whereas, in Kulikkada and Indigehawewa, political connections were used to continue illegal practices and to intimidate people, this was not the case in Pudukkuluma, Ihalegama and Surukkuluma.

8.4 Tank rehabilitation

Similar mechanisms as described in the previous section can be recognized in relation to tank rehabilitation projects. Such rehabilitation projects have had a significant impact on the operation and management of the irrigation systems in many

villages. Table 8.6 below gives an overview of *the most recent* projects⁸. The table includes all tanks in the case study villages.

Although the rehabilitation of minor irrigation tanks benefits primarily landowners, it also improves the opportunities for landless farmers to obtain tenancy arrangements and labour opportunities⁹ within their village boundaries. In general, one can observe that these projects incorporate many more benefits than the mere rehabilitation of the irrigation system. These include:

- Improvement of the irrigation infrastructure and increased water supply to the fields in the existing command area;
- Additional land for cultivation by extension of the command area;
- Temporary employment for the population during droughts;
- Increased membership of the farmer organisation in particular among male and female cultivators without paddy land;
- Profits for the common fund of the farmer organisation.

The extent to which these benefits actually materialised is not consistent across the case study areas. With some of the tanks, the condition of the irrigation infrastructure improved considerably upon rehabilitation. However, in several villages, following completion of the rehabilitation works, farmers were still not able to cultivate their land due to the poor condition of the rehabilitated infrastructure.

⁸ Some rehabilitation projects are channeled through the Decentralised Budget of Members of Parliament in the Area. These are were implemented prior to the most recent rehabilitation projects and therefore not in the list.

⁹ Chapter 7 indicated that, with increased income-security, households tend to rely on day-labourers for assistance in agricultural tasks instead of attam.

Table 8.6: overview of rehabilitation projects in the case study areas

<i>Name village tank</i>	<i>Rehabilitation</i>
Nallamudawa	1989, VIRP, ID
Kiriammunukole	1998, DAS
Hamillikulume	1994-95 DAS, approval NGO project 1999
Ambagahawewa / Amuna: temple tank	1998 Labour Intensive Project with Divisional Secretariat & Samurdhi
Syambalegas wewa	1998, Samurdhi
Indigehawewa	1998-99 WFP
Kodari kuluma	Scheduled 1999
Ratmalgeha wewa	1997-98 WFP
Kutti kuluma	Scheduled 1999
Wagaya kuluma	1998-99 WFP
Wellamuddawa	1993 NIRP
Punchikuluma	1998-1999 WFP
Tharanagolèwa	Scheduled 1999
Walpola wewa	1978 ID
Kuda wewa	1996-97 FFHCB
Hinguru wewa	1996-97 WFP/NIRP
Kulikkada	2 repairs in 1980s
Meegeha wewa	1994; unknown by whom
Gadolwewa	1998, Samurdhi
Kuratiya wewa	1995-96, Samurdhi
Nagemayagamawewa	Not rehabilitated
Rilaakada wewa	By landowners
Diwulgaha wewa	Not rehabilitated
Gobaththapage wewa	Not rehabilitated
Padikkaramaduwa	1974; 1985
Puakpitiya	1998; Samurdhi
Dambegaswewa	1993/94 WFP & DAS
Pudukkuluma	1996/97 NIRP, DAS, FO
Panichchakalla	1995, Decentralised Budget
Ihalegama	1985, Decentralised Budget
Surukkuluma	1997, Pradeshiya Sabha

For example, in Indigehawewa and Wellamudawa, farmers complained about leaking sluices despite their replacement and of breaks in the bund, within a year of the rehabilitation of the tank. In other cases only a few families benefited from rehabilitation.

“They had some piped parts and diversion points in the canal system, but the level was too high. Consequently, the flow of water through the canal is seriously hampered. If – at this very moment - there would be a cultivation season in which the entire command area could be cultivated, people would definitely start quarrels about this. Only purana wela gets sufficient water and the right head-end site of akkara wela. The work of the World Food Programme has been done properly, but these rehabilitation works did not include any repair or improvement to the canal structures, which block irrigation to the largest part of akkara wela.

The reason why those structures have not been improved during the rehabilitation by the World Food Programme is that the office-bearers - who are aware of these problems - only care about rehabilitation of the parts close to their land, not to other people's plots. Their lands are located under purana wela and under that part of akkara wela which is not affected by these problems” (fieldnotes Wellamudawa / Punchikuluma, 1999).

More serious was the fact that – with only few exceptions – the rehabilitation projects went hand in hand with (suspicions of) financial irregularities, preferential treatment, and consequently with mistrust, conflicts and distorted relationships. In Indigehawewa, Walpola, Kulikkada, Padikkaramaduwa, Wellamudawa and Punchikuluma, the farmer organisation was dissolved or became inactive shortly after rehabilitation due to these conflicts.

To explain these processes, and to understand the outcome of the selection procedures, it is not sufficient to look only at the formal selection criteria. It is equally important to look at the actual decision-making process, the influence of beneficiaries in this process, and to examine how the so-called ‘participatory’ process of decision-making facilitates such decisions. The different selection stages for rehabilitation under the Samurdhi Programme are given in box 8.2. The selection procedure for projects channelled through the Department of Agrarian Services is only slightly different.

The following sub-sections discuss the participation opportunities in the different stages of project formulation and implementation. These include (a) the requests for rehabilitation projects by farmers; (b) inspection and consultation with farmer representatives, initial selection; (c) meeting with, and consultation of villagers, decision-making; (d) implementation and monitoring and (e) contracting.

Box 8.2 Selection procedures for projects of the Samurdhi programme

1. Based on information from the Samurdhi-niyamake and govi-niyamake, an initial selection is made at the Divisional Secretariat, of the tanks which might be suitable for rehabilitation.
2. After this, the Samurdhi-manager and the Samurdhi-niyamake go to the village, and call a meeting with the villagers, in which they explain the possibilities for tank rehabilitation under the project. They ask the villagers which tanks should be selected for rehabilitation and based on the proposal of the villagers, they will make a priority list. The proposals usually come from the more experienced persons in the village, such as the vel vidane, farmer organisation office-bearers, govi-niyamake, or the school teacher. They do not have to vote, after nomination they will discuss and decide. During this meeting, the villagers can also discuss what type of rehabilitation works they want to be done, and a rough estimate will be made of the costs involved.
3. During the meeting, the Samurdhi-niyamake takes minutes, and makes a priority list, which he publishes at the AGA's office. During the next six weeks, people can make comments or oppose, and based on those comments, a final selection is made.
4. After the meeting, the Samurdhi manager approves this selection, followed by the AGA, who gives it approval in a meeting with all the relevant officers at the AGA's office.

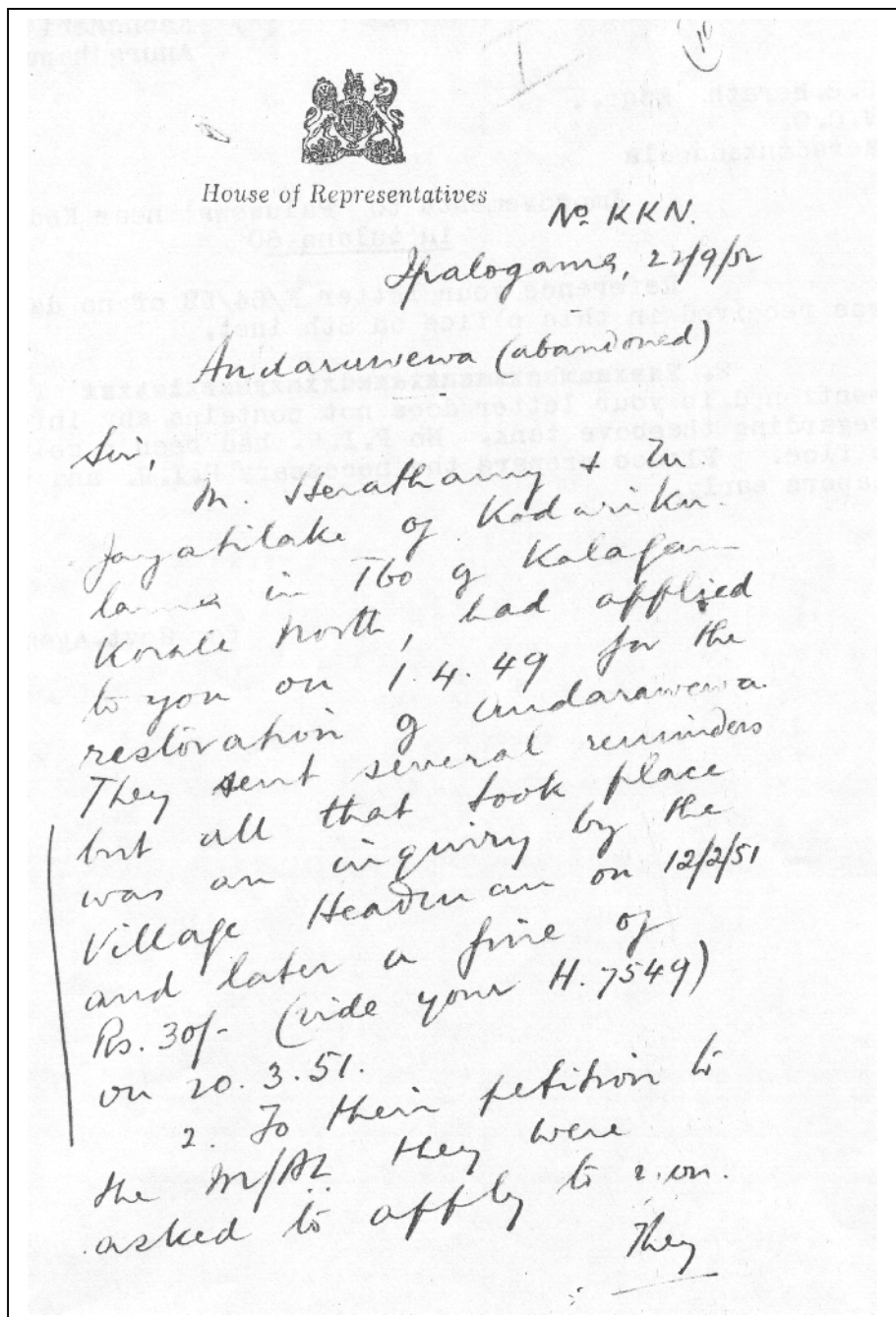
a. Requests for rehabilitation

In general, the acquisition of tank rehabilitation projects is based on requests (petitions and non-written requests) through a multitude of official channels, such as the Divisional Officer, the

Grama Niladhari, to the govi-niyamake, the Samurdhi-niyamake, the Pradeshiya Sabha, the Assistant Government Agent and the Government Agent, through participation in the co-ordination committees at divisional level, through letters and petitions, through contacts with politicians.

The letter on the next page (photo 8.1) shows that such requests and political intervention in tank-rehabilitation are not new. This letter was written by a Member of Parliament at Kalawewa in 1952 and sent to the Government Agent in Anuradhapura. The answer from this Government Agent was that – much to his regret – he could not approve the rehabilitation, as this would affect the command area of one of the other tanks.

Photo 8.1: reminder by a politician with regard to a request for rehabilitation



Many projects are channelled through the Department of Agrarian Services, such as those of the World Food Programme (WFP) and the projects from the Freedom From Hunger Campaign Board

(FFHCB). Furthermore, some projects are channelled through the Divisional Secretariat, in particular the Samurdhi Programme. This confirms the information obtained from the interviews that – in addition to contacts with politicians (chapter 9) - the requests through Divisional Officers or Assistant Commissioners of the Department for Agrarian Services, and requests through Samurdhi niymakes or Samurdhi managers, are the ones most likely to be granted.

In a few cases, villagers did not directly request rehabilitation, but were informed by government officers of the possibility of rehabilitation under existing programmes.

“No one requested this rehabilitation project. It came to the village through the friendship between the Assistant Commissioner of the Department of Agrarian Services and the chairman of the Farmer Organisation. They are very good friends and have a close relationship on an official as well as a personal basis. The Assistant Commissioner is a former Additional Government Agent of Mihintale. During those days, the chairman of the farmer organisation was the Grama Niladhari of 567 Thulana. Both of them are PA supporters. The current chairman once contested the local government election and became a member of Mihintale Pradeshiya Sabha, while the Assistant Commissioner contested the Provincial Council election but was defeated. Because of this, they know each other very well. The NIRP projects came through the DAS, and the Assistant Commissioner sent a personal message about this project to the chairman of the Farmer Organisation”. (fieldnotes Pudukkuluma, 2000)

The question, which has not yet been posed explicitly, is whether the establishment of farmer organisations in itself might have been a strategy by farmers for the ‘acquisition’ of rehabilitation projects.

This question emerged due to the remarks of respondents in some villages that, initially, the farmer organisation had only really been active during rehabilitation works(e.g. Padikkaramaduwa and Kulikkada).

The case study material reveals that the Department of Agrarian Studies played an important role in the establishment of farmer organisations, in particular through the Divisional Officers. They introduced the farmer organisation to the farmers, usually with explicit reference to the possibility of tank rehabilitation projects. For projects which were channelled through the regional Department of Agrarian Services - such as the Freedom from Hunger Campaign Board, and the World Food Programme - the establishment of a farmer organisation was a pre-condition. In Kulikkada for example, where the farmer organisation has been inactive for several years, the Divisional Officer refuses to allocate rehabilitation projects unless the farmer organisation is re-established. Table 8.7 below gives an overview of all the projects in the case study areas, which were channelled through the DAS.

The period in which farmer organisations were established in the case study areas (between 1989-1995) show that the establishment of farmer organisations did not emerge overnight. When looking at the years in which rehabilitation projects were executed, one can observe that, in most of the villages, the establishment of the farmer organisation pre-dated the projects by three or four years. In other words, although the establishment as such was not immediately effective in terms of direct project allocation, it has been an effective strategy in the longer term.

Table 8.7: Establishment of farmer organisations: deliberate strategy for rehabilitation?

<i>Year of establishment of the farmer organisation</i>	<i>Rehabilitations channelled through the DAS with involvement of the FO</i>
Nallamudawa 1991	Halmillikuluma 1994/95; Kiriammunukole 1998
Indigehawewa 1993	1997-1999 all tanks (scheduled or done)
Wellamudawa 1989/90	Wellamudawa 1993; Punchikuluma 1998 Tharanagolewa scheduled 1999
Walpola 1993	Kudawewa 1996-97; Hinguruwewa 1996-97
Kulikkada FO 1991	Kuratiyawewa 1995/96; Gadolwewa 1998. FO only active during rehabilitation
Pudukkuluma 1995	Pudukkuluma, 1997
Padikkaramaduwa 1990	Dambegaswewa 1993/94

b. Inspection and consultation of office-bearers, initial selection.

In response to a request for rehabilitation¹⁰, government officers (technical officers, govi-niyamakes and Samurdhi-niyamakes) visit the area to inspect or survey the irrigation infrastructure, and consult with the representatives of the farming community (in particular office-bearers and (former) vel vidanes) for information about the irrigation system and for their suggestions for rehabilitation. This approach is expected to result in a project, which is modified to the needs of the population. This is in line with the objectives of participation, which were considered in chapter 2. Although their potential impact cannot be ignored, it

¹⁰ In the case of projects channelled through the Department of Agrarian Services.

does give the (former) office-bearers and vel vidanes an advantage in emphasising their own preferences in the initial phase.

Based on this information, an initial selection is made of tanks which might be suitable for rehabilitation. The formal selection criteria used by the DAS are: (a) condition of the tank and canal system; (b) size of the command area; (c) number of shareholders; (d) cultivation opportunities and cropping intensity when structures are in good condition and (e) establishment or existence of a farmer organisation. For projects channelled through the Divisional Secretariat (e.g. the Samurdhi Programme), the existence of a farmer organisation is not a condition. The selection criteria used under the Samurdhi programme are (a) the condition of the tank; (b) whether the budget is enough to rehabilitate properly; (c) whether it is a common tank; (d) the number of landowners and (e) whether or not the tank has been rehabilitated recently.

c. Meeting with and consultation of the villagers, decision-making

Once the village or the village tank has been determined as suitable for rehabilitation, a meeting is organized to inform and consult with the farmers. In Kulikkada, the meeting (for tank rehabilitation under the Samurdhi Programme) was announced only to a selected group of large landowners and Samurdhi recipients, who were all PA supporters. Such responsiveness towards the needs of Samurdhi recipients and other PA supporters is not uncommon as will be further demonstrated in chapter 9.

In some cases, the selection or allocation of projects along political lines is even expected by the farmers. For example, in Indigehawewa, Wageyakuluma was selected for rehabilitation

according to the selection criteria, even though most farmers on the shareholders list were UNP supporters. The subsequent response from farmers in Indigehawewa is illustrative of their strategic behaviour. Farmers, who had land under a tank other than Wageyakuluma, approached the Divisional Officer with the question why he provided rehabilitation to those farmers, even though he knew they were UNP supporters. According to these farmers he should have selected a different tank. It shows how easy the villagers have internalised the process of decision-making which is – in many cases – politically motivated¹¹.

The previous section emphasised that during meetings, the leverage of large landowners over smallholders may discourage the latter from making suggestions or from opposing suggestions brought forward by others. In villages with strong patron-client relationships, the discussion on tank rehabilitation projects is often steered by one of the large landowners, office-bearers or the (former) *vel vidane*. Even though – formally - all farmers have the opportunity to bring forward their opinions with regard to tank rehabilitation, this does not always materialize in practice.

“Before the rehabilitation, a meeting was organised to select the tanks to be rehabilitated and to explain the project. The tanks were selected at the meeting, not beforehand.

¹¹ Similar examples come from other case studies, although not all in relation to tank rehabilitation projects. One of the members of the *Pradeshiya Sabha* in Galenbindunuwewa (for Padikkaramaduwa) complained that the SCOR project had not been successful, partly because it had not established relationships with politicians. He recommended that the project should establish relationships with representatives of the ruling political party to create more sustainability.

The Samurdhi-niyamake and the Samurdhi Manager gave an introduction, and some of the landowners proposed to rehabilitate Gadolwewa and Kuratiyawewa. Everyone else agreed by their silence; there was not much discussion, nor any voting” (fieldnotes Kulikkada, 1999).

Only by understanding these processes, does it become clear how Gadolwewa and Kuratiyawewa – two tanks that were virtually privately owned - could have been selected for rehabilitation.

d. Implementation and monitoring

After the final selection and approval by the government administration, the organisation in charge can start with the implementation of the project, which is often done in co-operation with the farmer organisation (for projects channelled through DAS) or with the Samurdhi taskforce (for projects channelled through the Samurdhi Programme). Regardless of the programme, all rehabilitation works are based on labour-intensive implementation. This type of approach is based on efficiency considerations; it is expected to result in lower implementation costs through the use of local labour. Simultaneously, participation in labour works offers the population a welcome source of additional income during the dry season when the labour works take place. In general, there are no formal criteria for participation by the local population.

Although the rehabilitation works involve strenuous physical labour, 50 to 70% of the participants in the labour works are women. The scarcity of opportunities for women to work as day-

labourers¹² in the vicinity of their village attracts women to such rehabilitation work, as it provides additional income or food supply. The attractiveness is further enhanced by the provision of work and income security over several months and working hours of 8.00 a.m. to 2.00 p.m.

In two cases (Padikkaramaduwa and Kulikkada), participation in the labour work was restricted to Samurdhi beneficiaries. This could be interpreted as selective participation of the poorest part of the population (those who rely on government allowances under the Samurdhi poverty alleviation programme), yet a more likely interpretation is the selective participation of PA supporters.

“The rehabilitation of Puakpitya was a show-project. Only Samurdhi beneficiaries got the opportunity to participate, and the work was not done properly. If they wanted to do some serious work, they should have raised the bund and spill” (fieldnotes Padikkaramaduwa, 1999)

If the implementation of labour works is channelled through the farmer organisation, then the office-bearers are responsible for monitoring the works, keeping attendance lists and for the distribution of the food packages. Once a week, or once every two weeks, inspection is also carried out by officers from the Department of Agrarian Services. That this is sometimes futile, can be observed from the following example.

“People thought that the project was taking care of everything, but they do not even know that – officially - the work is already

¹² Men have more alternatives as it is easier for them to work further away from the village, and because the range of cultivation activities allows them to work as day labourers throughout the season.

completed. They also do not know about the value of the food package they are entitled to in relation to the days they participated, nor about the exact plans. The farmer organisation has systematically marked fewer days for participation than people contributed, and they adjusted the weighing scale in such a way that it indicates 5 kg for only 4 kilograms. When distributing 20 or only 16 kg at one time, people do not feel the difference. The exact amounts and working days, and procedures, were explained in a meeting before rehabilitation, but the office-bearers messed with that. They kept back rice and sugar and even made kasippu with this extra sugar. The old people would get less food because they could not participate as well according to the office-bearers. When

I asked the farmer organisation why they did it in this way, the office-bearers said that the sacks they use also weigh something, which is deducted. This is nonsense, those sacks don't weigh anything. They made clear to me that I should shut up. The contract work, worth Rs. 7 *lakh* [approximately US\$ 10,000¹³], was just a show-project. The office-bearers themselves were the contractors and they earned a lot of money. It was a three man show" (fieldnotes Punchikuluma and Wellamudawa, 1999).

e. Creative contracting

Part of the rehabilitation, such as the replacement of sluices, requires the use of machinery and equipment. These works are executed through co-operation with local contractors. In many cases, the contracting is offered to the farmer organisation, and this provides the farmer organisation with additional income (typically 5% of the budget). These earnings should flow into the common

¹³ The amount mentioned by the respondent is extremely significant when realising that the budget for most rehabilitation projects under the Samurdhi Programme range between Rs. 100,000 and Rs. 150,000 (US\$ 1,500 – 2,000).

fund of the farmer organisation and can then be used for maintenance and repairs in later years. The rationale behind this procedure is to increase the cost-efficiency by hiring local contractors, to encourage proper execution of the works (as it is expected to be in farmers' own interests to improve the irrigation structures), and to enhance the financial capacity of the farmer organisation.

Unfortunately, the donor organisations do not sufficiently recognize the different interests within the farming community, and the personal interests related to contracting. The contracting is quite profitable, and becomes even more profitable when work is done superficially, with less input of materials than required, and lower quality standards than intended. Furthermore, it provides many opportunities for creative bookkeeping. As such it is very popular among office-bearers and their relatives, Samurdhi niyamakes and their relatives, and technical officers and their relationships.

“The Samurdhi-niyamake was contractor for the rehabilitation of both Kuratiya wewa and Gadolwewa, which are both private tanks. Only ten to fifteen people related to the Samurdhi niyamake could participate” (fieldnotes Kulikkada, 1999).

The rerouting of contracts through registered organisations is not uncommon. How creative some ‘contractors’ can be, is shown in the example of Pudukkuluma, where the contract for one of the projects was channelled through the women’s organisation.

“The Contractor for the rehabilitation of the Panichchakalla tank under the Decentralised Budget was the *govi niyamake*’s father. He channelled the contract through the women organisation because

he would not be eligible for direct contracting, as he is not a registered contractor of the government” (fieldnotes Pudukkuluma, 2000).

Protests against poor implementation

The shoddy work of some contractors does not go by unnoticed. Several respondents refer to this as ‘just for show’. In two cases – Pudukkuluma and Nallamudawa - farmers took action against the contractor by formal complaints to the Assistant Commissioner and the head office in Colombo. The example below refers to a different project in Pudukkuluma than the one which was channelled through the Women’s Organisation.

“10% of the works were done by villagers through shramadana and the other 90% by a private contractor. There was a conflict between the farmer organisation and the contractor, because everything was done by the T.O. (from the Department of Agrarian Services) on behalf of the contractor. The contractor and the T.O. are best friends. The T.O. wanted to do the project just for show. If he had done the works according to the estimates, the profit from the project would be too small. He never listened to the villagers, skipped the works, made many mistakes, and the quality was definitely not according to the estimates. The Farmer Organisation complained about this to the Assistant Commissioner and to the head office in Colombo. Those officers came to inquire about the problem and to check the condition of the work. In front of all the villagers, they told the officers from the office in Anuradhapura that they should have given the project to the farmer organisation phase by phase. The villagers got very angry and scolded the T.O., and tried to hit him. The result was that the officers from Colombo decided to give the rest of contract to the FO.” (fieldnotes Pudukkuluma, 2000)

A very similar strategy was followed by farmers in Nallamudawa, where farmers issued complaints to government officers high-up in the government hierarchy. In 1987, a Technical Assistant from the Irrigation Engineers Department performed a survey for rehabilitation of Nallamudawa wewa. According to his estimates, the rehabilitation works would cost Rs. 700,000 (US\$ 10,000). The tender for contracting was budgeted at only Rs. 150,000. The farmers from Nallamudawa had strong suspicions that the Technical Assistant involved in the rehabilitation works would keep money from the contract for himself. Therefore the farmer representative¹⁴ and some other farmers sent petitions against him to the Commissioner of the Department of Agrarian Services¹⁵.

Mosse made similar observations in tank irrigation systems in South India. He argues that village leaders continue to maintain links to the state, and to secure local political support through the 'redistribution' of state resources obtained through contracting. He states that upper case headmen and village leaders often retain power through privileged access to public works contracts, such as tank rehabilitations (Mosse, 2000, p. 25). He emphasises that this mechanism is more than a system of corruption and rent-seeking behaviour, and shows that the private gains from public works have to be shared 'upwards' with government officers and politicians and 'downwards' by redistribution of these profits as gifts to the community, such as money for temple building and

¹⁴ There was no farmer organisation in Nallamudawa at the time of the survey. The farmer representative succeeded the vel vidane in 1988, and the farmer organisation was established only in 1991.

¹⁵ It is unclear why they sent a petition to the Commissioner of the Department of Agrarian Services instead of to the Irrigation Department. Probably this is related to the shift of responsibilities for village tanks from the Irrigation Engineers Department to the DAS under the VIRP project.

repair. Mosse argues that it is through such manoeuvres that the village headmen are able to legitimise their claim on state resources and the transformation of common resources into personal patronage.

The empirical data¹⁶ from the research in Sri Lanka confirm the ‘upwards’ sharing obligation, in particular to the Technical Officers or Technical Assistants who have to inspect and approve the execution of works, and to politicians. However, there was hardly any evidence of redistribution of profits among the farming community, other than among the relations or close relatives of the farmer representatives and niyamakes. The lack of ‘downward’ sharing might explain the much higher level of resistance to such financial irregularities by farmer representatives in the case study areas when compared to the situation described by Mosse in South India.

8.5 Strategies within the legal domain

Before concluding this chapter, there is one more area of strategic intervention which needs to be explored when looking at formal strategies. This is the possibility for farmers to seek assistance through the legal system.

Between 1997 and 2000, only two cases were reported as filed in court by villagers from the case study areas.

¹⁶ Not all the data could be presented here, but there was frequent reference in five of the case study areas to ‘unforeseen reallocation of funds’ from tank rehabilitation in particular towards government officers and politicians (see chapter 7, table 7.3).

One case was filed by two landowners in Padikkaramaduwa against colony people who had allegedly cultivated their land and refused to leave (see chapter 6, section 6.4). One of the landowners who filed the case was the former chairman of the farmer organisation, and the largest landowner with more than 20 acres of land. Other inhabitants explained that the people from the colony had only claimed land, which they had cleared and prepared after it had been abandoned over a long period. Another case was filed by an individual farmer in Pudukkuluma against the farmer organisation, in order to get compensation for part of his land which had been used for the construction of a new canal.

The options for seeking legal assistance are determined by several factors. For almost a century¹⁷, village councils (referred to as *Gamsabhas*) were responsible for the enforcement of rules pertaining to cultivation and irrigation, and for the settlement of minor disputes in the villages (Somasekaram et al. 1997, p. 182). The disappearance of these Gamsabhas soon after independence restricted the options for villagers to seek legal redress. At present, farmers rarely seek legal redress due to the difficult procedures in filing a court case¹⁸, the time and costs involved, the administrative and geographical distance between the villages and the district court in Anuradhapura, and due to the chance of political interference before their case ever reaches court.

Due to such financial, institutional and political barriers, farmers sometimes look for other outside support instead of seeking legal support, or they simply refrain from action. The livelihood of

¹⁷ The British colonial government revived the pre-colonial village councils (*Gamsabhas*) with the Irrigation Ordinance no. 9 of 1856 and these village councils continued to exist until the 1950s.

farmers is not only affected by the mutual co-operation and conflicts within the farmer organisation, but sometimes also by external circumstances. Two examples are given here. The first example is not taken from the villages in the case study areas, but from a area near to Padikkaramaduwa. In this case, instead of taking legal action, farmers from the Huruluwewa settlements tried to convince the organisation associated with an ongoing project to intervene in illegal practices, which were endangering their livelihoods. The other example comes from Eppawala, only a few miles from Nallamudawa. It shows how the livelihood of farmers can be threatened by co-operation between the government and an international conglomerate, and how the lack of transparency in the decision-making process made legal action almost impossible.

Huruluwewa watershed development

Padikkaramaduwa is located close to the Huruluwewa watershed, where the SCOR project¹⁹ aimed to take soil and water conservation measures. One of the government officers at the *Kachcheri* (the District Secretariat) in Anuradhapura explained why – in his view – the SCOR project had not been successful.

“The project was not able to reach its objectives due to political interference, especially from the former Chief Minister (UNP). The full capacity of Huruluwewa is 3000 AcreFeet (Ac.ft)²⁰. Due to illegal tapping of the feeder canal to Huruluwewa, the tank only gets approximately 1500 Ac.Ft. The SCOR project wanted to stop this illegal tapping, since it wanted to develop the Huruluwewa watershed. The only feeder canal comes through Kekirawa and

¹⁸ Only the Divisional Officer can file a case in court on behalf of a farmer.

¹⁹ Shared Control of Natural Resources of the International Water Management Institute (IWMI).

²⁰ One AcreFeet is $4046.86 \text{ m}^2 * 0.3048 \text{ m} = 1233.48 \text{ m}^3$.

Modatagama. This is the home area of the former Chief Minister. Since he has most political support from his own area, he didn't want to interfere in these illegal actions. The area is very fertile, and people used reservation area (belonging to the Irrigation Department) for cash crop cultivation.

We once went on a fieldtrip to the area, and counted 270 points where pipes were tapping the water illegally. There was a continuous clash between farmers who were involved in the illicit tapping, and colonisation farmers from Huruluwewa²¹.

Once the Irrigation Department complained to the police, and they arrested those farmers who were involved in the illegal tapping of water. The former Chief Minister however ordered the police to release the farmers. Subsequently, the colonisation farmers told the project officers that they could not benefit from the project unless they could cultivate the entire area. Unless the project would be able to achieve that, they would not support the project" (fieldnotes Anuradhapura, 2000).

Such political intervention to release people from the police station is not exceptional. Several respondents referred to this practice, in particular in Indigehawewa and Kulikkada. Obviously, such intervention is unlikely to contribute to farmers' confidence in taking legal action.

Eppawala case

Just outside the village boundaries of Nallamudawa, there is a phosphate deposit which is estimated to contain more than 35

²¹ The farmers in Padikkaramaduwa purana gama have been affected indirectly by these practices. Due to limited opportunities on their own land, colony settlers started looking for land to cultivate elsewhere, such as under Puakpitiya in Padikkaramaduwa.

million tons of apatite (Mendis, 2000, p. 280). These phosphate rocks have been mined in small quantities for agricultural use in Sri Lanka since 1971 using labour intensive methods.

There is a proposal for large-scale mining by a multinational conglomerate²², which will exhaust the deposit of apatite phosphate in approximately 30 years. The initial exploration area will be 56 square kilometres with a buffer zone of approximately 800 square kilometres. The local population's fears are that this project might result in the displacement of thousands of people from their land, and the loss of income from the land that will be mined. Not surprisingly, the plans led to civil unrest among the local population and several protest rallies²³. Some villagers from villages nearby, such as Nallamudawa and Indigehawewa, participated in these local rallies, afraid that their livelihoods would also be affected if the plans for a large phosphate mine in Eppawala are realised.

Also at the national level, there is increasing protest among the elite Sinhalese elements of the population who fear the potential destruction of their cultural heritage²⁴. In an interview in March 2000, one of the Ministers involved indicated that the government was fully aware of the difficult situation of the farmers, and that the government was committed to making a careful decision. Yet,

²² Freeport McMoRan, IMC Agrico, Tomen Corporation of Japan, and Lanka Phosphate Ltd.

²³ Initiated and led by local monks and by an American national who had visited the village regularly over a period of 15 years.

²⁴ The Eppawala phosphate rock deposit lies in the catchment area of the Kalawewa – Jayaganga. This area, including a contour channel which was constructed in the 5th century A.D., has been recommended for recognition as a cultural heritage site under the UNESCO programme (Mendis, 2000).

he emphasised that the plans could also result in employment opportunities for the local population, and that it would be profitable for the government to receive income from the leasehold arrangement with the company. This money could be utilised for further technological development in Sri Lanka. The exact value of this lease would be determined in a negotiation process between the government and the company.

At the time of interview, the government had already signed an agreement with the company for an investigation into the intended activities, and an assessment of the likely social, economic and environmental impacts. This study, to be executed by the company itself, would be seen as a sufficient guarantee to ensure proper consideration of the environmental and social impacts, and to take mitigating measures if required. The worldwide reputation of the companies involved 'would be sufficient reason to trust the quality of the study'.

A number of inhabitants from Eppawala had less confidence in the intentions of the government and the conglomerate and did not want to wait any longer. In October 1999, seven petitioners from the area filed a case against the government. They complained of an imminent infringement of their fundamental rights with regard to the freedom to engage themselves in any lawful occupation, profession, trade, business or enterprise, to have freedom of movement and choosing their residence within Sri Lanka. They stated that they were in danger of losing the whole, or some portion, of their lands and means of livelihood if the proposed mining project were implemented. In its ruling of the 2nd June, 2000, the Supreme Court of Sri Lanka agreed with the petitioners about the imminent infringement of these rights.

Some comments may be helpful in understanding the difficulties of the petitioners in taking legal action. The petitioners filed a case following a long period of negotiations between governmental authorities and the companies involved. Many people expressed their concern with the actual process of decision-making, and with the private agendas of the particular politicians involved.

The opportunity to take legal action was - either deliberately or unintentionally – effectively obstructed by the complete lack of transparency over the procedures and progress of negotiations between the government and the conglomerate. The decision-making related to the phosphate mining in Eppawala has been characterised from the start by its lack of transparency and the lack of information with regard to the progress between the government authorities, the politicians and the companies involved. One of the Ministers explained that once the Cabinet has given the approval, people could go to court if they disagree, but not before since no contract (other than for the study) had yet been signed. In line with this remark, in their defence for the Supreme Court, the Government of Sri Lanka claimed that – until the time of implementation – there would be no such thing as an infringement of rights, thus denying the violation of the rights of the petitioners, and the jurisdiction of the court. This was contradicted by the Supreme Court in its ruling of the 2nd June, 2000²⁵.

²⁵ The ruling came only a few months after the announcement that Parliament might be dissolved and the Supreme Court might be sent home, to allow a constitutional change to be effected (see chapter 5).

8.6 The vision and promise of participation

The discourse in the early nineties on participatory irrigation management in Sri Lanka reflected the assumption that a major change could be effected through participatory management and the establishment of farmer organisations. Consider the optimism reflected in the following quote (taken from chapter 1, section 1.3):

“A major transformation in the implementing institutions must be initiated to bring about a shift from ...farmers dependent on the State to self-reliant small farmers organised into strong, democratic, effective and autonomous organisations with the authority and ability for full management of their resources...”(IMPSA, 1992, p. 1, 2)

Sofar, the farmer organisations are not yet the strong, democratic, effective and autonomous organisations as envisaged in the policy documents. The IMPSA report quoted above emphasised that the success of participatory management would depend on the willingness and capacity of farmers to manage their own affairs. The way in which this is formulated assumes that there is an institutional fix to the problems, regardless of the social structures, mutual relationships and dependencies.

The efforts by the government to encourage farmers to establish farmer organisations have indeed been quite successful. However, as indicated in previous sections, this was not motivated by the belief that a farmer organisation would solve all their problems, but more a strategic choice based on incentives. With the promise of future allocation of tank rehabilitation projects, farmers decided that there would be many advantages in establishing a farmer organisation as recommended to them by government officers.

Previous sections have revealed that the establishment of farmer organisations is, in itself, not sufficient for the actual materialisation of participation. In relation to this, Roscoe referred to ‘practice theory’, according to which, structure comprises a complex of rules and resources that shape but do not determine social action (Roscoe, 1993, p. 113). Analogous to this, one could say that the structure of the farmer organisation defines loosely the opportunities for participation (section 8.1), but does not determine individual behaviour (section 8.2 et seq.). Bourdieu explains how individual behaviour is affected by concealed ‘censorship’:

“Among the most effective and best concealed censorships are all those which consist in excluding them from the groups which speak or the places which allow one to speak with authority. In order to explain what may or may not be said in a group, one has to take into account not only the symbolic relations of power which become established within it and which deprive certain individuals of the possibility of speaking or which oblige them to conquer that right through force, but also the laws of group formation themselves which function like a prior censorship” (Bourdieu, 1991, p. 138)

Such censorship is clearly visible in the meetings of the farmer organisations, and operates to a large extent through the patron-client relationships. In the presence of strong patron-client relationships, vulnerable farmers and smallholders resort to consent and behavioural compliance²⁶, in particular when this concurs with the involvement of farmer representatives (or their

²⁶ Stryker defined behavioural consent as ‘compliance with current law and the absence of participation in political mobilisation to change legal decisions and decision-making procedures’ (Stryker, 1994, p. 858).

relations) in the production or sale of liquor, and the strategic use of political support by the representatives.

This passivity and consent is effectively used by members of the local elite to manipulate the outcome of decision-making with regard to tank rehabilitation projects, and so use these projects for personal benefit, as was shown in section 8.3. Borrowing, and slightly adapting the metaphor used by Hardin (the tragedy of the commons), one could characterise tank rehabilitation projects as pastures with resources that benefit the community. One can then observe how the overgrazing by only a few actors results in negative consequences for all the others, and has a detrimental impact on the functioning of farmer organisations.

One could argue that the problems encountered and described here are initial problems which will resolve themselves in the course of time. For example, in Padikkaramaduwa, the replacement of the office-bearers resulted in the improved functioning of the farmer organisation. Moreover, it is even possible to argue that the corruption involved in tank rehabilitation projects and the detrimental impact of this on the continuation of the farmer organisation may serve a purpose in the longer run, creating a more conducive environment for structural changes, for example with regard to the selection of farmer representatives. This however is nothing more than optimism, and would require a follow-up study in the future to validate this.

However, the fact that several farmer organisations were dissolved after suspicions of corruption in tank rehabilitation projects²⁷ shows that at least one of the ‘participatory’ procedures does serve a purpose, when the situation becomes intolerable.

In most of these cases, it is the mobilisation of internal or external support which encourages or facilitates such strategies. Such support is mostly found from former representatives, among government officers or among institutional organisers, and much less in the legal domain. The limited use of legal action is related to financial, spatial, institutional and political barriers, but can also be caused by the lack of transparency in decision-making, as illustrated in this chapter. This chapter has already touched upon the influence of political support and this will be further elaborated upon in next chapter.

²⁷ In combination with other factors, see chapter 7, table 7.3. In Kulikkada, the direct cause was a conflict between the large cattle-owners (who owned hundreds of cows / buffaloes), and landowners who complained that the cattle-owners didn’t keep an eye on the cattle, and that the cattle destroyed much of the paddy in the command area.

Ch. 9 Political strategies

“..... Apart from making available low cost funds to local authorities, the Government also plans in the next two years to double the funds allocated to Members of Parliament for development work in their electoral districts. The budget has raised the allocation for each MP to Rs. 3.5 million this year from Rs. 2.5 million and will raise it to Rs. 5 million next year.....New guidelines will be issued to govern these decentralised budgets so that the funds are used for specific activities such as repairing and maintaining small roads, minor irrigation schemes, dispensaries, school facilities, community centres and homes for elders” (Daily News; Saturday February 19, 2000, Vol. 83, no. 43, late city edition, front page).

Irrigation management and the strategic behaviour of farmers cannot be isolated from political intervention. Individual farmers¹ and farmer organisations actively use the features of the electoral system, and the budget powers attached to it, to improve their position and their access to resources. Politicians gratefully use such opportunities for gaining electoral support. The news item above indicates that the government recently increased the financial scope for Members of Parliament and local authorities to please their electorate.

¹ Male farmers who operate as representatives of the household and are much more than female farmers involved in seeking contact with politicians. As indicated in chapter 8, section 8.1, this does not necessarily imply that the benefits are primarily benefits for the person involved in these strategies. In most cases the entire household shares in these benefits.

This chapter will focus on the features of the political environment in which farmers and farmer organisations operate, and the strategies employed by farmers and farmer organisations to pursue their interests through political intervention².

This chapter will start with a description of the political geography within the Province and its electorates, and the temporal aspects of the political system (section 9.1). Subsequently, section 9.2 will pay attention to the interaction between government officers, politicians and office-bearers, and how mutual co-operation benefits these three groups. Section 9.3 discusses the resource distribution, along political lines and along the lines of classed social power; section 9.4 focuses on the strategies requests for the construction of a feeder canal; and section 9.5 on the requests for rehabilitation of minor irrigation tanks. In this chapter, I demonstrate how the relationships between farmers, government officers and politicians, shape and sustain social interaction and social relationships of power.

9.1 Political geography: at the doorstep of democracy

The contours of the current political setting at the district level were shaped by developments just after the first insurgency of the People's Liberation Front (JVP) in 1971. At this time, the first proposals were formulated for a Decentralised Budget. These proposals involved breaking down part of the capital budget on a district basis. Local capital works (irrigation, highways, health,

² These strategies are referred to, in the heading of this chapter, as 'political strategies'. In reality however, this is a very limited interpretation of politics, and mainly concerned with the distribution or allocation of financial resources (money-politics) and other resources.

education) were to be decentralised to the district level. This resulted in the establishment of the Decentralised Budget and the position of the District Political Authorities (DPA) in the early seventies.

These District Political Authorities, and later the District Ministers (from 1977 onwards), were local Members of Parliament. Powers were given to the Members of Parliament to nominate Grama Niladharies, and members to the Boards of Co-operative Societies, Cultivation Committees and Agricultural Productivity Committees. These political nominations of government officers offered ample opportunities for these Members of Parliament to intervene in the administrative system.

This influence of the Members of Parliament (MP) within the electoral districts remains largely unchanged, including in Anuradhapura District. Anuradhapura District covers seven electorates³ in the North-Central Province. Because of the frequent reference to MPs in this thesis, the names of the politicians and the ministry to which they are attached are left out; only their position at the time of the study is given:

1. Mihintale electorate. MP. Deputy Minister
2. Kalawewa electorate: Chief Minister North-Central Province
3. Horrowuputane electorate: Member and Minister PC
4. Medawachchiya electorate: MP
5. Anuradhapura - West electorate: MP
6. Anuradhapura - East electorate: MP, Deputy Minister
7. Kekirawa electorate: Member Provincial Council

³ Although the MPs are connected to districts their actual basis of operation is located within each of the electorates mentioned here.

In addition to these, there is another MP in the District but without an electorate (from Padevya). The case study areas are located within the Mihintale, Anuradhapura-East, Horrowuputane and Medawachchiya electorates. The interaction of villagers, office-bearers of Farmer Organisations and government officers is primarily with the politicians of these four electorates⁴ and the Chief Minister.

The interaction between politicians and villagers takes place through many channels, including an 'open-door policy'. The MP's residence serves as an 'office' for public hearings. During weekends, long queues of people line up at the door of their house⁵ to ask for assistance. This includes requests to politicians to discuss their problem with the police or the (A)GA; or requests with regard to jobs, house improvements, letters of recommendation for guns, letters of recommendation for agrowell subsidies; and allocation of funds for common improvements such as tank or road rehabilitation, the construction of school buildings, or the provision of electricity. In addition to these face-to-face meetings, opportunities for consultation exist through meetings with politicians at site-visits; through representatives, such as govi niyamakes, Samurdhi niyamakes, farmer organisations; Pradeshiya Sabhas and through party branches. For example, in the Medawachchiya electorate, there are 225 branches at the local level covering more than 63,000 people. Although this suggests a

⁴ Under the current Cabinet, their positions have changed somewhat. Some of the MPs and Deputy Ministers have become Ministers, or have become a deputy Minister in another Ministry.

⁵ This resembles the sala model described by Riggs. This refers to the concept of an office (with a veranda at the front and at the back) in which both official and personal obligations are fulfilled. (Riggs, 1964).

high density of party branches, most of these branches are only really active during the period leading up to elections.

The scope for intervention of each of these deputy Ministers goes beyond their 'own' Ministry. Through mutual co-operation with other Ministers, and with officials within these ministries, they have access to programmes under the following Ministries:

- Ministry of Mahaweli;
- Ministry of Transport and Highways;
- Ministry of Irrigation and Power (Irrigation Department);
- Ministry of Health and Indigenous Medicine;
- Ministry of Samurdhi, Youth Affairs and Sports;
- Ministry of Plan Implementation and Parliamentary Affairs;
- Urban Development Authority;
- Housing Ministry (National Water Supply and Drainage Board).

The programmes for tank rehabilitation, to which they have access, are: the Asian Development Bank (ADB) Rural Development Project; the Participatory Rural Development Project North-Central Province; and the World Food Programme. Additionally, they have access to the Samurdhi Programme, to the Agrowell Programme, to various activities under Sarvodaya (national NGO), the CARE Housing Programme, the Economic Advancement Programme, and several other programmes (e.g. for road construction, electrification, school facilities).

In addition to the funds available under these programmes and within the line ministries, each Member of Parliament has Rs. 2.5 million (to be raised to Rs. 5 million in 2001) at his disposal from the Decentralised Budget. The Decentralised Budget, referred to

earlier in chapter 5, is one of the main budgetary instruments of Members of Parliament to finance rehabilitation projects for small-scale irrigation systems. This instrument serves two purposes: to improve the living conditions of people and to create electoral support within the constituency. Between 1997 and 1999, the Decentralised Budget was fixed at Rs. 2.5 million per Member of Parliament for development work within their electoral district. Eight months before the Parliamentary Elections of October 2000, the decision was taken to increase the Decentralised Budget from Rs. 2.5 to Rs. 3.5 million in 2000, and to Rs. 5 million per Member of Parliament in 2001.

Obviously, electoral support is most crucial in advance of elections, in particular in advance of the General Elections and the Provincial Council Elections, as these determine the distribution of seats. The President is directly elected by the people for a six-year term and the last two Presidential Elections were on 9 November 1994 and 21 December 1999. The outcomes of these Presidential elections were a 62% majority for Mrs. Chandrika Kumaratunga (PA) in 1994 and a 51.1% majority for her in 1999.

The 225 Members of Parliament are elected by popular vote using a form of proportional representation system, and its Members serve a six-year term. There are 8 seats reserved for MPs from Anuradhapura District. The most recent General (Parliamentary) Election took place on 10 October 2000 and table 9.1 below gives an overview of the district results in Anuradhapura District. Approximately 5.5% of all votes were rejected.

Table 9.1: results of the General Elections October 2000

<i>Polling Division</i>	<i>Registered voters</i>	<i>General Elections Turn-out</i>	<i>PA</i>	<i>UNP</i>	<i>JVP</i>
Medawachchiya	63,651	72,28%	52,8%	38,6%	5.2%
Horawupotana	60,605	74,95%	44.6	42.0	6.7
Anuradhapura-East	70,735	74,33%	46.1	41.6	9.2
Anuradhapura-West	75,498	72,89%	47.0	44.1	5.2
Kalawewa	93,423	75,96%	53.0	37.4	6.5
Mihintale	48,370	75,97%	48.0	40.1	6.4
Kekirawa	60,379	77,42%	46.4	44.3	3.9
Total Anuradhapura	472,661	78, 52%	48.3%	41.3%	6.1%

The latest Provincial Council Elections were spread over 3 dates. These started with the violence-plagued elections for the Provincial Council of the North-Western Province (Wayamba) on 25 January 1999. These elections were followed by elections for the Provincial Councils of the Central Province, the North-Central Province, Sabaragamuwa, Uva and the Western Provinces on 6 April 1999. Finally, Provincial Council Elections in the Southern Province were held on 10 June 1999. There are also elections for the Local Authorities (Urban Councils, Municipal Councils and Pradeshiya Sabhas).

The election campaigns for the Provincial Council and during General Elections are not restricted to large towns, but also conducted in small villages in rural areas, including some of the villages in the case study areas. It is a colourful time with the use of symbols: green (UNP), blue (PA) and red (JVP); the elephant, the chair and the bell. However, it is also a period of tense political struggle, unfortunate accidents, intimidation, grenade attacks and

other discouragements to political opponents. As anywhere, many promises are made.

“I promise you that I will look into your problems and many projects will come to this village, provided that more than at least two-third of the population of this village has voted for me! And believe me, I will check the voting lists personally!” (Exclamation by Member of Parliament during election campaign for Provincial Council elections, March 1999)

Although it is rather doubtful whether an MP is able to check the voting lists by name, the impression was created that he could⁶, thereby increasing the pressure on individual voters to vote for him – if they wanted to claim future benefits.

The elections have positive budgetary consequences for the MPs within their electorate. In advance of elections, the President - in her position as Minister of Finance - asks the Treasurer of the Ministry of Finance to release extra funds for individual Members of Parliament (typically another Rs. 2 million). These funds can be used for additional works, such as electrification or road construction works. Not surprisingly, villagers indicated that the allocation of funds to common works increases in the period just before elections.

⁶ *Samurdhi niyamakes* and *Samurdhi managers* are said to have played an important role in ‘assisting’ the government with the Provincial Council, the Presidential and General Elections. Their role was questioned both in the national media, and by some respondents. There are persistent allegations of fraud (both by respondents and in the national media), in which the *Samurdhi niyamakes* and *Samurdhi* managers are alleged to have played a key role. To what extent these allegations are valid or mere incriminations is not clear.

9.2 Employment of, and employment through, the patronage system

Government officers and politicians

The recruitment of government officers (such as Divisional Officers, Technical Assistants, Technical Officers and Institutional Organisers), in particular the recruitment of govi-niyamakes and Samurdhi-niyamakes, is often influenced by political interventions. The remarks from MPs, Ministers and deputy Ministers who indicated that they are able to affect decision-making within government departments through ‘their own officers’ is both a statement on the influence these politicians have in the appointment of these officers, and on the expected future co-operative behaviour of these officers.

The mutual co-operation is a win-win situation for both sides. The lack of opportunities in the labour market leaves many well educated people (in particular the younger generation) unemployed. The employment of the rural youth in the public sector provides them not only with a secure income, but also with status and recognition from their relatives and relations. Similarly, politicians are ensured of a smooth process when sending requests through the informal channels within the relevant departments. The lines of communication become much shorter, and they are in a better position to satisfy their constituents on local level.

The officers of the Department of Agrarian Services, the most relevant Department in this study, are very co-operative in accommodating the requests from politicians, provided that they do not deviate too much from the official programme and project criteria. The consequences of frequent non-cooperative behaviour,

as indicated by several Divisional Officers and Grama Niladharies, involve:

- Public embarrassment in front of large crowds;
- Discontinuation of subsidies or personal favours;
- Discontinuation of temporary contracts;
- Transfers to remote or difficult areas (including the North-east);
- Criticism from Commissioners at district or national level, and replacement by officers who are more co-operative.

With the frequent face-to-face contacts between government officers and politicians, corruption by these officers is unlikely to result in their replacement provided that they have been able to maintain a good relationship with politicians. However – and this is an important distinction – those who were appointed under the previous government and UNP supporters⁷ are much more vulnerable to transfer and replacement. As formulated by a senior Minister at Provincial level, there is no problem with government officers who were appointed under the UNP continuing to work for the Provincial Council administration under the rule of the PA, provided that ‘they are willing to cooperate’.

The political intervention in the recruitment of government staff has to be seen in a wider political perspective. The creation of jobs and employment in the public and private sector – especially for poor groups in rural areas – has been a government priority ever

⁷ Several cases were mentioned (e.g. in Padikkaramaduwa, Pudukkuluma) where Grama Niladharies and an Agricultural Instructor were transferred or replaced due to financial irregularities. Strangely enough, this did not occur with other officers who were suspected of financial irregularities. Furthermore, several officials within the higher ranks of the Provincial Council administration were replaced after the PA victory over the UNP in the PC elections.

since the latest JVP uprising, not only to prevent extremist outbreaks but also to increase electoral support and the continuation of the patronage system⁸. Dunham and Kelegama demonstrated that, during the UNP government between 1989 and 1993, the public sector played a crucial role as a source of employment. During those years, the government created 60,000 to 70,000 new jobs each year (Dunham & Kelegama, 1997, p. 185).

As with the UNP government before it, the PA government realised the importance of creating employment opportunities. By the end of the first half of 1999, a total of 21,275 Samurdhiniyamakes had been appointed island-wide, covering 13,560 Grama Niladhari divisions in 22 districts. These, and other programmes, had an effect. Between 1986/87 and 1996/97, the percentage of unemployed youth between 14-18 years of age dropped from 48.0% to 35.6%. Similarly, the percentage of unemployed youth between 19-25 years old dropped from 35.3 to 30.4%. In 1996/97, the unemployment rates for these groups in the North-Central Province were 18.6 % and 20.7 % respectively (Central Bank of Sri Lanka, 1999a, p. 18)⁹.

⁸ For example, in June 2001, the Government announced the establishment of an 'Irrigation Army', which would offer employment to 5000 highly educated young people.

⁹ This is somewhat optimistic: there is a lot of hidden unemployment of educated youth have gone back to farming due to a lack of alternative jobs. Furthermore, as long as the war continues, the army is a large absorber of unemployed youth, especially in the case study areas. The question as to how reliable these statistics are is difficult to answer, and will be highly dependent on the sources of information from which the Central Bank composes these figures.

Village level representatives and politicians

The commitment from politicians to allocate funds to common works is based on the commitment from office-bearers and *vel vidanes* (either explicitly or implicitly) to mobilise as many votes as possible. The large kinship and social networks of these office-bearers - which was a criterion for their selection in the first place - is actively employed by all politicians to raise electoral support.

Requests are granted or processes are accelerated in return for votes, support, and future co-operation. The village representatives are – in their position as broker of state resources - not only in a position to refuse future co-operation but also able to request the withdrawal of particular resources, such as guns for the protection of their fields (against elephants and other wild animals) or their Samurdhi allowance. More than 30 years ago, Scott had observed that the exchange of favours for votes is a common feature of many electoral systems:

“The nature of the new exchange relationship that gives vitality to this patron-client pyramid is similar in most electoral systems. The local patrons and their clients provide votes at election time..., while the party undertakes to help its local adherents (through their patron) with jobs, help in dealing with the bureaucracy, providing public works, and so forth” (Scott, 1972, p. 110)

The magnitude of these potential blocks of votes should not be underestimated. In a publication on Sinhalese and Tamil Nationalism, Stokke concluded that the early elections in Sri Lanka were marked by a large number of successful independent candidates, who could mobilise blocks of votes at the elections (Stokke, 1998, p. 96).

This ‘bond’ between politicians and villagers through their representatives is temporary and situational. With a change of Ministers’ posts, of seats in the Parliament or in the Provincial Council, and a change of office-bearers, new relationships are established. Furthermore, due to the changed relationship and the differentiation of the patron-client relationships in some villages, the office-bearers have less permanent influence on the voting behaviour of the villagers.

Access to resources through government officers or politicians

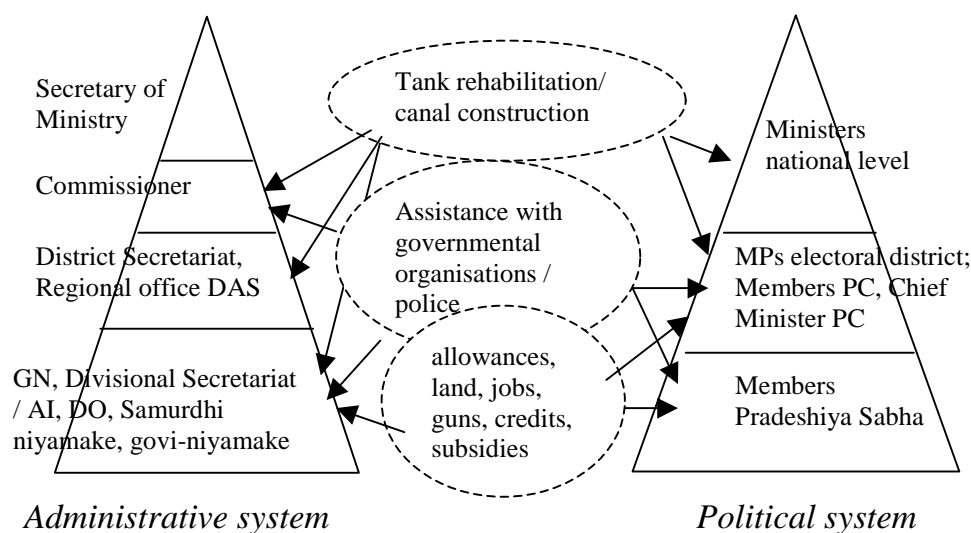
The struggle of politicians to gain electoral support, and the struggle of villagers to get political support, are intertwined and should not be seen in isolation of the control over and access to, state resources. Letters of recommendation are in great demand among the villagers. It shows that the observation of Powell, over thirty years ago, has not lost its relevance in the current situation in the case study areas:

“The role of broker, in fact, became generalized in peasant dealings with ‘outsiders’, and the ‘letters of recommendation’ became more highly valued in many instances than direct patronage benefits” (Powell, 1970, p. 414)

Figure 9.1 gives a simplified overview of the targets of particular requests, within both the administrative and the political systems. State resources have become almost open-access resources with preferential treatment. For example, although everyone under the age 35 may apply for the position of Samurdhi-niyamake or govi-niyamake, such positions are more likely to be granted to the sons or daughters of village representatives or the local elite, than to others. In general, preferential treatment is based on: (i) political

preference; (ii) personal relationships and (iii) one's position as a member of the local elite.

Figure 9.1: routing of requests by local elites



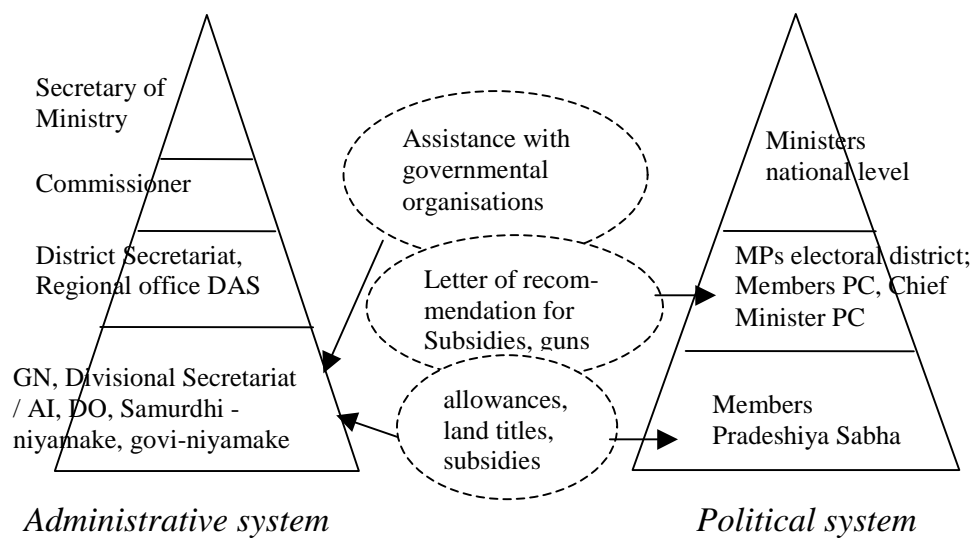
Political support is often based on the principle of reciprocity, either through votes, future financial gains, or in other ways¹⁰. Although support is also given to members from vulnerable households, their access to politicians is more difficult and more 'costly' in terms of opportunity costs. They have to travel to Anuradhapura and wait in long queues, either at the residence of the politician or during 'office days'¹¹ at the *Kachcheri*, without knowing whether they will be able to meet the politician, or whether their request will receive proper attention. The same day could have been used for farming or other income-generating

¹⁰ The expected favours may be extended into the personal sphere.

¹¹ Wednesday is a national 'office day', when all government officers are supposed to be in their office. Observations indicated that the number of people who try to get a meeting with the Chief Minister on an average Wednesday (after screening by the Personal Secretary) is probably between one hundred and two hundred.

activities. Consequently, the most vulnerable groups of households and smallholders tend to use their contacts with local government officers rather than direct contact with politicians. This considerably limits their scope for requests as can be seen in figure 9.2.

Figure 9.2: Routing of requests by vulnerable households & smallholders



These differences are also recorded in literature. Various authors emphasise how class and caste privilege is embodied and reproduced within spatialised political networks (e.g. Harriss-White, 1997; C. Jeffrey, 2000; Gupta, 1995). Robbins defines this reshaping of formal rules along axes of class and caste as corruption:

“...corruption represents the transformation of equitable rules of resource management into inequitable ones through the establishment and reproduction of persistent institutions along strong networks of co-operation between elites and officials. Authority over resources is established through formal law but the

structure of obligations is reformed along axes of classed, casted and gendered social power.” (Robbins, 2000, p. 439).

In reading this definition carefully, it implies that patronage [which involves the transformation of equitable rules of resource management into inequitable ones...] and preferential treatment in the distribution of resources is a form of corruption. This however, is not necessarily the case when the distribution of resources and resource management still meets the criteria set. It becomes corruption when the patronage or preferential treatment provides access to resources for people who are ineligible (e.g. providing jobs to people who clearly lack the educational qualifications) or sidesteps the formal procedures, such as the allocation of tank rehabilitation projects to privately owned tanks.

Robbins’ observation that the formal rules are reformed along axes of classed social power, needs – in the case of Sri Lanka – a slight rephrasing. The preferential treatment materialises through the political system, along axes of classed social power, but not along axes of casted social power. Furthermore, the structure of obligations along axes of gendered social power is less visible than that described by Robbins. The access of women to government officers at divisional or district level, and their access to politicians, is restricted due to constraints on their mobility and opportunity costs, but cannot simply be correlated to the gender of government officers¹² or politicians.

¹² Several Grama Niladharies and a few Divisional Officers were female. Similarly, there were several female Samurdhi-niyamakes and govi-niyamakes.

Preferential treatment along axes of classed social power materialises as follows. Through their position as village representatives, local patrons have better chances of political support than smallholders because of the number of votes they represent. Furthermore, they have more chances of getting assistance from politicians in solving their problems with the bureaucracy. The assistance of politicians in dealing with the bureaucracy and the police provides local patrons with the opportunity to solve problems with government officers, when they are unwilling to accommodate their requests or to continue highly profitable activities in the production and sale of liquor. Consequently, the structure of personalised and mutual obligations results in a privileged position of the local elite.

With regard to preferential treatment in line with caste social power, there are clear differences with the observations by Robbins. He describes how the common caste backgrounds of foresters and the local elites established strong bonds of trust for extra-legal exchange.

Due to the homogeneous caste-background of most villages, this is less evident in the case study areas of this study. Although the class and caste background of the politicians, government officers, and police officers, were not included in this study, some remarks can be made. Based on literature, one can deduce that the higher ranks within the government administration and the political system are still dominated by people from the higher castes, even though such influence has decreased over the years. Therefore, one might expect that the higher-caste villages (govigama) are more likely to receive support through the political and administrative system than lower-caste villages. However, the villages with least political

intervention (Nallamudawa and Padikkaramaduwa) were both high-caste; while two of the villages enjoying the strongest political intervention were low caste (Kulikkada and Indigehawewa). This refutes the previous assumption that higher-caste villages would be more eligible for receiving benefits than lower-caste villages.

In the other situation, assuming that there is a concurrence of caste between the villages and the politicians, an equally valid explanation could be that lower-caste MPs have to do more to live up to the expectations of villagers and ‘earn’ their votes in comparison to the other MPs in the same electoral district, and thus have more interest in actively personal intervening and maintaining close relationships with villagers.¹³

The search for support and co-operation from government officers is primarily based on functional and administrative boundaries. Figure 5.1 gives a more detailed overview of this. Village representatives take their requests for community works to those government officers who have authority over, or access to, the necessary resources. The Divisional Secretariat (AGA’s office) occupies an essential position in the routing of many requests (Samurdhi programme, agrowell subsidies, guns).

¹³ In relation to this, a high-ranking official within the Ministry of Irrigation and Power made a distinction between two types of MPs. He said: “Whereas MPs used to be educated and would previously grow in their position through the feudal system, nowadays many MPs are no longer educated, and come from the bottom-up. They are ‘entrepreneurs’. This is partly caused by the Preferential Voting System. After getting elected they will only be interested in getting as many contracts as possible. To become an MP from the local level, first one has to make regular donations to the party, then one may become an organiser for the party and gradually climb up until one is nominated and elected” (fieldnotes Colombo, 2000).

The search for political intervention and support is primarily based on electoral boundaries. Some requests are forwarded by local government officers, such as the AGA or the Divisional Officer, or by Members of the Pradeshiya Sabha. The AGA, the Divisional Officer and some members of the Pradeshiya Sabha participate in committees at divisional or district level that are occasionally attended by MPs or the Chief Minister of the Provincial Council. Not surprisingly, any relationship with MPs, with Deputy Ministers, Ministers and the Chief Minister, are actively employed by individual farmers and groups of farmers to forward specific requests to the appropriate politicians.

Figure 9.3 below gives an indication of the mutual relationships between individual farmers, representatives, government officers and politicians. Similar diagrams have been produced by others (e.g. Powell, 1970, p. 419; Mollinga in: Boelens & Davila, 1998, p. 158). The figure illustrates the mechanism of 'tied aid'. Requests are granted in return for votes or future co-operation. It illustrates how the state is embodied in the personage of individual officers, brokers and politicians (see also Moore, 1985; Jeffrey, 2000). Rather than portraying this figure in a top-down hierarchy, the actors are positioned somewhat differently. This is a deliberate effort to prevent the visual impression that the dependencies are mainly top-down or bottom-up, and that these dependencies are static.

The diagram illustrates the interactions between four groups: Individual farmers, Representatives, Government officers, and Politicians. The interactions are represented by arrows with labels:

- Individual farmers to Representatives:** Solid arrow labeled SC, dashed arrow labeled L, solid arrow labeled IG.
- Individual farmers to Government officers:** Solid arrow labeled SC, solid arrow labeled IG.
- Individual farmers to Politicians:** Dashed arrow labeled V, solid arrow labeled IG.
- Representatives to Government officers:** Solid arrow labeled SC, solid arrow labeled IG.
- Representatives to Politicians:** Solid arrow labeled SC, solid arrow labeled IG, solid arrow labeled IP, dashed arrow labeled E, solid arrow labeled C.
- Government officers to Politicians:** Solid arrow labeled IG, solid arrow labeled P, solid arrow labeled J.
- Politicians to Individual farmers:** Solid arrow labeled V, solid arrow labeled IG.
- Politicians to Representatives:** Solid arrow labeled IG, solid arrow labeled IP, solid arrow labeled C, dashed arrow labeled E.
- Politicians to Government officers:** Solid arrow labeled IG, solid arrow labeled P, solid arrow labeled J.
- Politicians to Block V:** Solid arrow labeled C, dashed arrow labeled E.

C	Community works for irrigation, roads, schools, and electricity
E	Esteem
IG	Individual favours/grants (land, jobs, credits, guns, subsidies)
IP	Individual protection / group protection
J	Jobs, promotion and voluntary / involuntary transfers
L	labour, ande-tenancy;
P	Pressure;
SC	Support, consent, co-operation;
V	Votes

The absence of opposition and the lack of resistance to malpractices

The functioning of farmer organisations benefits from the existence of formal opportunities for seeking redress if office-bearers or vel vidanes are successful in partial re-allocation of funds for common works to their own pockets. However, individual farmers are not really in a position to ‘fight’ against

illegal and corrupt practices which result in the further accumulation of wealth by a few patrons or in a biased distribution of resources among the relations of these patrons. This results in a lack of trust and ‘hidden resistance’, as was discussed in chapter 7 (section 7.6). Robbins emphasises that it is the enforced participation of the poor themselves in corrupt exchanges which renders them unable to resist. When considering the active participation of the poor in reaping the benefits of existing patronage systems, similar conclusions can be drawn. Robbins however, takes it a step further, when he states that:

“Ultimately then, corruption is an institutional system in which rights are dissolved in exchange of gifts and reflects more generally a state ideology of favors and privileges and a slide towards the criminalisation of the daily life of the poor” (Robbins, 2000, p. 440).

The complicity of some of the poor in the production and sale of liquor in villages such as Indigehawewa, Wellamudawa/Punchikuluma and Kulikkada might well prevent some of them from raising their voices against such ‘criminalisation’, but seems insufficient in explaining why others refrain from individual resistance to corrupt practices. Mollinga argued that social relationships of power – defined as the ability to influence the behaviour of others – influence accountability. He argues that accountability is about who has a say over the behaviour of others and in which manner (Mollinga in Boelens & Davila, 1998, p. 144). This social power is embodied in various dimensions of mutual socio-economic and socio-political relationships and daily practices.

An analysis of the research material and a comparison across the villages shows that – in the case study areas – the perception of social power is based on (i) the role of patrons in the distribution of a wide range of state resources; (ii) the mutual co-operation between patrons, government officers and politicians; (iii) the fear of intimidation which prevents active participation (see chapter 8, table 8.5). Furthermore, several farmers expressed a lack of confidence in the independence of the police.

“They [the local elite] are backed up by politicians, and can be released from the police station if this is requested by politicians. Police constables cannot refuse a politician's request without the risk of being transferred to the war area” (fieldnotes Kulikkada, 1999)

Against this background, it is understandable that villagers are in a difficult position in terms of fighting illegal activities and corruption at local level in those villages where there are strong patron-client relationships and effective co-operation among the local patrons, government officers and politicians.

Instead of perilous personal fights against such practices, a more common strategy is to engineer the replacement of vel vidanes or office-bearers of the farmer organisation through joint action and seeking alliances. Chapter 7 (section 7.5) showed that either the dissolution of the farmer organisation or the replacement of farmer representatives occurred place in five out of the seven case study areas. Both under the vel vidane system and under the farmer organisation, farmers were able to replace their representatives if they were not satisfied with their functioning. In other words, there is a workable option for resistance within the institutional

framework. The representatives are formally accountable to the farmers they represent.

However, the continuity of individual dependency relationships, and the collective effort to avoid serious disruption of kinship and village relationships makes that such action is not undertaken lightly. The strategy is only followed if there is a strong common feeling of discontent among a large group of farmers and a lack of trust in the integrity of the office-bearers / vel vidanes.

9.3 Distribution of resources along political lines

The social and political power, referred to in previous section, is embedded in many features of daily life, not only in irrigation management. Separating social and political power in irrigation management from other spheres of life ignores the multiple identity of actors, especially in an area where people are so dependent on multiple forms of income generation.

Several features of the state poverty alleviation programme (the Samurdhi Programme) have an impact on the farmers in the case study areas. As indicated in chapter 5 (section 5.6), the Samurdhi programme has been under severe criticism, of being ineffective, heavily politicised and abused by officers. Even the Minister in charge of the Samurdhi Programme is aware of this criticism:

“The main cause for these recalcitrant loans is the unfortunate interference by politicians...I have now sent my third letter to my fellow ministers, MPs, Members of Provincial Councils and Pradeshiya Sabha Members to kindly stop interfering in this, in order to help these people out of poverty.” (Interview with the

Minister of Sports, Youth and Samurdhi Affairs, Business Today, 2000, p. 41).

The Samurdhi programme is strongly oriented towards PA supporters¹⁴. The Samurdhi programme identified recipients not only on the basis of their income (less than Rs. 1000 per month) but also on the basis of their political preference¹⁵. The political preferences of the poor have conveniently been tagged through the Samurdhi Programme. This enables easy identification for the distribution of resources along political lines with a justification based on formal policies aimed at poverty alleviation. Chapters 7 and 8 have already illustrated how the Samurdhi programme is interlinked with local irrigation management:

- Through the appointment of Samurdhi-niyamakes who are sons or daughters of office-bearers or vel vidanes;
- Through the role of Samurdhi-niyamakes in forwarding requests to government officers and politicians;
- Through selective invitation policies for tank rehabilitation projects under the Samurdhi Programme¹⁶;

¹⁴ Although similar processes have also been common practice during previous governments, many respondents indicated that the political bias was less under the Janasaviya programme.

¹⁵ All respondents indicated that the Samurdhi allowances benefit primarily PA supporters. This however is not a formal criterion. Furthermore, newspaper articles indicated that in advance of the latest Provincial Council Elections, under the Minister's signature, a circular was sent to Samurdhi managers requesting them to classify the Samurdhi recipients coming under them according to their loyalty, with the help of the Samurdhi niyamakes (Guest column Sunday Times, 9th July 2000).

¹⁶ It is unclear to what extent this is official policy. However, it is perceived to be discriminative by the farmers who are not allowed to participate, in particular because other programmes do not restrict participation in meetings or labour works.

- Through the selection of only Samurdhi beneficiaries for paid labour works associated with tank rehabilitation;
- Through the rehabilitation of those parts of the command area which are owned by PA supporters;
- Contracting of tank rehabilitation works by the Samurdhi-niyamake or their relations.

The social power of the Samurdhi-niyamakes affects the mutual relationships between them and the other farmers, as can be seen in the following example.

“The political affiliation of Samurdhi-niyamakes with politicians is one reason why some farmers and office-bearers do not talk to either govi- niyamakes or Samurdhi-niyamakes. Sometimes the govi-niyamakes or Samurdhi-niyamakes don’t work properly, they don’t complete their cultivation activities on time, or even ill-treat UNP supporters. The central government has said that Samurdhi incentives should be given without distinction in terms of political support, but sometimes Samurdhi-niyamakes give incentives only to PA supporters, and sometimes to UNP supporters in return for a bribe. The Samurdhi-niyamakes are also asking for bribes for getting money from their health insurance or life insurance. For example, the life insurance disbursement is Rs. 5000, but to get it, the recipient has to pay Rs. 1000 to the niyamakes. Complaints are not possible, if the niyamakes find out, they will withdraw the Samurdhi cards” (fieldnotes Nallamudawa, 1999).

In other words, political affiliation not only discriminates in the distribution of resources, it also affects the willingness of farmers to co-operate with the govi-niyamakes and Samurdhi-niyamakes.

Agrowell development and distribution of guns for agricultural purposes

The distribution of state resources along political lines is manifest not only in the Samurdhi programme but also in other programmes, such as the agrowell development programmes and in the distribution of guns for agricultural purposes (Ch. 5, section 5.6).

Box 9.1: Farmers to get guns again

By Chamintha Thilakarathna; Sunday Times, 01/03/99

“Despite warnings from defence experts against the abuse of firearms licences and the setting up of a gun factory in Sri Lanka, distribution of application forms for such licences has already begun...

All applicants have been asked to obtain approval from the Grama Niladhari, police, divisional secretariat and the government agent. Once the approval is given the applications are to be sent to the Additional Secretary of the Defence Ministry and then to the Defence Secretary before the licence for possessing a firearms could be obtained.

Mr. Jayaratna [Minister of Agriculture and Lands] told the Sunday Times that a gun factory would help reduce the defence cost and would be able to turn out shotguns, knives and other items necessary for agricultural activities. He said, “the guns would be provided on a selective basis and the ministries concerned would take every possible step to ensure that they don’t fall into the wrong hands.”

According to the formal procedure for the distribution of guns for agricultural purposes, individual farmers need the approval of the Grama Niladhari, the Divisional Secretary and the police to obtain a gun. Additionally, they need a letter of recommendation from an MP (together with the other letters of approval) which results in a political bias in the distribution of guns. The news item in the box refers to the selective distribution of guns. This selective

distribution is already realised, although with a somewhat different interpretation:

“During the cultivation season, farmers have the right to get guns for protection of their fields. The AGA's officers ask the Samurdhi- niyamake who the most suitable farmers are (a licence is also needed). The Samurdhi-niyamake will make up a list, and the AGA sends this list to the police station. The previous Samurdhi-niyamake [who is at present govi-niyamake] only mentioned his friends, relatives and PA supporters, even if they don't cultivate paddy land or have a licence. People without paddy land cultivation use the guns for shooting wild animals (deer). UNP supporters are not considered for receiving those benefits. When they go directly to the police station with a request for a gun, they will be told to get a letter of recommendation from their MP who - of course – will not provide UNP supporters with such letters. The current Samurdhi-niyamake is OK, he is not biased, but some PA supporters have asked the MP – because of this - to remove him from his post” (fieldnotes Kulikkada, 1999).

The last sentence illustrates an effort by some voters to till the patronage system even more to their advantage. Patronage disbursement along political lines should – in their view – not only be seen as a customary practice, but also as a normative guideline. Similar remarks were made in Indigehawewa, where PA supporters objected to rehabilitation of a particular tank. This reveals that government officers who are PA supporters or who are appointed under the PA government, are expected to behave in a ‘monogamous’ way. It is in particular the local elite - threatened in their position as brokers in the distribution of state resources, and threatened by resistance to their practices from other villagers – who object to the distribution of resources to supporters of the opposition party.

9.4 Construction of a feeder canal: reducing seasonal vulnerability

Unlike the situation in larger schemes (see for example Uphoff, 2000), politicians are – even if they wanted to - not able to influence the water supply to those minor irrigation systems which are completely dependent on rainfall. The seasonal vulnerability of cultivation under these tanks creates and maintains a high dependency of farmers on other sources of income, on a wide social, political and economic network without which they are not able to survive. The construction of a feeder canal, which provides regular and reliable water supply to the tank, would reduce this vulnerability to a large extent. In Nallamudawa, Wellamudawa / Punchikuluma and Kulikkada, farmers have therefore repeatedly asked for the construction of a feeder canal. For example in Kulikkada:

“If they could divert water from Kanadarawa Oya, which is 3 km. upstream of the tanks, we could cultivate in both maha and yala seasons. Before the elections, some politicians promised us to a feeder canal. During the previous UNP government, the Minister of Sports - who came from this village - promised us a canal. Recently the current MP for this electorate promised this again. Unfortunately these are all empty promises” (fieldnotes Kulikkada, 1999).

The reasons for these ‘empty promises’ may vary, but frequently such work has been denied (i) either because other villages were more inventive in convincing government officers and politicians through bribes and drinks or (ii) on technical grounds.

“We asked politicians from the Pradeshiya Sabha right up to the cabinet level, and all promised to give us a canal (in return for

votes), but no one did. Around 1970, we asked the MP of the Sri Lanka Freedom Party. He promised to get a canal to the village under the Masterplan of the Mahaweli Project. But he got a bribe from people of Selestiyamaduwa. The result was the construction of a canal through Mawathewewa¹⁷, Selestiyamaduwa and Halmillutima towards Nachchaduwa” (fieldnotes Wellamudawa, 1999).

The construction of canals from the Mahaweli system is complicated, as this is subject to the authorisation by the Mahaweli Authority. Such approval requires extensive procedures and approval from Ministerial and regional levels.

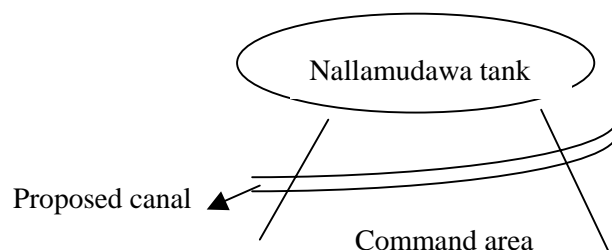
Case in Nallamudawa

The request for a feeder canal to Nallamudawa has a long history and started soon after independence. In the fifties, the people from Nallamudawa, Thimbiriketya and Mawaththewewa were invited to a meeting at the school in Mawaththewewa to discuss the possibilities for the construction of a feeder canal to the area. An engineer¹⁸ from the Irrigation Department proposed constructing a canal to the purana wela of Nallamudawa, but the landowners of Nallamudawa did not like his proposal. According to the plans of the engineer, the canal would not go to the tank, but through the paddy fields. For the landowners of these paddy fields, it would mean that they would have to give up some of their lands without any compensation. Most villagers were against the proposal. The canal would not provide any water to the fields of the command area under Nallamudawa wewa, because the fields were higher

¹⁷ This refers to another village with the same name.

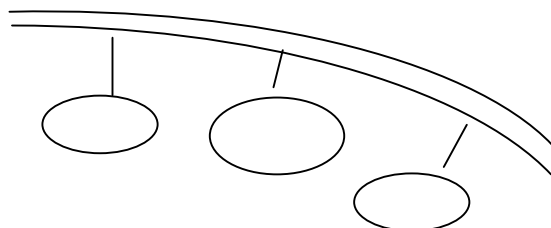
¹⁸ The respondent explicitly mentioned that the engineer was Tamil and from Jaffna. Whether this might have anything to do with their resistance to the proposal is not clear.

than the canal and they did not have pumps to pump the water from the canal into the fields.



One of the other reasons for their rejection was the fear that the sides of the canals would collapse due to erosion, resulting in a widening of the canal. Subsequently, the mudulali from Mawaththewewa – with the support of other villagers - proposed connecting the canal to their village. After the meeting, and a promise by an MP in 1956, the construction of this canal towards Mawaththewewa started in 1964, and was completed in 1969. It resulted in the extension of the command area by 250 to 300 acres, and resulted in regular cultivation during both maha and yala seasons. This not only raised living standards, it also decreased the dependency of many farmers on other sources of income. Thus, it reduced their dependency on others for labour, tenancy arrangements and credits.

Instead of the initial plan, the villagers from Nallamudawa proposed a canal from Galèwa, which is supplied by water from Jayaganga. This canal could be situated above Nallamudawa and approximately thirty other tanks, with diversion canals to each of those tanks.



The engineer informed them that this would not be feasible because the lands of the command area were 9 feet higher than other parts. According to the respondent, his rejection of their proposal was probably also based on the high investments. After this, they made a request for the same canal to president Premadasa (late eighties), but they did not receive any reply to that proposal.

Between 1997 and 2000, at the time of this study, the villagers of Nallamudawa were still not prepared to give up on their plans. They approached their MP with their request for a feeder canal. He emphasised his efforts for the Nallamudawa community in relation to their request for a feeder canal. According to his estimates, it would probably enable cultivation of another 700 or 800 acres in Nallamudawa and nearby villages.

“The Minister of the Mahaweli Authority has given me the mandate for such decision-making, and I have funds available for the construction of a feeder canal through the PRDP and ADB projects. The next step for me is to get the approval of the DGM [Deputy General Manager] of the Mahaweli Authority in Thambuttegama. I have already prepared a plan with the design of the canal and tanks, and hope that – after inspection of the area - I am able to convince the officers of the Mahaweli Authority to undertake action. This will not be easy; many officers are reluctant, because they fear that it will take away the water for cultivation under the Mahaweli scheme. However, we will try our best through our own Technical Officers in the Mahaweli Authority and the Irrigation Department” (fieldnotes Anuradhapura, 1999)

Future scenarios

Although, in general, the construction of such canals is highly unlikely if these canals will interfere with the water supply to

Mahaweli schemes, it will be interesting to see whether the Mahaweli Authority does give its approval in the near future for the following reasons:

First of all, the MP concerned (quoted above), held the position of Deputy Minister for Plan Implementation and Parliamentary Affairs at the time of this study (between 1997 and 2000). Now, after the latest General Elections (2000), he is appointed as Deputy Minister for Irrigation and Water Resources. This would seem to increase the opportunities for further political pressure, even though the process for approval is likely to take a long time. However, one of the government officers emphasised that their advice could not easily be overruled by the General Manager or the Minister where their advice was negative, based on an expectation that the existing command area would be affected.

Secondly, the phosphate quarry is located only a few miles from Nallamudawa. If the international conglomerate is successful in getting a license for phosphate mining, then this is likely to affect Nallamudawa and its surrounding villages directly in terms of their very existence and livelihood. The construction of a new canal to the area would not make much sense when the population may have to be resettled elsewhere.

9.5 Tank rehabilitation: improving food and income security

The rehabilitation of existing irrigation infrastructure is much easier for politicians to achieve than the construction of new feeder canals. Table 9.2 lists all the tanks in the area for which respondents indicated political intervention. Only those tanks are

mentioned for which respondents were very clear about political intervention¹⁹.

When looking at the timing of the projects (chapter 8, table 8.6), one can see a high concentration of projects in the period between 1995 and 1999, in particular from 1998 to 1999. Between 1994 and 1996 there was a long drought and in several villages cultivation was not possible during these years. The rehabilitation projects which were implemented during this period served not only to improve the physical infrastructure, but the opportunity for the local population to participate in the works also served as drought relief (income generation).

During drought periods, the implementation of the works is easier to plan because there is no cultivation below the tanks. Other factors play a role in explaining the intensity of projects during the later part of the nineties (1997-1999), in particular: the availability of donor programmes for minor tank rehabilitation works during that period of time, the scale of these programmes²⁰, and the timing of the Provincial Council Elections (6 April 1999 for the NCP), the Presidential Elections (21 December 2000) and General Elections (10 October 1999).

¹⁹ Although the villagers requested rehabilitation it is not clear whether rehabilitation was the result of active intervention.

²⁰ For an overview of minor tank rehabilitation programmes in Anuradhapura District during the period of research, see annex.

Table 9.2: Intervention by politicians in allocation tank rehabilitation

<i>Name tank & year of rehabilitation</i>	<i>Intervention by:</i>
Nallamudawa Halmillikuluma 1994	UNP politician
Nallamudawa Syambelegaswewa '98	MP PA Mihintale
Nallamudawa Kiriammunukola 1994	UNP Member PC
Nallamudawa Kiriammunukola 1998	Requested MP PA Mihintale
Nallamudawa Amuna 1998	Samurdhi → MP Mihintale
Indigehawewa 1998-99	DO → MP PA Mihintale
Indigehawewa Kuttikuluma 1999	Requested MP PA Mihintale
Walpola Kudawewa 1996-97	MP PA Medawachchiya
Kulikkada Kuratiyawewa 1995-96	Samurdhi officer → MP PA Medawachchiya
Ihalegama wewa 1985	Decentralised Budget MP UNP Anuradhapura-East
Pudukkuluma Panichchakalla 1995	Decentralised Budget MP PA Anuradhapura-East
Surukkuluma 1997	Pradeshiya Sabha & MP PA Anuradhapura-East
Padikkaramaduwa Puakpitiya 1977	UNP MP Horrowuputane

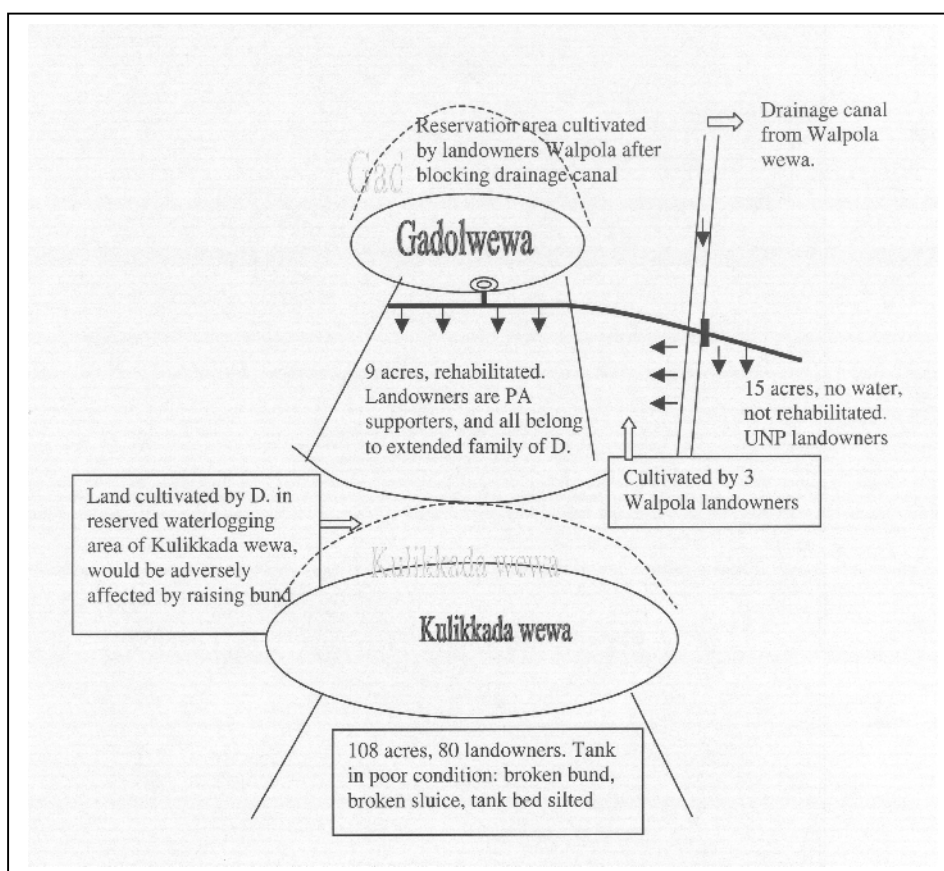
The impact of the elections in the disbursement of funds can be seen from: (i) the disbursement of extra funds to MPs to invest in their electorate; and (ii) special programmes announced in advance of (or immediately after) elections aiming at employment generation or improvement of the local infrastructure.

The World Food Programme, which started in 1994, and the Samurdhi Janatha Project (SJP), which commenced in 1998, both aimed to improve minor irrigation facilities at the rural level. The Samurdhi Janatha Project (more so than the WFP) has been a welcome instrument in raising electoral support over the past three years. From 1998, this project has tried to provide employment in the agricultural sector by improving minor irrigation facilities (agrowells, minor tanks) at the rural level. By June 1999, Rs. 79 million had been approved for 571 projects under this scheme (Central Bank of Sri Lanka, 1999, p. 46).

One of these projects was the rehabilitation of Gadolwewa in Kulikkada. At the initial meeting, the Samurdhi-manager explained that the funds available were only sufficient for raising the bund, replacement of the sluice and desilting the smallest tanks, not for improvements to one of the larger tanks in the village. According to him, rehabilitation of Kulikkada wewa was not an option within the Samurdhi programme. Consequently, Gadolwewa and later Kuratiya wewa were selected for rehabilitation. The contract work was executed by the Samurdhi-niyamake.

In response to this, some landowners of land under Kulikkada wewa and Meegehawewa complained that the Samurdhi-niyamake, the Samurdhi-manager and the Technical Officer used these rehabilitation works for private gain. Furthermore, they complained that the rehabilitation of Gadolwewa only benefited the extended family of the *vel vidane* who were landowners in the command area of Gadolwewa, *and* who were all PA supporters. This remark shows the belief that the selection of small tanks for rehabilitation under the Samurdhi Programme could be biased in favour of PA supporters.

Figure 9.4: sketch of Gadolwewa in Kulikkada



However, the rehabilitation of Kuritiyawewa – also situated in Kulikkada and also funded under the Samurdhi Programme – contradicts this view as it primarily benefited a small group of UNP supporters who owned land below this tank. The farmers, who complained about the rehabilitation of Gadolwewa, indicated that the profits involved were sufficient reason for the govi-niyamake and Samurdhi-niyamake to cooperate in the acquisition of rehabilitation funding for Kuritiyawewa. The table below shows how they have been able to ‘economise’ on the execution of the works.

Table 9.3: Superficial execution of rehabilitation works

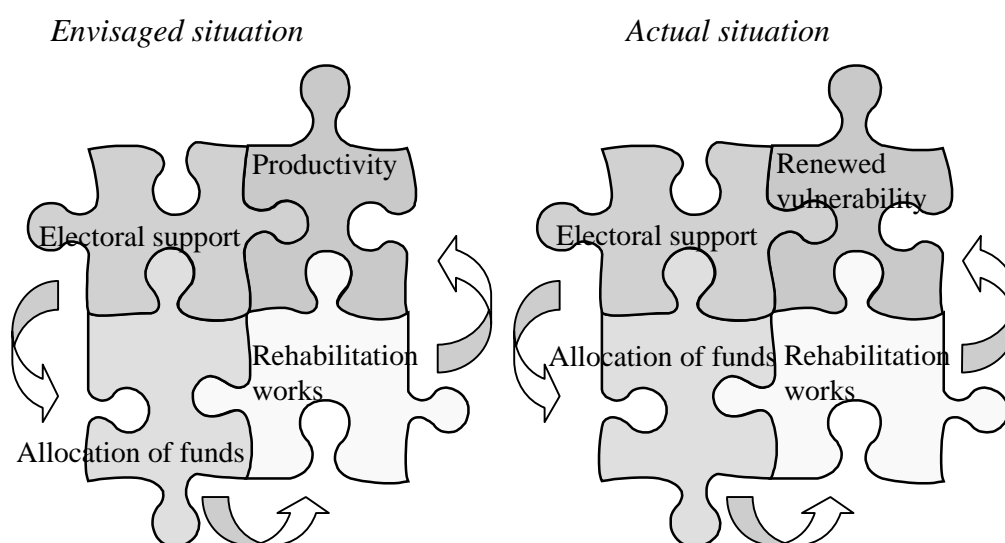
<i>Type of activity according to estimate</i>	<i>Gadolwewa</i>	<i>Kuratiya wewa</i>
Road in catchment area to be raised by 2½ ft	Not realised.	--
Cleaning the bund	Realised	Realised
Raising of the bund	(2 ½ - 3 ft.) Not realised.	(4 ft.) Not realised
New sluice	Not realised	Not realised
New spill	Not realised	--
Improvement of canal	Only part to PA supporters	--
300 shares ²¹ to be dug	Less than 25 shares in reality	150 shares in reality
Rs. 175 / share	Rs. 150 / share	Rs. 150 / share

Not surprisingly, these strategies and other forms of opportunistic behaviour are not always appreciated by the other farmers. The initial contentment among the rural population with regard to successful ‘acquisition’ of a rehabilitation project grows into frustration once they realise that some of the irrigation infrastructure is still in poor condition after completion of the rehabilitation works. They had hoped that their requests and electoral support would result in the allocation of funds, the execution of works, and increased productivity, rather than renewed vulnerability. Their disappointment with the deficient performance, and their frustration with the excessive use of

²¹ The tank bed is divided into demarcated areas of similar size, which are referred to as ‘shares’. Digging of one share can usually be completed by a person within one day.

‘community resources’ for private gain, creates tensions and distrust among the farmers. Figure 9.5 gives an indication of the envisaged outcome of their efforts (productivity) and the actual outcome of their efforts (renewed vulnerability).

Figure 9.5: Envisaged and actual process and outcome



9.6 Impact of politicisation on the farmer organisation

This chapter has shown that the strategies employed by farmers and farmer representatives to pursue their interests through political intervention are quite successful, in particular in terms of the ‘acquisition’ of tank rehabilitation works. However, this was only partially successful in reducing their vulnerability. The political patronage, in terms of individual grants, favours and political protection, benefits the farmer representatives and the local elite more than the other farmers, which results in a distribution of state resources along ‘axes of classed social power’.

The political patronage as described above, and the close relationship between the political and administrative systems, is not unique to Sri Lanka, nor to developing countries in general. Similar processes can be found in industrialised countries. For example, Médard observed:

“Although every Corsican owns a piece of land, most of them cannot live off the land. Because of the small size of their holdings, they have little choice but to enter into a quasi-clientelistic relationship vis-à-vis the large landowners.... In the second type of clientelism, the key political resource lies in the control over municipal land. The mayor uses land for his own profit and the profit of his clients, and withholds it from his enemies; the mayor can play this game because of his law enforcement prerogatives; the mayor, after all, is the head of the municipal police in France.” (Médard in Eisenstadt and Lemarchand, 1981, p. 148).

Although the Members of Parliament in Sri Lanka do not have formal authority over the local police as in France, their influence is still significant, as was seen in the previous chapter.

When translated into the terms of the sustainable livelihood framework, the following situation becomes apparent. The seasonal vulnerability results in a continuous demand for other sources of income apart from cultivation. The political patronage system within the electorate is shaped around this vulnerability, and feeds electoral support by responding to this vulnerability and by the distribution of resources along political lines. The availability of resources (either through budgets or through particular programmes) is essential to sustain this patronage system, and explains why the scope of intervention covers a

multitude of ministries and programmes. Political patronage is likely to become more prevalent in a situation of increased political competition, such as in the run up to elections.

The question as to how political patronage can operate in a modern institutional setting, with its own hierarchy and formal authorities should be answered from a broader perspective than merely looking at recruitment policies and personal face-to-face relationships. Both the bureaucracy and the political system, as well as farmer organisations, provide platforms for discussion, co-ordination and decision-making with regard to planning and implementation, regulation, and resource allocation. Hence, they all enter the 'public space'²², although not necessarily at the same time. However, it is the mutual dependency of human agency within each other's domain which necessitates co-operation among actors within the institutional and the political system. The face-to-face nature of contact and co-operation between villagers and Members of Parliament, as well as between government officers and Members of Parliament, facilitates co-operation through the combination of favours, loyalty and the well-understood principle of reciprocity (and the consequences of breaking this reciprocity).

How then does political patronage influence participation within the farmer organisation? The impact of political patronage goes beyond the reinforcement of class-inequality. The previous chapter (section 8.3) showed how participation is reduced to consent and compliance particularly under the conditions of strong patron-client relationships at local level, in combination with the production of liquor, threats and the political support of the

²² Public space comes into being when people come together to talk about public objects (Parekh, 1981, p. 95).

patrons. The fear of repercussion is fed by the knowledge that political protection obstructs participation. Although the implementation of some rehabilitation projects have increased the numerical representation of farmers in the farmer organisation through their temporary membership, this does not imply that the opportunities for active participation have improved.

Against this background, it is useful to refer again to the definition of power, because it seems that power obstructs participation. Chapter 2 (section 2.8) referred to Giddens who defined power as “the capability of actors to secure outcomes where the realisation of these outcomes depends on the agency of others” (Giddens, 1979, p. 93). This does not provide any information on the (non-) voluntary character of power. Hannah Arendt clearly makes such a distinction when she states that power consists of others’ support or active co-operation, and not mere compliance or passive conformity. In her view, power is independent of material instruments of coercion (Arendt, 1994, p. 198-206). It is a “free gift of others based not on their sense of obligation nor fear of consequences, but their trust and approval”, which can only be acquired through free speech and elections, and through meetings (Parekh, 1981, p. 160-161).

Although this definition is a more philosophical conceptualisation of power, it does shed light on different notions of participation and power. According to Arendt’s notion of power, behavioural consent and passive conformity are realised by force, and not by power when these are based on material instruments of coercion or on fear of consequences. It seems that the official view on participatory irrigation management starts from a different (and idealised) notion of participation, which is denied by the realities

of participation in the case study areas. Using the terminology of Arendt's definition of power, the conditions for real participation and active co-operation are hardly present - in particular in those areas with strong patron-client relationships - even though it may seem formalised by the meetings and the very existence of the farmer organisation.

Ch. 10 Conclusions and reflections

It is time to return to the main research question as formulated in the first chapter.

“How do farmers adapt their strategies to pursue their interests in a changing institutional environment; and how can the functioning of farmer organisations be understood in terms of these strategies, and the outcome of these strategies, for particular categories of farmers?”

The previous chapters have shown that these questions cannot be answered in a few straightforward lines.

In the preface, I used the metaphor of the water in the tanks, where one could see Lotus flowers and weeds, sometimes floating close to the bund, around the sluices, and at other times covering the water surface around the bathing places. Instead of trying to find their exact location, I focused on the processes, which cause them to drift around. Using the concepts of this thesis, I have tried to show how irrigation management and the strategic behaviour of farmers are shaped by social and political struggles, and by strategic alliances between farmers, government officers and politicians.

The first question - how farmers adjust their strategies to pursue their interests in a dynamic institutional environment – has been covered in the various chapters. In section 10.1, some comments will be made with regard to the dynamic character of some of these strategies, and

how these have evolved over time in a changing social, economic and institutional environment. The second question refers to the functioning of farmer organisations in terms of their performance of the irrigation management tasks, which were defined in chapter 2, section 2.1. Instead of summarising the findings from previous chapters, on planning and implementation, on operation and maintenance, on rehabilitation, on co-ordination and conflict management, section 10.2 will primarily concentrate on co-operation and rule-compliance among farmers, two essential conditions for effective irrigation management.

The original concern in this research, which is reflected in these two questions, was about the performance of farmer organisations in relation to their irrigation management tasks. This perspective, however, proved unsatisfactory in explaining the functioning of farmer organisations. The role, position and strategies of farmers and their representatives in other domains proved to be as important, if not more so than the design and rules of irrigation management. Therefore, section 10.3 will reflect on the initial approach used for assessing the performance of the farmer organisation.

Section 10.4 will identify those factors which were really detrimental to the stability of farmer organisations, based on the analysis in the previous chapters. Finally, sections 10.5 and 10.6 aim at a broader discussion, by comparing particular features of the irrigation management systems across the case study areas, and by reflecting on formal and informal institutions.

10.1 Adjustment of strategies to a changing environment

Since independence, there have been significant changes in the social, economic and institutional environment of the farmers in the case study areas. The livelihood strategies of farming households are, and always have been, shaped by their considerable vulnerability to seasonal fluctuations, the risks of crop failure or crop damage, and the low cropping intensities.

There have always been changes, and adjustments to these changes. In the early 1950s, several extended families lived in small settlements in the case study areas. They had several acres to cultivate in the command area, and ample space to move around with chena cultivation in the jungle surrounding their villages. Gradually, these small settlements grew into larger villages, with more households, and more mouths to feed. Land was divided among children, who divided it again among their children; eventually resulting in plots of land that are so small that cultivation of these plots is not sufficient to make a living. One could speak of subsistence agriculture without food or income security.

Initially, there were some resourceful strategies to deal with the scarcity of land within families. *Thattumaru* and *kattimaru*, the rotational cultivation of land among sons and daughters, provided temporary solutions, but also resulted at times in heated arguments between them. These intra-household conflicts about the division of land increased with the increasing scarcity of land. Chapter 6 (section 6.4c) showed that the legal provisions with regard to the division of land now prevent the further fragmentation of land (which is sensible

at the macro-level), but also results in disputes within families after the death of permit-holders. Another resourceful strategy, *bethma*, is practised in response to the frequently occurring situation of insufficient rainfall for cultivation of the complete command area.

The introduction of high yield varieties and mechanisation in paddy cultivation in the early seventies had a major impact on these exchange strategies. Although the introduction of these varieties increased the yield of paddy considerably, the agricultural investments increased likewise. This affected the 'profitability' of the exchange of resources, in particular the exchange of land and labour. It has resulted in a decrease in the reciprocal exchange of labour (*attam*) and the temporary redistribution of land (*bethma*) in times of droughts. Even though there has been a decrease in the mutual exchange strategies within and between farming households over the years, co-operation is still an important strategy, albeit that the nature of this co-operation has changed considerably. At present, co-operation involves much more networking and seeking alliances, rather than the mutual exchange of land and labour.

The introduction of high yield varieties and the mechanisation of paddy cultivation has not only resulted in a decrease of exchange strategies, it has also resulted in a significant increase in farmers' reliance on credit, and the continuation of their dependency on others. Chapters 7, 8 and 9 discussed how these dependencies presently affect their active participation in the formal domain, in particularly in the meetings of the farmer organisation.

Previous chapters revealed that farmers easily adjust to changes in the institutional environment when these changes provide farmers with opportunities to increase their access to resources. For example, chapter 8 (section 8.4a) demonstrated that the establishment of farmer organisations was a strategic choice based on material incentives – the promise of tank rehabilitation projects – rather than a decision based on the perception that the farmer organisation would provide them with an improved institutional structure for irrigation management at the local level.

Since independence, several government policies, programmes and much legislation has been aimed at reducing farmers' vulnerability and dependency, such as the Paddy Lands Act of 1958, the Guaranteed Minimum Price scheme for paddy, Rural Credit Schemes, Crop Insurance Policies, the Agrowell Development Programme and various programmes for land permits and land grants, such as the Jayabhoomi Programme. Of these programmes, the last two mentioned have had the most significant impact on farmers and farming households in the case study areas. The Paddy Lands Act of 1958 did not have the anticipated impact on the sharecropping arrangements; the position of tenants is not much different than in the past. New forms of sharecropping emerged, such as the *mudulali*-tenancy, and the 'sharecropping' in liquor brewing.

Nowadays, one can observe a combination of livelihood strategies, in particular (i) the combination of subsistence agriculture and cash crop cultivation, (ii) minimisation of investments and maximisation of profits, (iii) securing access to means of production and financial resources, (iv) acquisition of land and (v) the search for other means

of income generation. A strategy to secure access to credit and to other means of income generation has been a consistent theme throughout the chapters. The strategies of farming households to obtain such credit and other means of income generation are largely based on their relationships with the local elite. With few exceptions, the selection of farmer representatives [office-bearers and vel vidanes] is almost always based on three criteria: (i) kinship, (ii) landholding and (iii) one's presumed access to government officers and politicians.

This is both a strength and a weakness of farmer organisations. It provides opportunities for the 'acquisition' of tank rehabilitation projects or other infrastructural works which benefit the community, yet at the same time it provides opportunities for the representatives to use their connections with government officers or politicians to strengthen their own position and to appropriate funds from tank rehabilitation projects for private gain. Relationships with government officers and politicians are also used strategically by some farmer representatives to consolidate their position in the farmer organisation.

The most important form of co-operation should not be forgotten: co-operation among farmers in the farmer organisation, their participation in collective action, and compliance with the rules. This type of co-operation proved to be less problematic than initially assumed.

10.2 Functioning of the farmer organisation

One of the starting points at the outset of this research was the assumption that enduring co-operation by farmers within the farmer

organisations and rule-compliance would materialise and continue only when farmers are satisfied with the functioning of the farmer organisation. This is why, in chapter 7, so much attention is paid to farmers' co-operation and compliance with formal and informal rules.

The co-operation, or rule-compliance, of farmers and their satisfaction with the functioning of the farmer organisation is, of course, a circular process. The farmer organisation is only able to perform its tasks adequately with the co-operation of its members. When the farmer organisation or the farmer representatives do not perform satisfactorily, the commitment of farmers to cooperate and to comply with its rules will decline rapidly and the frequency and intensity of conflicts is likely to increase, and the implementation of the cultivation schedule will become problematic. Conformity to the cultivation schedule is essential, not only for the tuning of water distribution, but also because adherence to the cultivation schedule limits the risk of crop failure by roaming cattle and trespassing elephants.

In chapter 7, it was argued that the shared history, kinship relations and community practices in the case study areas are sufficient for continued co-operation in irrigation management, provided that such co-operation has proved to be productive in the past. This corresponds to the perspective of Dasgupta, who argued that the popular image of village tanks as common property resources, vulnerable to over-extraction and free-rider behaviour, is not correct.

One has to conclude that, so far, free-rider behaviour is not threatening the irrigation management system. What shows up from the analyses

across the case study areas is that violations of formal and informal rules, deviation from the cultivation calendar, and the substandard performance of regular irrigation management tasks are *only perceived to be unacceptable* when they are likely to result in crop failure for a large group of farmers, or when this obstructs cultivation in the next season for all farmers. Occasional free-rider behaviour, non-intentional violation of rules, or the withdrawal of water from the canal without permission are, for that reason, not perceived as threatening to the continued operation of the irrigation management system. However, early land preparation and harvesting by a select group of farmers (which might result in crop damage by roaming cattle and elephants), is strongly disapproved of for that very reason.

Structural free-rider behaviour is prevented by social norms with regard to appropriate behaviour and by the small population which assists in the recognition of defaulters. In the words of Dasgupta, “it is hard to slack if your neighbours are keeping an eye on your performance” (Dasgupta, 1993, p. 563). With field protection (fencing, building watch huts, watching the fields at nights), free-rider behaviour is further prevented by the severe consequences for farmers if these tasks are not taken seriously. The mechanisms for conflict resolution with regard to controlling free-rider behaviour are quite informal and successful, aiming at the execution of tasks, compliance with the rules, and a reduction of the chances of further escalation.

One aspect should not be overlooked. Throughout all the institutional changes, there has been one institution which has been a constant factor in local irrigation management: the kanna meetings, held at the start of each cultivation season. The decision-making process in these

meetings is collectively used to come to an agreement on the cultivation schedule, operation and maintenance. Despite some complaints and grumbling, this type of decision-making functions reasonably well within most farmer organisations.

10.3 Reflections on the methods for assessing the performance of farmer organisations

From the perspective of day-to-day water management, the overall conclusion could thus be drawn that most farmer organisations function reasonably well. Despite some problems, there is the adequate rule-compliance, collective action and other forms of co-operation among farmers necessary for the successful cultivation of paddy in the command area of the tank. Moreover, there is no large-scale struggle for water. The common interests bind the farming community in co-operation. End of story? Or perhaps not?

The operationalisation of the ‘functioning of farmer organisations’ in terms of their performance in irrigation management tasks (section 1.3 and section 2.1) proved to be too limited. Where rainfall is unpredictable, where food and income security is constrained by frequent droughts, where employment opportunities are either scarce or where temporary migration of young women to the Middle East disrupts family relationships, and where crop failure is a constant risk due to roaming elephants, the interests and strategies of farmers go beyond the operation and maintenance of the irrigation system.

Under these conditions, the first priority of vulnerable groups of farmers is not to improve their access to resources for cultivation which are available through the market (such as agricultural credits, machinery, agricultural inputs) or through kinship relations, but to protect or improve one's access to day-labour opportunities within village boundaries, and to governmental resources which are much scarcer or subject to particular conditions, such as agrowell subsidies, Samurdhi allowances, guns for the protection of fields, licences, land titles, or government jobs. The potential *denial of* access to these resources results in risk and conflict avoiding behaviour during the meetings of the farmer organisation.

In other words, risk avoidance – one of the popular themes in literature – should be seen here not as risk avoidance in terms of cropping patterns, seed variety, pest management, or sharecropping arrangements – but as risk avoidance with respect to social relationships and economic dependencies.

Therefore, the question is not simply how the farmer representatives manage to establish co-operation among the farmers, but rather, how personal relationships, social networks and political connections have an impact on the strategies of farmers and farmer representatives, and how this affects the functioning of farmer organisations and farmer representatives.

10.4 The real causes for instability within the farmer organisation

Previous chapters have not only discussed the co-operation of farmers within the farmer organisations and the functioning of farmer organisations in relation to their irrigation management tasks, but have also indicated which conditions are detrimental to the stability of the farmer organisation. It was argued that any instability within farmer organisations is not directly related to the institutional design and rules (as suggested by Ostrom, 1990, p. 90), but that it can be traced back to the lack of trust by members in the capabilities and integrity of the farmer representatives, and in the disapproval of particular behaviour by farmer representatives or other farmers.

One of the most critical aspects for the functioning and continuation of farmer organisations, in the case study areas, is not related to the performance of irrigation tasks, but to: the role of the farmer organisation and representatives in tank rehabilitation projects; the appropriation of funds designated for rehabilitation; the opportunities to participate in, and benefit from, the rehabilitation project; and the substandard rehabilitation of the physical irrigation infrastructure. Substandard rehabilitation results in rapid deterioration of the irrigation infrastructure and, as such, it has a negative impact on the condition of the irrigation system. Section 3.5 referred to the ‘social construction of technology’ but in this case it would be more appropriate to talk about the social construction of ‘vulnerable’ technology.

Although it would be rather strong to state that the rehabilitation of common tanks, when the contracting is done by the farmer

representatives or their relations, is likely to result in the dissolution of the farmer organisation or the replacement of its office-bearers within one or two years of completion of the works, an analysis of the data does suggest such a causal relationship. It shows that the expectation that - by hiring local contractors – one could encourage the proper execution of the works is merely a vision, and not the reality.

However, the financial irregularities and shoddy performance of tank rehabilitation projects is not the only reason for the dissolution of a farmer organisation or the replacement of farmer representatives. The lack of trust and disapproval is based on a combination of several factors:

1. Suspicion of financial irregularities in relation to tank rehabilitation, and the execution of works which are deficient and below standard;
2. Poor or non- performance of operational tasks by farmer representatives;
3. Involvement of farmer representatives or their relations in the production of liquor. Large-scale consumption of liquor by farmers results in different attitudes towards co-operation and rule-compliance, *and* threatens the social environment;
4. Clashes of interests between two groups, where the behaviour of one group results in considerable crop damage for another group.

Although the distribution of resources along political lines and the use of political relations to intimidate people and continue illegal activities is a cause of even more disapproval (and consequent distrust), it also results in a strong reluctance among vulnerable groups of farmers and smallholders to agitate against the farmer representatives.

10.5 A comparison between case study areas

When looking at the stability of the farmer organisations – in terms of support for or resistance to the operations of the farmer representatives - one can observe that certain farmer organisations (in particular the farmer organisations in Nallamudawa and Padikkaramaduwa) perform much better than others. The question why, should be answerable in terms of the factors given in the previous section.

When looking at the intensity of politicisation – defined by the intervention of politicians in project allocation, by the preferential treatment in distribution of resources along political lines by farmer representatives, and by the use of political connections to intimidate people and continue illegal practices – one can observe that the farmer organisations in Nallamudawa and Padikkaramaduwa (since 1996) are exceptionally free of such activities when compared to the other villages. In a study on decentralisation in South Indian tank irrigation, Mosse observed that in the late 19th Century:

“Zamindar-rajas continued to treat productive resources (land and irrigation systems) as political assets to *rule* – to gift, disburse and redistribute in order to cement political alliances, secure credit, reward services or acquire honour and religious merit – rather than as resources to *manage*” (Mosse, 2000, p. 10)

It is tempting to replace the ‘Zamindar-rajas’ with ‘farmer representatives’ and to translate this to the current situation in Sri Lanka. The variations observed across the case study areas show that some farmer organisations or farmer representatives (Indigehawewa,

Wellamudawa/Punchikuluma, Kulikkada, Walpola and Pudukkuluma) do treat the local irrigation system as a political asset to *rule*, whereas other farmer organisations or farmer representatives (in particular Nallamudawa and Padikkaramaduwa) treat the irrigation system as resources to *manage*. A comparison of the case studies shows that there is much less conflict with regard to *the management* of the land and irrigation system as resources, than with regard to the land and irrigation system when these are deliberately used as *political assets to rule*.

While this is in mind, another point should be made. It is popular to frame the farmer organisation as a platform for the negotiation of power. Yet, in most villages, the real platform for negotiation lies within the informal networks for mutual co-operation and support. In those villages that have a *high concentration* of social, economic and political power, the farmer organisation is a platform through which power relationships are reproduced rather than negotiated; and in such places individual resistance (human agency) is not within the realms of possibilities. Only in villages where social, economic and political power is less manifest or less concentrated, has the farmer organisation the potential to become a platform for negotiation and participation.

The extent to which this materialises is influenced by the alliances between farmers, farmer representatives, government officers, project officers and/ or politicians. The farmer organisation is unlikely to become a real platform for negotiation of power as long as farmer representatives or members of the local elite are able to give the impression of state authority through ‘flirting’ with local government

authorities and politicians. However, alliances can also function as mechanisms for externally-induced accountability where the farmers lose trust or confidence in the integrity or the capabilities of farmer representatives. Alliances with government authorities on a higher administrative level, or alliances with former *vel vidanes*, are used successfully to negotiate power relationships within the farmer organisation.

10.6 A reflection on formal and informal institutions

In section 2.6 I quoted Eggertsson, who stated that it “is of the utmost importance to understand the extent to which informal institutions adjust to formal institutions; and the extent to which the stock of informal institutions will undermine specific public policy initiatives” (Eggertsson, 1997, p. 1192). Eight years before Eggertsson made this statement, Siriwardena had already given his opinion on this subject. With reference to the Mahaweli Development Programme of Sri Lanka, he stated that “local officials are forced to alter the policies and procedures of planned intervention when confronted with the struggles, negotiations and strategic actions of farmers” (Siriwardena, 1989, thesis; see chapter one).

The findings from this research indicate that the situation is similar in minor irrigation systems, but that Siriwardena’s observation needs further refinement. Chapter 9 clearly revealed that local officials may be forced to alter the formal procedures when they are confronted by the struggles, negotiations and strategic actions of farmers, but only when farmers have created an alliance with politicians. The first part

of Eggertsson's concern – the importance of understanding the extent to which informal institutions adjust to formal institutions - is equally important. It is a critical point, which needs some clarification.

Chapter 5 discussed how the institutional format of cultivation committees, farmer representatives and farmer organisations has changed many times since independence, and probably will continue to do so into the future. However, earlier chapters demonstrated that it is an illusion to think that current irrigation management evolves around – and operates through – mechanisms which are significantly different from those of the past. Even though the socio-economic standing (or class) of different groups of farmers is not the same, most strategies evolve around the following mechanisms:

1. Credit arrangements (creditor – debtor);
2. Mutual support, sharing of resources among relations (giver - recipient);
3. Alliances and networking (farmers - representatives - officers - politicians);
4. Patronage and brokerage (patron – client);
5. Using the features of the political system (politicians – voters).

Individual farmers, farmer representatives, politicians, and government officials all operate in a system which facilitates, justifies and rewards the use of patronage through social, administrative and political networks. It is important to understand that all four groups of actors have a certain interest in the continuation of these mechanisms, *regardless* of the institutional and political setting of the time. Undoubtedly, the large majority of vulnerable farming households would like to move towards a less dependent position within these

mechanisms, but they have not abandoned the mechanisms as such. It is perceived as a legitimate and efficient method for obtaining goods and services, and for lowering the transaction costs in a political economy where the goods and services cannot easily be obtained from other sources.

It is not the use of personal relationships, bureaucratic and political networks as such which is perceived to be illegitimate, but the use of these networks to enable and conceal excessive personal gain and the use of these networks to intimidate people or to continue illegal activities. Referring again to the ‘Zamindar-rajās’, it is legitimate to use these relationships and connections *to manage* (e.g. for the purpose of rehabilitation of the irrigation infrastructure), but it is not legitimate to use these relations and connections *to rule*. The combination of such strategies may not be sustainable from the paradigm point of view – since they reproduce social and economic inequities – yet it has proven to be rather durable and self-sustaining.

So, what does this mean for the interrelationship between formal institutions (such as organisations, procedures, rules, criteria, laws, and budgets) and informal institutions (including trust, reciprocal exchange, common norms, rules, and social networks)?

The mainstream institutional literature tends to position the formal institutions at the centre of research. Likewise, the CPR literature positions rules at the centre of its agenda. The literature on participation assumes that structures and procedures are the key issues, in understanding structural change. The literature on social capital clearly makes an important contribution in the sense that it

acknowledges that the informal institutions are equally important, yet it tends to portray the informal institutions as a separate ‘structure’, which interacts with formal structures.

During the course of this research, gradually a different perspective unfolded: the five mechanisms described above should be seen as institutions in themselves. Informal networks and mechanisms proved to be embedded in, and modified to, the formal context.

The farming communities, the farmer organisations, the local bureaucracy and the political system at the electoral level resemble many features of the prismatic society, referred to by Riggs. In a prismatic society, traditional social systems continue to exist, although these systems are filtered through formal procedures, policies and institutions (Riggs, 1964). This is referred to on a more abstract level by Sewell, when he refers to deep structures:

“Deep structures are those schemas that can be shown to underlie ordinary or ‘surface’ structures, in the sense that the surface structures are a set of transformations of the deep structures”... “Deep structural schemas are also pervasive in the sense that they are present in a relatively wide range of institutional spheres, practices and discourses” (Sewell, 1992, p. 22).

The use of market relationships, mutual support and the sharing of resources, the patronage system, and the resourceful use of features of the political system could thus be seen as ‘deep structures’. These structures evolved over a long period and have proved to be very enduring in the face of seasonal vulnerability. They may reproduce

social and economic inequality, but they also provide a minimum 'insurance' against crop failure, droughts and other forms of misfortune. Previous chapters have indicated that these mechanisms are selectively adopted and adjusted by the farmers in the face of new policies, new organisations, new paradigms, or new poverty alleviation programmes.

This thesis has shown that co-operation – whether through mutual support, networking, reciprocal exchange, collective action or rule compliance – is an essential mechanism, not only for the purpose of irrigation management, but also beyond. Such co-operation, in particular mutual support, is shaped by the evolution of social relationships over the course of time. It has also been shaped by historical events, although these did not get much attention in this thesis.

One of the historical events which most probably shaped social relationships at village level is the positioning of villagers and their behaviour towards each other during the most recent JVP insurrection. Villagers referred to assassinations, threats and robberies, camps and pressure to join the JVP, and the arrests by security forces. Several villages were abandoned during this period. The traumas of violence during this period are not yet forgotten, and these traumas are passed on to sons and daughters within the families. Therefore, it is very difficult to predict mutual co-operation and the formation of alliances, since these will be determined not only by one's socio-economic positioning, and one's role in the farmer organisation, but also by historically shaped relationships of trust and distrust.

When I was going on the bund of our tank

I saw the flowers in the tank

But I wasn't able to count the stems

May God Panambandara bless these flowers

When you are going on the bund of our tank

Eat some woodapple fruits

Drink some clean water from the tank

Bless the bund of our tank

(Mrs. K.B. Rangetena, age 85, Nallamudawa)

References

- Abeyratne, S. 1990. *Rehabilitation of small-scale irrigation systems in Sri Lanka: state policy and practice in two systems*. IIMI Country paper Sri Lanka, no. 6, Sri Lanka.
- Adger, W.N.; Luttrell, C. 2000. 'Property rights and the utilisation of wetlands. *Ecological Economics*. 35: pp. 75-89. 'Special issue: the values of wetlands: landscape and institutional perspectives'.
- Agrarian Service Amendment Act, no. 4, 1991*: Interim Constitution for the Farmer Organisation. Publication Bureau, Colombo, Sri Lanka.
- Arendt, H. 1958. *The human condition*. University of Chicago Press, Chicago/ London, USA/UK.
- Arendt, H. 1994. *Vita activa. De mens, bestaan en bestemming*. Uitgeverij Boom. Amsterdam, Nederland.
- Athukorale, K.; Athukorale, K.; Merrey, D.J. 1994. *Effectiveness of non-government organizations in developing local irrigation organizations; a case study from Sri Lanka*. IIMI country paper Sri Lanka, no. 12, Sri Lanka.
- Baland, J-M.; Platteau, J-P. 1999. 'The ambiguous impact of inequality on local resource management'. *World Development*. 27(5): pp. 773-788.
- Bardhan, P. 1993. 'Symposium on management of local commons'. *The Journal of Economic Perspectives*. 7(4): pp. 87-92.
- Barker, R.; Samad, M. 'Irrigation development and food security in Sri Lanka'. *Economic Review* [Economy of Water Resources], March 1998.
- Basnayake, B.K. 1990 (est.). *Droughts in the Dry Zone of Sri Lanka*; Dept. of Geography, University of Peradaniya, Peradaniya, Sri Lanka

Baumann, P. 2000. *Sustainable Livelihoods and Political Capital: arguments and evidence from decentralisation and natural resource management in India*. ODI working paper 136.

Berkes, F.; Folke, C.; Colding, J. 1998. *Linking social and ecological systems: management practices and social mechanisms for building resilience*. Cambridge, UK.

Boelens, R.; Davila, G. (eds.).1998. *Searching for equity. Conceptions of justice and equity in peasant irrigation*. Assen, the Netherlands.

Bourdieu, P. 1977. *Outline of a theory of practice*. Translated by Richard Nice. Cambridge University Press, Cambridge, UK.

Bourdieu, P. 1991. *Language and symbolic power*. Polity Press, Cambridge, UK.

Bourdieu, P. 1998. *Practical Reason. On the theory of Action*. Polity Press, Cambridge, UK.

Bouveresse, J. 1999. 'Rules, dispositions, and the habitus'. In: Shusterman, R. (ed.) *Bourdieu; a critical reader*. pp. 45-63. Blackwell Publishers, Oxford, UK.

Boyle, R. 1999. 'The accidental paradise'. *Serendib* 18(2): pp. 27-30.

Brohier, R.L. 1998. *The history of irrigation and agricultural colonization in Ceylon. The Tmankaduwa District and the Elahera-Minneriya Canal*. (First published in 1941), Nawinna – Maharagama, Sri Lanka.

Brow, J. 1981. 'Class formation and Ideological Practice: a case from Sri Lanka'. *Journal of Asian Studies*, 40 (4), pp. 703-718.

Campbell, B.; Mandondo, A.; Nemarundwe, N.; Sithole, B; Jong, Wil de; Luckert, M.; Matose, F. 2001. 'Challenges to proponents of common property resource systems: despairing voices from the social forests of Zimbabwe'. *World Development*. 29(4): pp. 589-600.

Central Bank of Sri Lanka. 1990. *Annual Report 1990*. Colombo, Sri Lanka.

Central Bank of Sri Lanka. 1999a. *Sri Lanka socio-economic data 1999*. Colombo, Sri Lanka

Central Bank of Sri Lanka. 1999b. *Sri Lanka state of the economy 1999*. Colombo, Sri Lanka.

Chambers, R. 1988. *Managing canal irrigation. Practical analysis from South Asia*. Oxford and IBH Publishing Co., New Delhi and Calcutta, India.

Chambers, R. 1994. 'The origins and practice of participatory rural appraisal.' *World Development*. 22(7), pp. 953-969.

Chambers, R. 1995. 'The origins and practice of participatory research and development.' In: *Power and participatory development: Theory and Practice*, ed. N. Nelson and S. Wright, pp. 30-42. Intermediate Technology Publications, London, UK.

Chandrapala, L. 1999 (est.); *Comparison of Areal Precipitation of Sri Lanka on district basis during the periods 1931-60 and 1961-90*; Department of Meteorology, Colombo, Sri Lanka.

Chandraprema, C.A. 1991. *Sri Lanka: the years of Terror. The JVP insurrection 1987-1989*. Lake House Bookshop, Colombo, Sri Lanka.

Cleaver, Frances. 1999. 'Paradoxes of participation: questioning participatory approaches to development'. *Journal of International Development*, 11: 597-612.

Codrington, H.W.1926. *A short history of Lanka*. Web edition 2000 by Ranjiv Ratnatunga, Sri Lanka.

Cohen, J.M. and Uphoff, N.T. 1980. Participation's place in rural development: seeking clarity through specificity.' *World Development* 8(3), pp. 213-235.

Coleman, J.S. 1988. 'Social capital in the creation of human capital'. *Americal Journal of Sociology*, 94: pp. 95-120.

Coward, E.W. 1985 'Technical and social change in currently irrigated regions: rules, roles and rehabilitation' in Cernea (ed.), *Putting people first*. World Bank, New York, USA.

Crawford, S.E.S.; Ostrom, E. 1995. 'A grammar of institutions'. *American Political Science*. 89 (3): pp. 582-600.

Das, R.J.1998. 'The social and spatial character of the Indian State'. *Political Geography*; 17(7): 787-808.

Dasgupta, P. 1993. *An inquiry into well-being and destitution*. Clarendon Press, Oxford, UK.

Dayton-Johnson, Jeff. 2000. 'Determinants of collective action on the local commons: a model with evidence from Mexico'. *Journal of Development Economics*; 62: 181-208.

Dehsler, D; Sock, D. 1985. *Community development participation: a concept review of the international literature*. Paper prepared for the International League for Social Commitment in Adult Education, July 22-26. Ljungskile, Sweden.

Denzin, N.K.; Lincoln, Y.S. (eds.). 1998. *The Landscape of qualitative research: theories and issues*. Sage Publications, Thousand Oaks / London / New Delhi; UK / India.

Denzin, N.K.; Lincoln, Y.S. (eds.). 1998. *Strategies of qualitative inquiry*. Sage publications. Thousand Oaks / London / New Delhi. UK / India.

Dharmaratne, T.A.; Hathurusinghe, C.P. 1999. 'Paddy / rice marketing: perspectives and prospects in 90's'. *Economic Review: Paddy Sector Development, major issues*. 24 (10/12), Jan-March 1999. People's Bank, Colombo, Sri Lanka.

Dichter, T.W. 1989. 'The enterprise concept: a comment on innovations in participatory approaches to development. In: *Assessing participatory development: rhetoric versus reality*. Ed. W.P. Lineberry, pp. 131-137. Westview Press, Boulder, CO.

Diesing, P. 1971. *Patterns of discovery in social science*. Aldine Altherton, Chicago, USA.

Dunham, D.; Kelegama, S. 1997. 'Does leadership matter in the economic reform process? Liberalization and governance in Sri Lanka, 1989-1993.' *World Development*, 25(2): 179-190.

Eckstein, H. 1975. 'Case study and theory in political science.' In: F.I. Greenstein and N.W. Polsby (eds.). *Strategies of inquiry*. Pp. 79-137. Reading, MA, Addison- Wesley. UK.

Eggertsson, Thrainn. 1997. 'The Old Theory of Economic Policy and the New Institutionalism'. *World Development*; 25(8):1187-1203

Eisenstadt, S.N.; Lemarchand, R. 1981. *Political clientelism, patronage and development*. Contemporary political sociology, vol. 3. Sage publications, Beverly Hills / London. USA / UK.

Farrington, J. and A.J. Bebbington. 1993. *Reluctant partners: non-governmental organizations, the state and sustainable agricultural development*. Routledge. London, UK.

Farrington, J.; Carney, D.; Ashley, C.; Turton, C. 1999. 'Sustainable livelihoods in practice: early applications of concepts in rural areas'. ODI, *Natural Resource Perspectives*, no. 42.

Feagin, J.R., Orum, A.M., Sjoberg, G. (eds.). 1991. *A case for the case study*. University of North Carolina Press, Chapel Hill, USA.

Fine, G.A.; Deegan, J.G. 1996. 'Three princes of Serendip: insight, chance and discovery in qualitative research'. *Qualitative Studies in Education (QSE)*, 9(4): pp. 434-447.

Gamburd, M.R. 1998. 'Absent women and their extended families: Sri Lanka's migrant housemaids.' In: Risseuw, C.; Ganesh, K. (eds.). *Negotiation and social space; a gendered analysis of changing kin and security networks in South-Asia and Sub-Saharan Africa*. pp. 276-291. New Delhi / Thousand Oaks/London, India / UK.

Ganewatte, P. 1994. *Land tenure and ownership patterns in Sri Lanka, Part I*. International Irrigation Management Institute, Battaramulla, Sri Lanka.

Gardner, R.; Herr, A.; Ostrom, E.; Walker, J. 2000. 'The power and limitations of proportional cutbacks in common-pool resources'. *Journal of development economics*; 62: pp. 515-533.

Geiser, U. 1993. *Ökologische Probleme als Folge von Konflikten zwischen endogenen und exogen geprägten Konzepten der Landressourcen-Bewirtschaftung. Zur Diskussion um Landnutzungsstrategien und ökologisches Handeln im ländlichen Raum der Dritten Welt am Beispiel Sri Lanka*. Sri Lanka Studies Vol. 5, Dissertation Philosophischen Fakultät, Geographisches Institut der Universität Zürich, Switzerland.

Geiser, U. 1995. 'Indigenous resource management and external development interventions in the dry zone of Sri Lanka: from conflicts to synergy?' *Geojournal* 35(2): 185-196.

Gelbert, M. 1988. *Chena (shifting) cultivation and land transformation in the dry zone of Sri Lanka*. Inaugural dissertation submitted to the Philosophical Faculty Section II of the University of Zürich. Zürich, Switzerland.

George, A.L. 1979. 'Case studies and theory development: the method of structured, focused comparison'. In: P.G. Lauren (ed.), *Diplomacy: new approaches in history, theory and policy*. pp. 43-68. Free Press. New York, USA.

Ghatak, M.; Pandey, P. 2000. 'Contract choice in agriculture with joint moral hazard in effort and risk'. *Journal of Development Economics*. 63(2000): pp 303-326.

Giddens, A. 1979. *Central Problems in Social theory: action, structure and contradiction in social analysis*. MacMillan Press Ltd. London, UK.

Giddens, A.; Held, D. (eds.). 1982. *Classes, power, and conflict. Classical and contemporary debates*. Contemporary social theory. MacMillan, Houndmills, Basingstoke, Hampshire and London. UK.

Giddens, A. 1984. *The constitution of society: outline of the theory of structuration*. Polity Press. Cambridge, UK.

Gilmartin, D. 1994. 'Scientific empire and empirical science: colonialism and irrigation technology in the Indus Basin'. *Journal of Asian Studies*. 53(4): pp. 1127-1149.

Glaser, B.; Strauss, A.L. 1967. *The discovery of grounded theory: strategies for qualitative research*. Chicago, USA.

Goodman, L.A. 1961. 'Notes on the etymology of serendipity and some related philosophical observations'. *Modern Language Notes*, 76(5): pp. 454 – 457.

Gosselink, P., Strosser, P. 1995. *Participatory Rural Appraisal for Irrigation Management Research; Lessons from IIMI's experience*. IIMI Working Paper No. 38, Colombo, Sri Lanka.

Gunasekera, W. 1981. *The role of traditional water management in modern paddy cultivation in Sri Lanka*. HSDP-STT series. United Nations University, Japan.

Gupta, A. 1995. 'Blurred boundaries: the discourse of corruption, the culture of politics and the imagined state'. *American ethnologist*, 22(2): pp. 375-402.

Hardin, G. 1968. *The tragedy of the commons*. Science 162.

Harriss-White, B. 1997. 'The state and informal economic order in South Asia'. In: *The Moscow school of social and economic sciences colloquium on exploratory / informal economies: substance and methods of study*, January.

Hennayake, S.K.; Hennayake, N.M. 2000. *Anthropologists misreading Sinhalese-Buddhist nationalism*; Department of Geography, University of Peradeniya; <http://www.lankaweb.com/news/features/anthropologists.html>

Hettiarachchy, T. 1982. *The Sinhala peasant in a changing society*. Colombo, Sri Lanka.

Hodge, Ian; McNally, Sandra. 2000. 'Wetland restoration, collective action and the role of water management institutions'; *Ecological Economics*; Special Issue: the values of wetlands: landscape and institutional perspectives. 35: 107-118.

IMPSA. 1992. *Achieving high productivity and prosperity of irrigated agriculture through participatory management*. Irrigation Management Policy Support Activity (IMPSA), Policy Paper 10, Colombo, Sri Lanka.

Ismail, M. 1995. *Early settlements in Northern Sri Lanka*, Colombo, Sri Lanka.

Jayawardene, K.; Wijayaratna, C.M; Rajasekera, P. 1994. *Tenurial Security and Natural Resources Management in a watershed context. Part II – Impact of tenurial security on productivity*. IIMI, Sri Lanka.

Jeffrey, C. 2000. "Democratisation without representation? The power and political strategies of a rural elite in North India". *Political Geography*; 19: 1013-1036.

Jenkins, T.N. 2000. 'Putting postmodernity into practice: endogenous development and the role of traditional cultures in the rural development of marginal regions'. *Ecological Economics*; 34: 301-314.

Jodha, N.S. 1986. "Common property resources and the rural poor in dry regions of India". *Economic and Political Weekly*, 21(27).

Jones, M. 1998. 'Restructuring the local state: economic governance or social regulation?' *Political Geography*. 17(8):959-988.

Jungeling, I.1989. *Improving management of small-scale irrigation systems*. IIMI Country Paper Sri Lanka, no. 5. Sri Lanka.

Kabeer, N. 1999. 'Resources, agency, achievements: reflections on the measurement of women's empowerment'. *Development and Change*. 30(1999): pp. 435-464.

Kadt, E. de. 1999. *Back to society and culture; on aid donors' overblown concern with 'governance' and democratisation*; Utrecht, the Netherlands.

Karunaratne, G. 1998. *The vidane's daughter*. Sarasavi Publishers, Nugegoda, Sri Lanka.

Knox, R. 1982. *An historical relation of Ceylon*. Tisara Prakasakayo Ltd. Dehiwala, Sri Lanka. First English edition printed in 1681 by Richard Chiswell, London, UK.

Kothari, S. 1989. *Applied politics*. Indian Institute of Public Administration, New Delhi, India.

Kranton, R.E. 1996. 'Reciprocal exchange: a self-sustaining system'. *The American Economic Review*; 86(4): 830-851.

Leach, E.R. 1971. *Pul Eliya: a village in Ceylon; a study of land tenure and kinship*. Cambridge, UK.

Leach, M.; Mearns, R.; Scoones, I. 1999. 'Environmental entitlements: dynamics and institutions in community-based natural resource management'. *World Development*; 27(2): 225-247.

Levi, M. 1988. *Of rule and revenue*. University of California Press, Berkely, USA.

Lise, W. 2000. 'Analysis: Factors influencing people's participation in forest management in India'. *Ecological Economics*, 34: pp. 379-392.

Lloyd, W.F. 1977. "On the checks to population". Reprinted in: Baden, J. and Freeman, W.H. *Managing the commons*, San Fransisco, USA.

Lofland, J.; Lofland L. 1984. *Analyzing social settings*. Wadsworth. Belmont, CA.

Lund, R. 1993. *Gender, locality and changing resource management practices: the dry zone of Sri Lanka*. Gender Studies Occasional Paper 5.

Gender and Development Studies Unit, Asian Institute of Technology, Bangkok, Thailand.

Lyon, F. 2000. 'Trust, networks and norms: the creation of social capital in agricultural economies in Ghana'. *World Development*, 28(4): pp. 663-681.

MacLeod, Gordon; Goodwin, Mark. 1999. 'Reconstructing an urban and regional political economy: on the state, politics, scale and explanation'. *Political Geography*; 18: 697-730.

Malhotra, A.; DeGraff, D.S. 1997. 'Entry versus success in the labor force: young women's employment in Sri Lanka'. *World Development*. 25(3): pp. 379-394.

March, James G.; Olsen, Johan P.. 1984. 'The new institutionalism: organizational factors in political life'. *The American Political Science Review*. 78(3): 734-749.

Mapa, R.B. 1999. 'Paddy sector: challenges and changes in 2020.' In *Economic Review; Paddy Sector Development, Major issues*. Jan-March 1999: pp. 3-5. People's Bank, Colombo, Sri Lanka.

Mehta, L.; Leach, M.; Newell, P.; Scoones, I.; Sivaramakrishnan, K.; Way, S-A. 2001. *Exploring understandings of institutions and uncertainty: new directions in natural resource management*. IDS Discussion paper 372, Brighton, UK.

Mendis, D.L.O. 1999. *Eppawala - Destruction of Cultural Heritage in the name of Development*; published by the Sri Lanka Pugwash Group, Sri Lanka.

Mendis, D.L.O. 2000. *WTO, Globalization and Eppawala after Seattle; a collection of essays*; published by the Sri Lanka Pugwash Group, Sri Lanka.

Michener, Victoria J. 1998. 'The participatory approach: contradiction and co-option in Burkina Faso'. *World Development*. 26(12): pp. 2105-2128.

Miller, G.; Dingwall, R. 1997. *Context and method in qualitative research*. Sage, London, UK.

Ministry of Agriculture and Lands. 1998. *Review of development programme 1998*. Colombo, Sri Lanka.

Ministry of Provincial Councils and Local Government. 1996. *Provincial Councils: operational experience of devolution*, Report of the Committee to study the operation of Provincial Councils in Sri Lanka. Colombo, Sri Lanka (draft, not published).

Mishler, E.G. 1990. 'Validation in inquiry-guided research: the role of examples in narrative studies'. *Harvard Educational Review*. No. 60: pp. 415-441.

Molen, I. Van der. 2001. *An assessment of female participation in minor irrigation systems of Sri Lanka*. Working Paper 8. International Water Management Institute (IWMI). Colombo, Sri Lanka.

Mollinga, P. 1998. *On the waterfront: water distribution, technology and agrarian change in a South Indian canal irrigation system*. Wageningen, the Netherlands.

Moore, M.P. 1981. 'The ideological function of kinship: the Sinhalese and the Merina'. *Man*. New Series. 16(4): p. 579-592.

Moore, M. 1985. *The state and peasant politics in Sri Lanka*. Cambridge University Press, Cambridge, UK.

Moore, M. 1989. 'The ideological history of the Sri Lankan 'Peasantry''. *Modern Asian Studies*; 23 (1): 179-207.

Mosse, D. 1994. 'Authority, gender and knowledge: theoretical reflections on the practice of participatory rural appraisal'. *Development and Change*; 25: 497-526.

Mosse, D. 1995. 'History, ecology and locality in tank-irrigated South-India'. *Development and Change*. 28: pp. 505-530

Mosse, D. 1997. 'The symbolic making of a common property resource: history, ecology and locality in a tank-irrigated landscape in South-India'. *Development and Change*; 28: 467-504

Mosse, David. 1999. 'Colonial and contemporary ideologies of 'community management': the case of tank irrigation development in South-India'. *Modern Asian Studies*; 33(2): 303-338

Mosse, D. 2000. *Kingship, bureaucracy and participation: competing moralities of 'decentralisation' in South Indian irrigation*, first draft.

Nelson, N. and Wright, S. 1995. *Power and Participatory Development: theory and practice*. IT Publications, London, UK.

Nippon Koei Co. Ltd. 1999. *The study for the realization of irrigated agriculture in the dry and intermediate zones of Sri Lanka; Interim report*. Japan International Cooperation Agency (JICA) and the Ministry of Irrigation and Power; Colombo, Sri Lanka.

Ostrom, E. 1990. *Governing the commons: the evolution of institutions for collective action*. Cambridge University Press, New York, USA.

Ostrom, E. 1992. *Crafting institutions for self-governing irrigation systems*. ICS Press, San Francisco, USA.

Ostrom, E.; Gardner, R. 1993. 'Coping with Asymmetries in the commons: self-governing irrigation systems can work'. *Journal of economic perspectives*. 7(4): pp. 93-112.

Ostrom, E., Gardner, R.; Walker, J.A. 1994. *Rules, games and common-pool resources*. University of Michigan Press, Ann Arbour, USA.

Paldam, Martin; Svendsen, Gert Tinggaard. 2000. 'An essay on social capital: looking for the fire behind the smoke'. *European Journal of Political Economy*; 16:339-366

Panabokke, C.R. 1996. *Soils and agro-ecological environments of Sri Lanka*. Natural Resources Series, No.2. Natural Resources, Energy and Science Authority of Sri Lanka, Colombo, Sri Lanka.

Panabokke, C.R. 1998. *The small tank cascade systems of the Rajarata: their settling, distribution patterns and hydrography*. Published for the Mahaweli Authority of Sri Lanka (MASL), Colombo, Sri Lanka.

Pant, Dhruva Raj. 2000. *Intervention processes and irrigation institutions; sustainability of farmer managed irrigation systems in Nepal*; Wageningen; the Netherlands.

Parekh, B. 1981. *Hannah Arendt and the search for a new political philosophy*. Macmillan Press Ltd., London / Basingstoke, UK.

Parkin, F. 1982. 'Social closure and class formation' in: Giddens, A. and Held, D. 1982. *Classes, power, and conflict. Classical and contemporary debates*. Pp. 175-184. MacMillan, Houndmills/ Basingstroke/ Hampshire/ London, UK.

Peebles, P. 1990. 'Colonization and ethnic conflict in the Dry Zone of Sri Lanka'. *Journal of Asian Studies*. 49 (1): pp. 30-55.

- Peiris, G.H. 1996. *Development and change in Sri Lanka; geographical perspectives*. International Centre for Ethnic Studies, Delhi, India.
- Perera, J. 1985. *New dimensions of social stratification in rural Sri Lanka*. Agrarian Research and Training Institute, Colombo, Sri Lanka.
- Platteau, J-P. 1995. 'A framework for the analysis of evolving patron-client ties in Agrarian Economies'. *World Development*. 23(5): pp. 767 – 786.
- Powell, J.D. 1970. 'Peasant society and clientelist politics'. *American Political Science Review (APSR)*; 64(2): pp. 411-425.
- Presidential Secretariat. Nov. 1999. *Agriculture*. Information sheet, no. 15.
- Pretty, J.N. 1994. 'Alternative systems of inquiry for a sustainable agriculture'. In: *IDS Bulletin*, 25 (2): p. 37-48. Brighton, UK.
- Pretty, J; Ward, H. 2001. 'Social capital and the environment'. *World Development*; 29(2): pp. 209-227.
- Putnam, R.D., Leonardi, R. & Nanetti, R.Y. 1993. *Making democracy work: civic traditions in modern Italy*. Princeton.
- Raby, Namika. 1985. *Kachcheri bureaucracy in Sri Lanka: the culture and politics of accessibility*; New York, USA.
- Rahnema, M. Bawtree, V. (eds.). 1997. *Post-development Reader*. Zed Books; London, UK.
- Ratnayake, P. 1992. *Towards self-reliant rural development: a policy experiment in Sri Lanka*. Colombo, Sri Lanka.

Ratnayake, W. 1998. *Comparative advantages of growing rice over other field crops; as an average farmer in the dry zone comprehends*. (unpublished). Huruluwewa, Sri Lanka.

Riggs, F. 1964. *Administration in developing countries: the theory of prismatic society*. Houghton Mifflin, Boston, USA.

Risseeuw, C.; Ganesh, K. (eds.) 1998. *Negotiation and social space; a gendered analysis of changing kin and security networks in South Asia and Sub-Saharan Africa*. Sage, New Delhi/Thousand Oaks/London. India / UK.

Roberts, M. 1974. 'Problems of social stratification and the demarcation of national and local elites in British Ceylon'. *Journal of Asian Studies*. 33(4): pp. 549-577.

Robbins, Paul. 2000. 'The rotten institution: corruption in natural resource management'. *Political Geography*; 19: 423-443.

Rogers, J.D. 1994. 'Post orientalism and the interpretation of premodern and modern political identities: the case of Sri Lanka'. *Journal of Asian Studies*. 53 (1): pp. 10-23.

Roscoe, P.B. 1993. 'Practice and Political Centralisation: a new approach to political evolution'. *Current Anthropology*, 34 (2): pp. 111-140.

Rudd, Murray A. 2000. 'Live long and prosper: collective action, social capital and social vision'. *Ecological Economics*; 34(234): 131-144.

Scheurich, J.J. 1996. 'The masks of validity: a deconstructive investigation'. *International Journal of Qualitative Studies in Education (QSE)*. 9(1): pp. 49-60.

Schrevel, A. 1993. *Access to water: a socio-economic study into the practice of irrigation development in Indonesia*; ISS, The Hague, the Netherlands.

Schrijvers, J. 1985. *Mothers for life. Motherhood and marginalization in the North Central Province of Sri Lanka*. Eburon, Delft, the Netherlands.

Scott, J.C. 1972. 'Patron-client politics and political change in south-east Asia'. *American Political Science Review*. 66(1): 91-113.

Scott, J. 1997. 'The infrapolitics of subordinate groups' in: Rahnema, M. Bawtree, V. (eds.) *The Post-development Reader*. pp. 311-328. Zed Books; London, UK.

Seabright, P. 'Managing local commons: theoretical issues in incentive design'. *The journal of economic perspectives*. 7(4): pp. 113-134.

Sen, A.K. 1976. 'Famines as failures of exchange entitlements'. *Economic and Political Weekly* 11.

Sen, A.K. 1990. 'Gender and cooperative conflicts' in: Tinker, I. (ed.). 1990. *Persistent inequalities. Women and World Development*. pp. 123-149. Oxford University Press, New York/ Oxford. USA / UK.

Sen, A.K. 1981. *Poverty and famines: an essay on entitlement and deprivation*. Clarendon Press, Oxford, UK.

Senanayake, D.S. 1935. *Agriculture and Patriotism*. Reprinted in 1985. Colombo, Sri Lanka.

Sewell, William H. 1992. 'A theory of structure: duality, agency and transformation'. *American Journal of Sociology*. 98(1):1-29.

Sharpe, Melvin L. 2000. 'Developing a Behavioral Paradigm for the Performance of Public Relations'. *Public Relations Review*; 26(3):345-361.

Shusterman, R. (ed.). 1999. *Bourdieu; a critical reader*. Blackwell Publishers, Oxford, UK.

Silva, K.M. de. 1981. *A history of Sri Lanka*. Calcutta, India.

Siriwardena, S.S.A.L. 1989. *From planned intervention to negotiated development: the struggle of bureaucrats, farmers and traders in the Mahaweli irrigation scheme in Sri Lanka*. Dissertation Wageningen Agricultural University, the Netherlands.

Somasekaram, T. (Ch.ed.); Perera, M.P.; De Silva, M.B.G.; Godellawatta, H. 1997. *Arjuna's atlas of Sri Lanka*. Arjuna Consulting Co Ltd., Dehiwala, Sri Lanka.

Starkloff, R. 1998. 'Water Scarcity in Kitulwatte: The social causes and consequences of environmental degradation in a highland Uva village of Sri Lanka'. *World Development*. 26(6): pp. 913-932.

Steenbergen, F. van. 1997. *Institutional change in local water resource management: cases from Balochistan*. Netherlands Geographical Studies 220, the Royal Dutch Geographical Society. Utrecht, the Netherlands.

Stokke, , K. 1998. 'Sinhalese and Tamil nationalism as post-colonial political projects from 'above'. *Political Geography*. 17(1): pp. 83-113.

Stryker, Robin. 1994. 'Rules, resources, and legitimacy processes: some implications for social conflict, order and change'. *American Journal of Sociology*; 99(4): 847-910.

Tambiah, S.J. 1990. 'Sri Lanka: introduction'. *Journal of Asian Studies*; 49(1), p.26-29.

Tennekoon, M.U.A. 1986. *Drought hazard and rural development; a study in perception of and adjustment to drought*. A study in the North Central Province of Sri Lanka. Sri Lanka.

Thompson, J. 1995. 'Participatory approaches in government bureaucracies: facilitating the process of institutional change'. *World Development*. 23(9): pp. 1521-1554.

Thorbecke, E.; Svejnar, J. 1987. *Economic policies and agricultural performance in Sri Lanka 1960-1984*. Development Centre Studies, Organisation for economic Cooperation and Development (OECD). Paris, France.

Tramezzino, M. (publisher.). 1557. *Peregrinaggio di tre Giovanni figliuoli del Re di Serendippo: per opera di. M. Christo foro Armeno dalla Persiana, nell'Italiana lingua trappartato*. Venice, Italy. Later version in French: *Le voyage et les aventures [sic] des trios princes de Sarendip traduit du person*. Paris, 1719. Translation into English: *The travels and adventures of three princes of Serendip: intermixed with eight delightful and entertaining novels: translated from the Persian into French and from thence done into English*. London. 1722.

Ulluwishewa, R.; Tsuchiya, K. 1984. 'The disintegration of a traditional system of exchange labour and the mechanisation of paddy land preparation in Sri Lanka.' *Journal of the Faculty of Agriculture*, Kyushu University, 29 (2-3): pp. 117-138.

Unnithan, M.; Thin, N. 1989. 'Identity: the politics of representation'. *Anthropology Today*; 5(6):20-22.

Uphoff, N. 1986. *Getting the process right: improving water management with farmer organisation and participation*. Working Paper. Cornell University. Ithaca. USA.

Uphoff, N.; Wijayarathna, C.M. 2000. 'Demonstrated Benefits from Social Capital: the Productivity of Farmer Organizations in Gal Oya, Sri Lanka'. *World Development*; 28(11):1875-1890.

Vincent, J. 1978. 'Political anthropology: manipulative strategies'. *Annual review of anthropology*. 7: p. 175-194.

Walisundara, N. 1999. 'Improving the irrigation efficiency of small tanks'. *Daily News*, Tuesday 12, October 1999.

White, S.C. 1996. 'Depoliticising development: the uses and abuses of participation.' *Development in Practice*. 6 (1), pp. 6-15.

Wijeweera, B.S. 1988. *A colonial administrative system in transition; the experience of Sri Lanka*. Marga Publications, Sri Lanka Institute for Development Studies, Sri Lanka.

Woodhill and Robins. 1998. *Participatory evaluation for landcare and catchment groups*.

Woolf, L. 1998. [Seventh impression. First printed in 1913] *The village in the jungle*. Oxford University Press, Chennai. India.

Yin, R.K. 1994. *Case study research. Design and Methods*. 2nd edition. Applied Social Research Methods Series, vol. 5., Sage Publications, Thousand Oaks / London/ New Delhi.

Zwarteveen, M. and Neupane, N. 1996. *Free riders or victims: women's nonparticipation in irrigation management in Nepal's Chhattis Mauja Irrigation Scheme*. Research report no. 7. International Water Management Institute, Colombo, Sri Lanka.

References to newspaper articles

Centre for Monitoring Election Violence; 1999. *Final report of Alleged Violence on the 1999 presidential elections; Preliminary report on the April 1999 PC elections*. <http://www.lacnet.org/srilanka/politics/elections/cmev/>

Ivon, V. 2000. 'Politics of the Samurdhi'. Guest Column. *Sunday Times*. 9 July 2000. <http://www.lacnet.org/suntimes/000709/guest.html>

Nanayakkara, W. and Abeyawardena, K. 2000. 'In parliament on Wednesday. Dissolution of Paddy Marketing Board and Appointment of Liquidators' In: *The Island*, 6 April 2000, p. 2.

Rajakarunanayake, L. 2000. 'Helping people to help themselves'. Interview with the Minister of Sports, Youth and Samurdhi Affairs. *Business Today*, April 2000, p. 38-46.

Thilakarathna, C. 1999. 'Farmers to get guns again'. *Sunday Times*, 1 March 1999.

Winkel, R. van. 2000. 'The only court in session'. *Sunday Times*, 12 March 2000, 5th Column, p. 11. <http://www.lacnet.org/suntimes/000312/rvw.html>

Legislation

[All acts are published as a supplement to Part II. Of the Gazette of the Democratic Socialist Republic of Sri Lanka, printed at the Department of Government Printing, Government Publications Bureau, Sri Lanka]

Agricultural Productivity Law, No. 2 of 1972

Agrarian Service Act, no. 58, of 1979

Agrarian Services (Amendment Act), no. 4 of 1991

Paddy Lands Act, no. 1, 1958

Pradeshiya Sabhas Act, no. 15, 1987, art. 3

Thirteenth Amendment to the Constitution, 1987

Annex 1: Tank rehabilitation programmes in Anuradhapura District

Tank rehabilitation projects through the DAS

1983-1988 ADZAP	Anuradhapura Dry Zone Agriculture Projects. Rehabilitation of minor abandoned tanks. Funded by ADB. (Asian Development Bank)
1986-1990 VIRP	Village Irrigation Rehabilitation project. Minor irrigation rehabilitation, funded by World Bank.
1991-1998 NIRP	National Irrigation Rehabilitation Project. This is considered as phase ii of VIRP; rehabilitation of minor irrigation schemes, operation and maintenance tasks.
1994-1999 WFP	World Food Program. Rehabilitation of minor irrigation schemes.
1999-2002 WFP	Phase ii. Under this program it collaborates with PRDP; the first phase of the project was funded by WFP and the second phase (1996-2002) funded by WFP & PRDP.
1999 PRDP	Participatory Rural Development Program. Rehabilitation of minor tanks in the district.
1998-2000 NIRP	Phase ii After-care programme for the rehabilitated tanks in the district, funded by European Union.
1998-ADB	Asian Development Bank. Minor tanks improvement project funded by ADB.
1998-FFHCB	Freedom From Hunger Campaign Board. Rehabilitation of minor irrigation schemes.

1995 “World Vision”(N.G.O) Minor tank rehabilitation

1998 Seva Lanka Foundation (NGO) Minor tank rehabilitation

Additionally, the following details were provided by GN Division No. 565

1989- Small tank irrigation improvement program implemented by the “National Youth Service Council”. This programme was called “*Jathika Seva Campaign*”.

1990 *Project 15,000*. Canal rehabilitation project, Funded by Janasaviya Trust Fund.

1996 *Samurdhi Community Project*. Minor irrigation rehabilitation project, funded by Samurdhi funds

Names of NGOs involved in small tank rehabilitation activities.

1. Seva Lanka Foundation
2. Care International
3. Sarvodaya district centre
4. Sri Lanka Canada Development Fund
5. Christian Labour Society
6. Community participatory development foundation
7. Sudu Parevio organisation
8. Grama shakthi development foundation
9. Sama sevaya
10. Save the children fund
11. Community self-strengthening development foundation
12. Ritico foundation
13. Samadeepa social centre
14. Rajarata participatory development foundation
15. Rajarata vanni organisation

16. Human pleasure foundation
17. Forut organisation
18. Surekuma organisation
19. Sarvodaya Siripura
20. Sarvodaya
21. Sithuvama organisation
22. Nikasala organisation
23. Janodaya organisation

Projects by provincial irrigation department

This department was established in 1989 and is involved in minor irrigation rehabilitation works in the area. They were involved in the following projects in recent years.

- | | |
|-----------|----------------------------------|
| 1992-1998 | NIRP ,rehabilitation of 76 tanks |
| 1997 | ADB , rehabilitation of 12 tanks |
| 1997 | PRDP rehabilitation of 18 tanks. |

Annex 2: Example of technical details: Nallamudawa

Information sheet for rehabilitation of Nallamudawa under VIRP:

Deputy Director's Office (National) Irrigation Department Anuradhapura;
Mr. Jayaratne, planning officer; Mr. Thilakaratne, engineer

Nallamudawa: date rehabilitation 1989

Irrigation Department Mahakanadarawa Division (office closed);

Plan no. 11-206, shelf 14, F. Technical plan / drawings available.

Tank Data

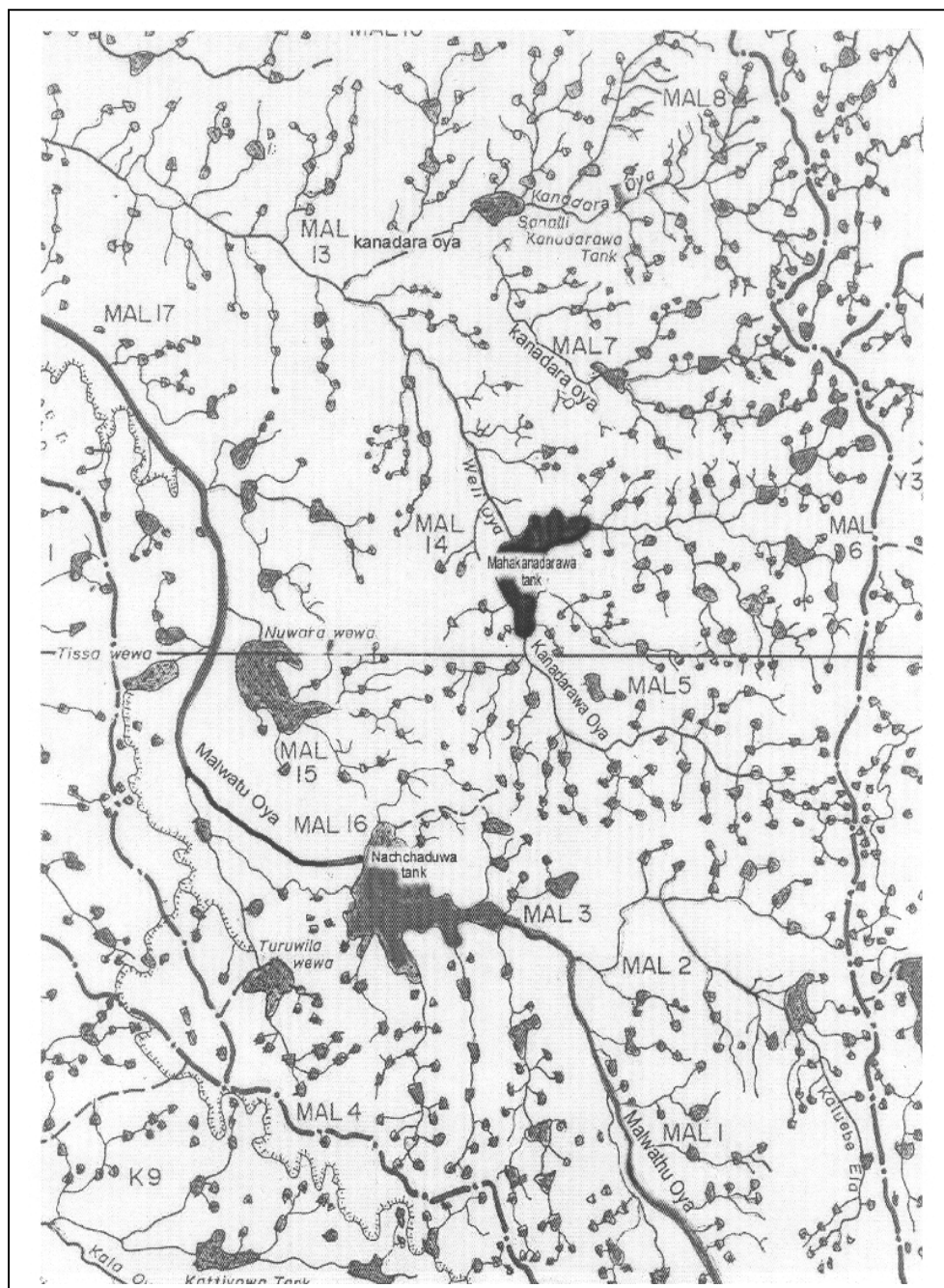
Name of the tank: Nallamudawa Tank
Co-ordinates: F/14 (8.90 * 5.90)
Catchment area: 1.57 sq. Miles
Area at Full Supply Level (FSL) 110.48 Acres
Capacity at FSL: 48.49 Ac.ft.
Irrigable area: 140 acres.

Bund:	Existing	Proposed
Nature:	earthen	earthen
Length:	2700 ft.	2800 ft.
Top width:	4' to 5' var.	6'0" (6 ft. 0 inches)
Side slopes:	1-1.5	1 on 2"
Bund Top Level (BTL):	113.0	113.5
High Flood Level (HFL):	?	111.27
Full Supply Level (FSL):	110.27	110.27
Free Board:	3.73	3.23

Spill:	Existing (RB)	Proposed (RB)
Type	natural	natural
Location	28.0 CH (chains)	28.0 CH
Length	100' – 0"	100' – 0"
Crest level (usually FSL, spill L)	110.27	110.27

Sluice:	Existing			Proposed		
	LB		RB	LB		RB
Type	JB.	HPT	JB	HPT	HPT	HPT
Location	1.37	4.40	18.9	1.37"	4.40"	18.9"
Size of opening:	6" ρ	9" ρ	9" ρ	15" ρ	15" ρ	15" ρ
Sill level	101.65	100.0	103.30	101.5	100.0	103.0
Head of water	--	--	--	8.77	10.27	7.27

Annex 3: Medawachchiya and Anuradhapura sheet. Density of tanks



Source: IWMI, not to scale.

Summary

This thesis is based on research into minor irrigation systems in the Dry Zone of Sri Lanka that was carried out between 1997 and 2000 in Anuradhapura District. In Anuradhapura District, there is large variation in rainfall and severe water shortages occur frequently, sometimes for several years in succession. The food and income security of the farming population is seriously affected by these droughts. This study focuses on the strategies of farmers in this area to cope with these regular droughts and which aim to increase their food and income security.

Certain policy documents of the early nineties indicated that small farmers could make substantial progress in shifting from 'a state of poverty to a state of increasing prosperity' through the establishment of farmer organisations and through participatory irrigation management. This proved to be more complicated than foreseen, even though many farmer organisations were established. A substantial part of the problems seemed to be related to the strategic behaviour of farmers, and the outcome of decision-making as a result of these strategies. Therefore, the research concentrates on the question as to how farmers adapt their strategies to pursue their interests in a changing institutional environment, and how the functioning of farmer organisations can be understood in terms of these strategies the outcome of these strategies.

The research design is based on qualitative research and triangulation, and combines a literature study with multi-site case studies in the field. Six farmer organisations and one traditional irrigation management system, covering a total of ten villages in Anuradhapura District were studied. The Sustainable Livelihood

framework was used to analyse the strategies of farmers. According to this framework, the strategies of people are influenced by the range of resources available to them, by their own priorities, by seasonality and insecurity, while their options are determined by policies, institutions and processes. One of the starting points in this thesis is that irrigation management and the strategic behaviour of farmers cannot be isolated from social and political struggles that go beyond irrigation management.

Chapter four gives an impression of the case study areas, and deals with the question as to how the technical characteristics of the minor irrigation systems in the case study areas and the agro-ecological features affect the irrigation management system. It shows that the vulnerability should not only be seen as vulnerability in terms of (i) rainfall, but also in terms of (ii) the poor condition of the irrigation infrastructure, and (iii) crop damage by cattle and elephants in the areas.

Chapter five deals with the features of the institutional and bureaucratic environment in which farmer organisations operate. It starts with a description of the colonial setting and the relevant changes since independence which have affected the current institutional structures, and continues by providing an overview of the legal institutional setting at present. It shows how the responsibilities for cultivation and irrigation at the lower administrative levels have changed since independence, and so puts the current emphasis on farmer organisations in a longer-term perspective. Furthermore, it provides an overview of several government programmes which were intended to have a direct bearing on the livelihood opportunities of small farmers and tenants.

The impact of these government programmes is discussed at the end of chapter six, which argues that only a few of these programmes have had a positive impact on the cultivation conditions in the case study areas. Most of these programmes have benefited those households that have some financial reserves rather than the most vulnerable households. The financial position of farmers changed with the introduction of high yield varieties and the introduction of tractors in the seventies. Although these have increased the yields significantly, they have also increased the necessary agricultural investments and the demand by farmers for credits at the start of each cultivation season. Instead of the expected reduction in the financial vulnerability of farmers, their indebtedness has continued and access to labour, jobs and other means of income-generation have become as important as the cultivation of paddy and other field crops.

Chapter six focuses on the livelihood strategies employed by farmers in the case study areas and raises the question how these strategies can be understood in relation to the seasonal vulnerability and the unpredictability of income-generation through paddy cultivation. One of the response strategies is spatially diversified cultivation, a combination of subsistence agriculture and cash crop cultivation in the command area of the tank, in chena fields, homesteads and the highlands. The shared interest in the cultivation of paddy (both as a subsistence crop and as a cash crop) facilitates co-operation in planning and implementing the cultivation schedule.

Chapter seven argues that this co-operation among farmers should not only be sought in formal rules which are designed to prevent free-rider behaviour and the illegal withdrawal water. Farmers primarily enter into co-operation because of their shared history,

their understanding of community obligations, and the experience that such co-operation has been productive in the past. Although this chapter indicates that co-operation and rule-compliance are less problematic than expected, it touches upon some unforeseen problems.

First of all, early land preparation creates more conflict than the occasional free-rider behaviour of a few farmers, or the occasional stealing of water. Furthermore, the involvement of farmers and farmer representatives in the production and sale of liquor, and the wide-scale consumption of liquor among farmer in some of the villages clearly affects the functioning of farmer organisations. Distrust in the capabilities, the intentions and the integrity of farmer representatives reduces the commitment of individual farmers to participate actively, to attend meetings and to comply with all the rules.

Finally, chapter seven shows that strategies to dissolve the farmer organisation or to replace farmer representatives can be traced back to the lack of trust among members in the capabilities and integrity of the farmer representatives, and in the disapproval of particular behaviour by farmer representatives or other farmers. This is caused by a combination of factors: (i) the suspicion of financial irregularities in relation to the tank rehabilitation and the substandard execution of works; (ii) poor or non-performance of operational tasks by farmer representatives; (iii) involvement of farmer representatives or their relations in the production of liquor, or the large-scale consumption of liquor by farmers; and (iv) a clash of interests between two groups, where the behaviour of one group results in considerable damage to the other group's crops.

Although the procedures for decision-making within the farmer organisation do provide farmers with a wide range of opportunities to influence decision-making, these opportunities are not always used. Chapter eight focuses therefore on the question how the options for participation are influenced by unwritten rules and norms, and socio-economic relationships.

It argues why the establishment of these farmer organisations is, in itself, not sufficient for the actual materialisation of participation. In the presence of strong patron-client relationships, many farmers resort to consent and behavioural compliance, in particular when this concurs with the involvement of farmer representatives (or their relations) in the production and sale of liquor, and the strategic use of political support. This passivity and consent is, in return, effectively used by members of the local elite to manipulate the outcome of decision-making with regard to tank rehabilitation projects, and using these projects for personal benefit.

The input by, and presence of, government officers at meetings of the farmer organisation proves to be of strategic importance when it comes to controversial issues, which go beyond the cultivation schedule and water distribution. The opportunities to seek support in the legal domain are hindered by financial, institutional and political barriers, by a complete lack of transparency in decision-making at national level, and by the lack of confidence in the legal system. Therefore, farmers choose to look for other outside support, from government officers, from officials at high ranks in the government administration, from project staff, or support from politicians.

Chapter nine focuses on the features of the political environment in which farmers and farmer organisations operate, and the strategies

employed by them to pursue their interests through political intervention. The political patronage system is shaped by the financial vulnerability of farmers, and their demand for tank rehabilitation, agrowell subsidies, jobs, credits and other means of income-generation. The political patronage feeds electoral support by responding to this vulnerability and by the distribution of 'benefits' along political lines.

The last chapter, chapter ten, reflects on the strategies of farmers and on the method used for assessing the performance of farmer organisations. It argues that the role, position and strategies of farmers and their representatives in domains other than day-to-day irrigation management prove to be at least as important for the functioning of farmer organisations as the design and rules of irrigation management. It concludes that the current strategies of farmers in irrigation management evolve around mechanisms which are not significantly different from those of the past.

A comparison of the performance of farmer organisations across the case study areas reveals that the office-bearers of 'successful' farmer organisations treat the irrigation system as resources to manage, whereas the farmer representatives who evoke much resistance treat the irrigation system as a political asset in order to rule. In those villages that have a high concentration of social, economic and political power, the farmer organisation is a platform through which power relationships are reproduced rather than negotiated. Only in villages where the concentration of power is much less manifest or concentrated does the farmer organisation have the potential to become a platform for negotiation and participation.

සාරාංශය

මෙම පොතෙහි අන්තර්ගතය, ශ්‍රී ලංකාවේ වියළි කළාපය තුළ පිහිටි සුළු වාරිමාර්ග පද්ධතීන් අලලා කෙරුණු පර්යේෂණයක් මත පදනම් වී තිබේ. වියළි කළාපය නියෝජනය කරමින් අනුරාධපුර දිස්ත්‍රික්කය තුළ වර්ෂ 1997 හා 2000 දී මෙම පර්යේෂණය සිදු කරනු ලැබිණ.

අනුරාධපුර දිස්ත්‍රික්කය තුළ වර්ෂාපතනයෙහි විශාල විෂමතාවක් දක්නට තිබේ. උග්‍ර ජල හිඟයන් නිතරම පාහේ ඇතිවන අතර, සමහරවිට මේ තත්ත්වය වසර කිහිපයක් අඛණ්ඩව බලපානු ලබන අවස්ථා ද ඇත. මේ තත්ත්වය, ප්‍රදේශයේ ගොවි ජනතාවගේ ආහාර සැපයුමටත්, ආදායම් සුරක්ෂිතභාවයටත් ඉතා තදින් ම බලපෑම් ඇති කරයි.

මේ ප්‍රදේශයේ ගොවි ජනතාව මෙම ප්‍රශ්නයට එරෙහිව හා ඔවුන්ගේ ආහාර සැපයුමත්, ආදායම් තත්ත්වය වර්ධනය කිරීමේදීත් ඔවුන් අනුගමනය කරන උපක්‍රමයන් කෙරෙහි ඉලක්ක කර ගනිමින් මෙම අධ්‍යයනය සිදු කර තිබේ.

අනුව දශකයේ මුල් කාලවලදී සැකසුණු සමහර ප්‍රතිපත්ති ලේඛනවලින් දක්වන පරිදි "දරිද්‍රතාවය" යන්න "සෞභාග්‍යයේ වර්ධනයකට" යන ප්‍රකාශය මුල් කරගනිමින් බිහිකළ ගොවි සංවිධාන හා සහභාගිත්ව වාරි කළමනාකරණය තුළින් සැලකිය යුතු ප්‍රගතියක් සුළු ගොවීන් තුළ ඇතිකළ බව පෙන්වා දී තිබේ. මෙම තත්ත්වය බලාපොරොත්තු වූවාට වඩා සංකීර්ණ බවක් පෙන්නුම් කළද, කෙසේ නමුත් ගොවි සංවිධාන රාශියක්ම මේ කැලය තුළ බිහිවිය. මෙම ක්‍රමෝපායන් සම්බන්ධව ගොවීන්ගේ ප්‍රතිචාර හා ඒ පිළිබඳ ගනු ලැබූ තීරණවල ප්‍රතිඵලයක් වශයෙන්, සැලකියයුතු තරමේ ගැටළු ද මතු වූ බව පෙන්වා දී තිබේ. එම

නිසා මෙහි දී මතුවන දෙවන ප්‍රශ්නය වන්නේ, මෙම ක්‍රමෝපායන්ට සරිලන පරිදි ගොවි සංවිධාන ක්‍රියාත්මක විය යුතු ආකාරය පිළිබඳව ගොවි කණ්ඩායම්වලට කෙසේ අවබෝධ කළයුතු ද යන්නයි.

මෙම පර්යේෂණය ගුණාත්මක පදනමක් මත සැලසුම් කළ පර්යේෂණයකි. එය පොතපත අධ්‍යයනය තුළින් හා ක්ෂේත්‍ර කීපයක් නියෝජනය වන පරිදි කෙරුණු කේවල අධ්‍යයනයන්ගේ සංයෝගයකින් ආවරණය වේ. ගොවි සංවිධාන භයක් හා සම්ප්‍රදායිකව වාරි කළමනාකරණය සිදුවන එක් පද්ධතියක් ඇතුළුව, අනුරාධපුර දිස්ත්‍රික්කය තුළ මුළු එකතුවෙන් ගම්මාන 10 ක් අධ්‍යයනය සඳහා ආවරණය කර තිබේ: තිරසාර ජීවන රටාව මත සැකසුණු දළ සැලැස්ම, ගොවීන්ගේ ක්‍රමෝපායන් විශ්ලේෂණය සඳහා භාවිතා කර තිබේ. ඒ අනුව මිනිසුන් භාවිතා කරන මෙම ක්‍රමෝපායන් ඔවුන්ගේ භාවිතය සඳහා උපයෝගී කර ගන්නා සම්පත් පරාසය මගින් පාලනය වේ. එනම් ප්‍රතිපත්ති මගින් හා ආයතන, ක්‍රියාවලියන් මගින් ඔවුන්ගේ අභිප්‍රායයන් තීන්දු කරන අතරතුර, සෘතුමය බලපෑම් හා අස්ථාවරභාවයන් තුළ පවතින ඔවුන්ගේ ප්‍රමුඛතාවයන් ද ඉහත සඳහන් අයුරින් පාලනය වේ.

මේ ග්‍රන්ථයේ එක් ආරම්භක කරුණක් වන්නේ, වාරිමාර්ග කළමනාකරණය හා ගොවීන්ගේ මෙම ක්‍රමෝපාය රටාව, වාරිමාර්ග කළමනාකරණයෙන් ඔබ්බට විහිදෙන සමාජීය හා දේශපාලනික අරගල වලින් වෙන්කොට ගත නොහැකි බව දැක්වීමයි. මේ තුළින් විස්තර කර දක්වන්නේ, "සහයෝගය" වනාහි වාරිමාර්ග කළමනාකරණයේ අත්‍යවශ්‍ය අංගයක් බවයි. එය අන්‍යෝන්‍ය උදව් උපකාර තුළින්, හෝ එකට බැඳුණු ජාලයක් ලෙසින් හෝ, එසේත් නැත්නම් හුවමාරුව තුළින් හෝ, සමූහ ක්‍රියාදාමයක් මගින් හෝ, නීතියකට යටත් වූ එකඟතාවයක් තුළින් හෝ සිදුවිය හැකියි. එවැනි සහයෝගය, විශේෂී වූ අන්‍යෝන්‍ය උදව් අපකාර තුළ,

සමාජය හා ආර්ථික සබඳතා තුළින් හෝ විශ්වාසය හෝ අවිශ්වාසය මත පදනම් වූ සබඳතා මගින් හෝ එසේත් නොමැති නම්, අවිධිමත් නියමයන් හා නොලියවුණ නීති රීති හා පුරුදු ආශ්‍රිතව හැඩගැසී තිබේ.

හතරවන පරිච්ඡේදය තුළින් කේවල අධ්‍යයන ප්‍රදේශය පිළිබඳ හැඟීමක් දැනවන අතර, කේවල අධ්‍යයන ප්‍රදේශය තුළ පිහිටි කුඩා වාරිමාර්ග පද්ධතින්ට ආවේණික වූ ශිල්පීය ගුණාංග, කෘෂි - පාරිසරික ගුණාංග හා කුමන ආකාරයකින් වාරිමාර්ග කළමනාකරණ පද්ධතිය කෙරේ බලපාන්නේ ද යන්න විස්තර කරයි. එමගින් පෙන්නුම් කරන්නේ, ගොවි ජනතාව තුළ පවතින, පීඩිතභාවය හුදෙක්ම (i) ටර්ෂාපතනයේ හිඟභාවය මත ම සිදුවන එකක් නොවන බවයි. එය (ii) දුර්වල තත්ත්වයේ පවතින වාරිමාර්ග යටිතල ව්‍යුහය තුළින් හා (iii) ගවයින් හා වල් අලි මගින් සිදු කරන හෝග විනාශය නිසාත් ඇතිවන පීඩාකාරී බවක් ලෙස හැඳින්විය හැකිය. දුර්වල තත්ත්වයේ පවතින වාරි යටිතල ව්‍යුහයන්, වැව් පුනරුත්ථාපනය කිරීමේ ව්‍යාපෘති සඳහා ගොවි නියෝජිතයින් මගින් කරනු ලබන බොහොමයක් ඉල්ලීම් හා පෙත්සම් සඳහා පෙළඹවීමක් ඇති කරයි.

පස්වන පරිච්ඡේදය තුළින්, ගොවි සංවිධාන මෙහෙයවීම තුළ, ආයතනමය වශයෙන් හා නිලධාරීන්ගේ කාර්යභාරය පිළිබඳ හැඳින්වීමක් කෙරේ. එහි ආරම්භය යටත් විජිත සමය පිළිබඳ හැඳින්වීමකින් හා නිදහසෙන් පසු සිදුකළ යම් යම් අදාළ වෙනස්කම් ගැන, එනම් වත්මන් ආයතනික ව්‍යුහයට බලපෑ හා දැනටත් අඛණ්ඩව කරගෙන යාමට අවශ්‍ය නීත්‍යානුකූල ආයතනික පසුබිම පිළිබඳ කෙටි විස්තරයකින් ද සමන්විතවේ. ඒ තුළින් පෙන්වන්නේ නිදහස ලැබීමෙන් පසු ගොවිතැන් හා වාරිමාර්ග සම්බන්ධයෙන් වූ වගකීම් තුළ, පහළ මට්ටමේ පරිපාලනය තුළ සිදුවූ වෙනස්කම් පිළිබඳවයි. එනම් ගොවි සංවිධානවල දිගුකාලීන පැවැත්මක් සඳහා

ඒවා කුමන ආකාරයේ වෙනස්කම්වලට භාජනය කළේ ද යන්න එමගින් පෙන්නුම් කරයි.

තව ද අදහෝචිත් හා සුළු ගොවීන්ගේ ජීවනෝපාය ඉලක්ක කරගනිමින්, රජය විසින් සෘජුවම මැදිහත්වී දියත් කළ වැඩසටහන් කීපයක් පිළිබඳව ද විස්තර ඉදිරිපත් කර තිබේ.

රජයේ මෙම වැඩසටහන්වලින් ඇතිවූ තත්ත්වයන් පිළිබඳව හයවන පරිච්ඡේදය අවසානයට සඳහන් කර ඇති අතර, කේවල අධ්‍යයන ප්‍රදේශය තුළ හිතකර අන්දමින් බලපෑම් ඇතිකළ කරුණු කීපයක් පිළිබඳව පමණක් විස්තර ඉදිරිපත් කර තිබේ. මෙම වැඩසටහන් තුළින් වැඩි වශයෙන් ම ප්‍රතිලාභ අත්කර ගන්නේ, මුදල් අතින් දුප්කරතා ඇති පවුල්වලට වඩා, මුදල් අතිරික්තයක් තිබූ පවුල් බව කිවයුතු වේ. 1970 ගණන් වලදී හඳුන්වා දුන් වැඩිදියුණු කළ බීජ භාවිතය හා ට්‍රැක්ටර් භාවිතය නිසා ගොවීන්ගේ මුදල්මය තත්ත්වයන් තුළ වෙනසක් ඇතිවූ බව නොරහසකි. මෙසේ අස්වැන්න සැලකිය යුතු අන්දමින් වැඩිවීම කෘෂිකර්මාන්තය තුළ ගොවීන්ගේ ආයෝජනය වැඩිවීමට ද හේතු විය. එපමණක් නොව වගා කන්නයක් ආරම්භයේ දී ණය ගැනීම කෙරෙහි ගොවීන් තුළ වූ ඉල්ලුම ද වැඩි විය. මෙතුළින් ගොවීන් තුළ වූ මූල්‍යමය අගතිහතාවල අපේක්ෂිත අඩුවීමකට වඩා ඔවුන් තුළ ණයගැති භාවයෙන් දිගින් දිගටම පැවතීම හේතුකොටගෙන, ශ්‍රමය සඳහාත්, රුකියා හා අනෙකුත් ආදායම් ඉපයීමේ මාර්ග කෙරේ ඔවුන් තුළ වූ උනන්දුව, වී වගාව හා අනෙකුත් ක්ෂේත්‍ර හෝග සඳහා ඔවුන් තුළ වූ උනන්දුව හා සමාන කොට සැලකීමේ ප්‍රවණතාවයක් දක්නට ලැබේ.

හයවන පරිච්ඡේදය තුළින් අධ්‍යයන ප්‍රදේශයේ ගොවීන් විසින් තම ජීවිතය ගැටගසා ගැනීම සඳහා භාවිතා කරන උපක්‍රම, වී වගාව තුළින් ලැබෙන අවිනිශ්චිත ආදායම් ඉපයීම තුළ හා සෘතුමය

වශයෙන් ඇති කරන පීඩාවන්ට අනුකූලව; මේ ක්‍රමෝපායන් කෙසේ අවබෝධ කර දිය යුතු ද යන ප්‍රශ්නය කෙරේ අවධානය යොමු කර තිබේ. එක් උපක්‍රමයක් වන්නේ අවකාශීය වශයෙන් විවිධාංගීකරණයට ලක්කළ ගොවිතැනයි. මිශ්‍ර හෝග වගාවන්, එනම් යැපීම සඳහා වූ හෝග හා මුදල් හෝග වශයෙන් සෑම වාර්ෂිකම, හේන්වල හා ගොඩ ඉඩම් හා ගෙවතු වල වගා කිරීමයි.

වි වගාව පංගු වශයෙන් බෙදා කිරීම (මුදල් හෝගයක් මෙන්ම යැපීම් හෝගයක් ලෙස), වගා කාලසටහන් සැලසුමේ දී හා ක්‍රියාත්මක කිරීමේ දී කිසියම් පහසුකම් සලසයි.

හත්වන පරිච්ඡේදය මගින් විස්තර කරන්නේ, ගොවීන් අතර පවතින මෙම සහයෝගය, නීති විරෝධී ජල පරිහරණය හා ගොවීන් හිතූමනාපයට කටයුතු කිරීම වලක්වාලන නීතිරීති සම්පාදනය සඳහා පමණක් උපයෝගී කර නොගත් එකක් බවයි. මූලික වශයෙන් මෙවන් සහයෝගයක් ඔවුන් තුළ දක්නට ඇත්තේ, අතීතයේ සිට ම ඔවුන් තුළ වූ බෙදා හදාගෙන වැඩ කිරීමේ පළපුරුද්ද නිසාවෙනි. සාමූහිකව ඔවුන් තුළ වූ බැඳීම් හා සහයෝගීව කටයුතු කිරීම තුළින් බැඳීම් සාර්ථක ඵල නෙලා ඇති බවට ඔවුන්ගේ අතීතය දෙස බැලූවිට පෙන්නුම් කරන කරුණකි.

එසේ ම මෙම පරිච්ඡේදය තුළින් හුවා දක්වන තවත් කරුණක් නම්, ගොවීන් තුළ මෙම සහයෝගය හා නීතිරීති සම්බන්ධ දක්වන එකඟතාවය, බලාපොරොත්තු වූ තරමට ම ගැටළු සහගත තත්ත්වයක් මතු නොකළ නමුත්, එය අනපේක්ෂිත ගැටළු කිහිපයකට මග පාදන බවයි. මූලින් ම කිව යුත්තේ, ඉදහිට සිදුවන ජලය සොරා ගැනීම හෝ ගොවීන් කිහිපදෙනෙකු විසින් හිතු මනාපයට වගා කිරීම නිසා මතුවන ආරවුල් වලට වඩා, වැඩි ආරවුල් තත්ත්වයක්, වගා කාලසටහනට පෙර ආරම්භ කරන බිම් සැකසීම් කටයුතු තුළින් මතුකරන බවයි. තව ද සමහර ගම්වල

සිටින ගොවීන් හා ගොවි නියෝජිතයින් විසින් කරනු ලබන නීති විරෝධී මත්පැන් නිෂ්පාදනය හා අලෙවිය හේතු කොටගෙන, ගොවීන් තුළ මත්පැන්වලට දැඩි ඇබ්බැහිවීමක් දක්වන අතර, පැහැදිලිව එය ගොවි සංවිධානවල ක්‍රියාකාරීත්වයට ද බලපායි.

ගොවි නියෝජිතයින් හරියාකාරව තම වගකීම් ඉටු නොකිරීම තුළ හා ඔවුන්ගේ අවංකභාවය තුළ හා අදහස් තුළ අවිශ්වාසයක් පැවතීම, අනෙකුත් ගොවීන් තුළ පොද්ගලිකව ගොවි සංවිධානය කෙරේ ඔවුන් තුළ පවතින බැඳීම් අඩු කිරීමට හේතුවේ. එනම් ගොවි සංවිධාන තුළ ඔවුන්ගේ ක්‍රියාකාරී සහභාගිත්වය හා රැස්වීම්වලට පැමිණීම හා නීතිරීති සමඟ එකඟවීම යනාදී කරුණු ඔවුන් විසින් නොසලකා හැරීමට එය පාදක වී ඇත. අවසන් මෙහි දී සිදුවන්නේ මේ ක්‍රමෝපාය එක්කෝ ගොවි සංවිධාන විසුරුවා හැරීමට හෝ නැවතත් පෙර සඳහන් කළ පරිදිම, අවිශ්වාසී හා තම වගකීම් හරියාකාරව ඉටු නොකරන පිරිසක්, ගොවීන්ගේ අප්‍රසාදය මධ්‍යයේ, ගොවි නියෝජිතයින් ලෙස පත්කර ගැනීමයි.

- මේ තත්ත්වය කරුණු කීපයක සංයෝගයක් තුළින් හටගනී; එනම්,
- (i) පුනරුත්ථාපන කටයුතු අංග සම්පූර්ණව හා හොඳ තත්ත්වයකින් යුතුව සිදු නොකිරීම හේතුකොටගෙන, පුනරුත්ථාපන ව්‍යාපෘතිය තුළ මුදල් අක්‍රමිකතා සිදු වී යැයි සැක සිතීම.
 - (ii) ගොවි නියෝජිතයින්ගේ දුර්වල හා අකාර්යක්ෂම මෙහෙයුම් කටයුතු
 - (iii) ගොවි නියෝජිතයින් හා ඔවුන්ගේ ඥාතීන් නීති විරෝධී මත්පැන් නිෂ්පාදනයේ නිරතවීම නිසා, ඒ තුළින් හටගත් බහුලව කෙරෙන මත්පැන් පානය නිසා සාමාජීය පරිසරයට සිදුවන තර්ජන හා එහි ප්‍රතිඵලයක් ලෙසින් සහයෝගයට හා නීතිරීති වලට එකඟවීම, සම්බන්ධ විවිධ වූ ආකල්ප මතුවීම.

(iv) ප්‍රතිලාභ ලැබීම සඳහා ගොවීන් තුළ පිල් බෙදීමක් හා හැලහැප්පීම් මතුවීම. මේ තුළින් එක් පිලක ක්‍රියාකාරකම් අනෙක් පිල් සාමාජිකයින්ගේ හෝග විනාශයකට බලපෑම.

කෙසේ නමුත් ගොවි සංවිධානය තුළ තීරණ ගැනීමේ දී එහි ක්‍රියාවලිය තුළින් ගොවීන්ට ද මේ සඳහා බලපෑම් ඇති කිරීමට හා ඔවුන්ගේ අදහස් දැක්වීමට ඉඩ ප්‍රස්ථා සලසා දුන්න ද, බොහෝවිට ගොවීන් විසින් එම අවස්ථාව උපරිම ලෙස ප්‍රයෝජනයට නොගනී.

මේ නිසා අටවන පරිච්ඡේදය තුළින් බලාපෙරොත්තු වන්නේ, නොලියවුණ නීතිරීති විධි මගින් හා සමාජය ආර්ථික සබඳතා මගින් සහභාගිත්වය සඳහා ඇති විකල්ප මාර්ග ලෙස මෙය කුමන ආකාරයෙන් බලපැවැත්වේ ද යන්නය.

එයින් විස්තර කරන්නේ ගොවි සංවිධාන පිහිටුවීම තුළ ම, සහභාගිත්වය නියතවශයෙන් ම සිදු කිරීම සඳහා, එය ප්‍රමාණවත් නොවූයේ මන්ද, යන ගැටළුව පිළිබඳවයි.

ශක්තිමත් පාලක - අනුගාමික සබඳතා අභිමුඛයෙහි, බොහෝ ගොවීන් එකම ආකාරයෙන් සිතිමට හා ඔවුන්ගේ අදහස්වලට එකඟවීමේ නැඹුරුවක්, හා යටහත් පහත් බවක් දක්වන ස්වරූපයක් ඇති කරයි. විශේෂයෙන් ම ගොවි නියෝජිතයින් විසින් කරනු ලබන නීති විරෝධී මන්පැන් අලෙවිය හා දේශපාලන වාසි උපක්‍රමශීලීව යොදා ගැනීම තුළින් මෙසේ අනුගාමිකයින් තම ග්‍රහණයට හසුකර ගැනීමට ඔවුන් සමත් වේ. අනුගාමිකයින් දක්වන යටහත් පහත් බව ප්‍රදේශයේ සිටින යමක් කමක් ඇති ප්‍රභූ සාමාජිකයින් විසින් එය තමන්ගේ ම වාසියට හරවා ගනී. විශේෂයෙන් ම වැව් පුනරුත්ථාපන ව්‍යාපෘති සම්බන්ධ තීරණ ගැනීමේ දී ඒවා තමන්ගේ පෞද්ගලික වාසියටත් - යහපත

උදෙසාත් යොදා ගැනීම සඳහා එම පුද්ගලයින් විසින් මේ අවස්ථාව උපයෝගී කර ගනී.

ගොවි සංවිධාන රැස්වීම්තුල දී රජයේ නිලධාරීන් ඉදිරියෙහි ඇති වගකීම් නම්, විවාදයට තුඩු දෙන ගැටළු මතුවන අවස්ථාවන්හි දී හා වගා කාලසටහන හා ජලය බෙදාදීම ඉක්මවා ඊට පිටින් කටයුතු කරන අවස්ථාවල දී මෙම ක්‍රමෝපායේ ඇති වැදගත්කම පෙන්වාදීමයි. නීත්‍යානුකූල ක්‍රියාමාර්ග ගැනීමට ඇති බොහෝ අවස්ථාවන්, මූල්‍යමය, ආයතනික හා දේශපාලන බාධාකිරීම් තුළින් වළක්වාලනු ලබයි. මෙසේ කිරීමට හේතු නම්, ජාතික මට්ටමේ තීරණ ගැනීමේ දී, නීති පද්ධතිය තුළ පවතින රහස්‍යභාවයේ අඩුපාඩුව හා විනිවිද ස්වභාවයේ පවතින අඩුපාඩුව මීට බලපෑමයි. එම නිසා බොහෝවිට ගොවීන් මීට පිටින් ඇති අවස්ථාවන්ගේ පිළිසරණ පතයි. රජයේ නිලධාරීන්ගෙන් හා ඉහළ මට්ටමේ පරිපාලනය තුළින් හෝ, එසේත් නැත්නම් දේශපාලනඥයන්ගේ හෝ ව්‍යාපෘතිය භාර නිලධාරීන්ගෙන් මේ සඳහා ඔවුන් පිළිසරණක් බලාපොරොත්තු වේ.

නවවන පරිච්ඡේදය තුළින් විස්තර කරන්නේ ගොවි සංවිධාන තුළ පවතින දේශපාලනමය වාතාවරණය පිළිබඳව හා දේශපාලන මැදිහත්වීම් තුළින් ගොවීන් බලාපොරොත්තුවන ප්‍රයෝජන පසු පස ලුහුබැඳීමේ ස්වභාවය පිළිබඳවයි. දේශපාලනමය වශයෙන් අනුග්‍රහය දක්වන පද්ධතිය කරුණු කීපයක් වටා හැඩගැසී තිබේ. එනම්, ගොවීන්ගේ මූල්‍යමය දුෂ්කරතා වටා හා වැඩි පුනරුත්ථාපනය වෙනුවෙන් කෙරෙන ඉල්ලීම්, වගා ලිං සඳහා වන ආධාර මත හා රැකියා, ණය හා වෙනත් ආදායම් ඉපයීමේ මාර්ග වටා එය හැඩ ගැසී තිබේ. මේවාට දේශපාලනඥයින් දක්වන අනුග්‍රහය තුළින් ගොවීන් විසින් මැතිවරණයේ දී දක්වන සහයෝගය පිළිබඳව ඔවුන් බලාපොරොත්තු තබා ගනී.

අවසන් පරිච්ඡේදය එනම්, දහවන පරිච්ඡේදය තුළින් මෙම ක්‍රමෝපායන් දෙස නැවත හැරී බැලීමක් සිදු කිරීම හා ගොවි සංවිධාන ක්‍රියාවලිය තක්සේරු කිරීම සඳහා යොදාගත් ක්‍රමය පිළිබඳ විග්‍රහයක් කෙරේ. එතුළින් විස්තර කරන්නේ, ගොවීන්ගේ හා ගොවි නියෝජිතයින්ගේ ක්‍රියාකලාපය, තත්ත්වය හා ක්‍රමෝපාය වෙනත් කරුණු විෂයෙහි (එදිනෙදා කෙරෙන වාරි කළමනාකරණය හැර) කුමන ආකාරයෙන් වැදගත් කමක් දක්වන්නේ ද යන්න පිළිබඳවයි. වාරි කළමනාකරණය තුළ නීතිරීති සම්පාදනය, හැරුණු විට, අනෙකුත් ක්‍රියාකාරකම් ද ඒ හා සමානව වැදගත් කමක් දැක්විය යුතු බව පෙන්වුම් කෙරේ. වර්තමානයේ දී ජල කළමනාකරණය තුළ ඔවුන් භාවිතා කරන මේ ක්‍රමෝපායන් හා තාක්ෂණය අතීතය හා සසඳා බැලීමේ දී, සැලකිය යුතු වෙනසක් පෙන්වුම් නොකරන බව කිව යුතුය.

කේවල අධ්‍යයන ප්‍රදේශය තුළ පිහිටි ගොවි සංවිධානවල ක්‍රියාකාරීත්වය සංසන්දනය කිරීමේ දී පහත සඳහන් කරුණු හෙළිදරව් විය. එනම් - "සාර්ථක" ගොවි සංවිධානයක නිලධාරීන්, වාරිමාර්ග පද්ධතියක් වනාහි තම ජීවිතය ගැට ගසා ගැනීමට ඇති සම්පතක් සේ සලකනු ලැබූව ද, ගොවීන්ට අහිතකර ලෙස බලපෑම් ඇති කරන ගොවි සංවිධාන නියෝජිතයින් එය සලකනු ලබන්නේ, වාරි පද්ධතියක් යන්න, තම පාලනය සඳහා යොදා ගතහැකි දේශපාලනමය වස්තුවක් හැටියටයි. එවැනි ගම්මාන තුළ, විශේෂයෙන් ම ඉහළ මට්ටමින් සාමාජීය, ආර්ථික හා දේශපාලන බලය ඒකරාශී වූ ගොවි සංවිධාන තුළ බලය තහවුරු වන අතර, බහුතරයකට, අදහස් හුවමාරු සඳහා ඒ තුළ ඉඩ නොලැබේ.

මෙලෙස බලය ඒකරාශීවීම අතින් අඩු ප්‍රවණතාවයක් දක්වන ගොවි සංවිධාන තුළ පමණක්, සහභාගිත්වය හා අදහස් හුවමාරු කර ගනිමින් කටයුතු කිරීම සඳහා යම් ඉඩ කඩක් ඇති බවට සිතීමට පුළුවන.

Samenvatting

Dit proefschrift is gebaseerd op onderzoek in kleinschalige irrigatiesystemen in de droge klimaatzone van Sri Lanka, hetgeen uitgevoerd werd tussen 1997 en 2000 in Anuradhapura District. Anuradhapura District wordt gekenmerkt door een grote variatie in regenval, en het komt regelmatig voor dat er een ernstig tekort is aan water, soms enkele jaren achtereenvolgens. De voedsel- en inkomenszekerheid van de boerenbevolking wordt in ernstige mate bedreigd door deze droogtes. Deze studie richt zich dan ook op de strategieën van boeren in dit gebied om hiermee om te gaan, in het bijzonder op strategieën die hun voedsel- en inkomenszekerheid vergroten.

Bepaalde beleidsdocumenten uit de vroege jaren negentig weerspiegelen de verwachting dat kleine boeren substantiële vooruitgang zouden kunnen maken - van armoede naar toenemende welvaart - door de oprichting van boerenorganisaties en door middel van participatieve vormen van irrigatiebeheer. Dit bleek echter veel gecompliceerder te zijn dan voorzien, ook al werden er vele boerenorganisaties opgericht. Een groot deel van de problemen lijkt gerelateerd te zijn aan het strategisch gedrag van boeren, en aan de uitkomst van besluitvorming als gevolg hiervan. Daarom concentreert dit onderzoek zich op de vraag hoe boeren hun strategieën aanpassen in een veranderende institutionele context; en hoe het functioneren van boerenorganisaties begrepen kan worden in relatie tot deze strategieën en de uitkomst hiervan.

Het onderzoeksontwerp is gebaseerd op kwalitatief onderzoek en triangulatie, en combineert literatuurstudie met meervoudige case-studies in het veld. Zes boerenorganisaties en een traditioneel

irrigatie beheerssysteem zijn bestudeerd als onderdeel van deze studie, en dit omvatte een totaal van tien dorpen in Anuradhapura District. Het 'Sustainable Livelihood Framework' werd gebruikt om de strategieën van boeren te analyseren. Volgens dit raamwerk worden de strategieën van mensen om in hun levensonderhoud te voorzien bepaald door hun eigen prioriteiten, door de verschillende middelen die hen tot beschikking staan, door seizoensfluctuaties en gebrek aan voedsel- en inkomenszekerheid, terwijl hun opties bepaald worden door beleid, instituties en processen. Een van de uitgangspunten in dit onderzoek is dat het strategisch gedrag niet los gezien kan worden van sociale en politieke strijd hetgeen veelmeer omvat dan alleen irrigatie beheer op lokaal niveau.

Dit proefschrift is opgedeeld in tien hoofdstukken. In de eerste drie hoofdstukken komen de probleemdefiniëring, het conceptuele raamwerk, en de methodologie aan de orde. Het tweede deel, hoofdstukken vier en vijf, zijn meer beschrijvend en dienen als introductie voor latere hoofdstukken.

Hoofdstuk vier geeft een indruk van de case-studiegebieden, en richt zich op de vraag hoe technische kenmerken van de kleinschalige irrigatiesystemen en de agro-ecologische kenmerken het irrigatiebeheer beïnvloeden. Het laat zien dat de kwetsbaarheid van de boeren niet alleen bepaald wordt door (i) beperkte en onvoorspelbare regenval, maar ook door (ii) de slechte staat van de irrigatie-infrastructuur; en door (iii) gewasschade toegebracht door vee en olifanten in deze gebieden.

Hoofdstuk vijf heeft betrekking op de kenmerken van de institutionele en bureaucratische omgeving waarbinnen boerenorganisaties opereren. Dit hoofdstuk begint met een beschrijving van de koloniale setting en de relevante veranderingen

sinds onafhankelijkheid welke van invloed zijn geweest op de huidige institutionele structuren, gevolgd door een overzicht van de relevante wetgeving. Het laat zien hoe de verantwoordelijkheden voor landbouw en irrigatie bij de lagere overheden veranderd zijn sinds onafhankelijkheid, en plaatst de huidige aandacht voor boerenorganisaties in een langer-termijn perspectief. Daarnaast geeft het een overzicht van verscheidene overheidsprogramma's welke gericht waren op het verbeteren van de levensomstandigheden van en de kostwinning voor kleine boeren en pachters.

Aan het eind van hoofdstuk zes wordt gesteld dat slechts enkele van deze programma's een positief effect hadden op de landbouwcondities in de case studie gebieden. De meeste programma's kwamen ten goede aan huishoudens met financiële reserves, niet aan de meest kwetsbare huishoudens. De financiële positie van de boeren veranderde met de introductie van verbeterde zaadvariëteiten en met de introductie van tractoren in de zeventiger jaren. Hoewel deze innovaties de opbrengst aanzienlijk deed toenemen, stegen hiermee ook benodigde investeringen voor de landbouw, en de behoefte aan leningen aan het begin van elk landbouwseizoen. In tegenstelling tot de verwachte verminderde financiële kwetsbaarheid, nam de schuldenlast van boeren niet af. Vanwege de steeds terugkerende schuldenlast, werd toegang tot de arbeidsmarkt en andere bronnen van inkomensverwerving even belangrijk als de verbouw van rijst en andere gewassen.

Hoofdstuk zes richt zich met name op de strategieën van boeren om in hun levensonderhoud te voorzien, en stelt de vraag hoe deze strategieën begrepen kunnen worden in relatie tot de seizoensfluctuaties en de onbetrouwbaarheid van inkomensgeneratie door middel van alleen rijstbouw. Een van deze

strategieën die aan de orde komt, is de differentiatie en spreiding van landbouwgewassen, welke gebruikt worden voor eigen consumptie en welke verbouwd worden om deze te verkopen op de markt. Verschillende gewassen worden verbouwd in het bevoeiingsgebied van de stuwmeertjes, in de chena velden, in tuintjes bij de huizen, en in hoger gelegen gebieden aan de rand van het bevoeiingsgebied van de stuwmeertjes. Het feit dat de meeste boeren betrokken zijn bij rijstbouw en allen belang hebben bij een goede opbrengst, vergemakkelijkt de samenwerking in opstelling en uitvoering van een gezamenlijk schema voor het verbouwen van rijst.

Hoofdstuk zeven betoogt dat de samenwerking niet alleen gezocht moet worden in formele regels, welke gericht zijn op het voorkomen van free-rider behaviour (het 'meeliften' zonder een bijdrage te willen leveren) en het illegaal onttrekken van water aan het irrigatiesysteem. De samenwerking onder boeren is gebaseerd op een lange traditie, op een besef van gemeenschappelijke belangen, en de ervaring dat zulke samenwerking productief was in het verleden. Hoewel de samenwerking en de gehoorzaamheid met betrekking tot regels minder problematisch bleek te zijn dan verwacht, werden enkele andere problemen aangetroffen. Allereerst werd duidelijk dat zeer vroege bewerking van het land meer conflict veroorzaakt dan het incidenteel meeliftersgedrag door een aantal boeren, of dan het af en toe stelen van water. Een andere opmerkelijke bevinding is dat de betrokkenheid van boeren en hun vertegenwoordigers in de produktie en verkoop van sterke drank, evenals de consumptie van alcohol onder boeren in enkele van de dorpen, het functioneren van de boerenorganisaties sterk beïnvloedt. Een gebrek aan vertrouwen in de capaciteiten, de intenties en de integriteit van hun vertegenwoordigers vermindert

de bereidheid van boeren om actief deel te nemen, om de vergaderingen bij te wonen, en om zich aan de regels te houden.

Hoofdstuk zeven laat zien dat strategieën die zich richten op het tijdelijk ontbinden van boerenorganisaties, of die zich richten op de vervanging van boerenleiders, vaak te maken hebben met een veroordeling van bepaald gedrag of met een gebrek aan vertrouwen in de capaciteit en integriteit van deze boerenvertegenwoordigers. Het tijdelijk ontbinden van boerenorganisaties, of de vervanging van boerenleiders, wordt teweeg gebracht door een aantal factoren: (i) het vermoeden van financiële onregelmatigheden in relatie tot verbetering van de irrigatie-infrastructuur, en een gebrekkige uitvoering van werkzaamheden; (ii) slechte uitvoering of geen uitvoering van operationele taken; (iii) betrokkenheid van boerenleiders, of hun kennissen, vrienden dan wel familie bij de productie van sterke drank, of de grootschalige consumptie van drank door boeren; en (iv) een belangenstrijd tussen twee groepen, waarbij het gedrag van een van de groepen resulteert in aanzienlijke gewasschade voor de andere groep.

Hoewel de procedures voor besluitvorming binnen de boerenorganisatie verschillende mogelijkheden bieden aan boeren om besluitvorming te beïnvloeden, worden deze mogelijkheden niet altijd benut. Hoofdstuk acht houdt zich daarom bezig met de vraag hoe de opties voor participatie beïnvloed worden door ongeschreven regels, normen en door sociaal-economische verhoudingen. Het laat zien waarom de oprichting van boerenorganisaties op zichzelf niet voldoende garantie biedt voor de realisatie van participatie.

In de aanwezigheid van sterke patroon-cliënt verhoudingen, is te zien dat veel boeren instemmen met bepaalde besluiten en

stilzwijgend goedkeuring verlenen aan besluiten die soms in hun nadeel zijn. Deze passiviteit en stilzwijgende instemming is met name te vinden in die dorpen waar boerenleiders (of hun kennissen, vrienden of familieleden) betrokken zijn bij de produktie en verkoop van drank, en waar de vertegenwoordigers actief gesteund worden door bepaalde politici. De passiviteit en stilzwijgende instemming wordt effectief aangewend door leden van de lokale elite om de uitkomst van besluitvorming met betrekking tot rehabilitatieprojecten te manipuleren, en om deze projecten te gebruiken voor persoonlijk gewin.

De inbreng en aanwezigheid van overheidsambtenaren bij vergaderingen van de boerenorganisatie blijkt van strategisch belang te zijn als het gaat om controversiële zaken, die verder reiken dan het schema voor de verbouw van rijst en de waterverdeling. De mogelijkheden voor boeren om juridische steun te zoeken zijn beperkt. Ze worden gehinderd door financiële, institutionele en politieke barrières; door de ondoorzichtigheid van besluitvorming op nationaal niveau; en door het gebrek aan vertrouwen in het juridische systeem. Om die reden zoeken boeren liever steun bij overheidsambtenaren, bij hoger geplaatste ambtenaren, projectmedewerkers en politici, dan dat ze ervoor kiezen om iets aan te vechten via een rechtbank.

Hoofdstuk negen richt zich op de kenmerken van de politieke omgeving waarbinnen boeren en boerenorganisaties opereren, en de strategieën die door hen gebruikt worden om hun doeleinden te bereiken door middel van politieke bemoeienissen. Het laat zien hoe politieke patronage gebruik maakt van de financiële kwetsbaarheid van boeren, en hoe politici zich moeite getroosten om te voldoen aan verzoeken om verbetering van de lokale infrastructuur, om subsidies voor het bouwen van putten voor

landbouwkundig gebruik, om banen, leningen en andere manieren van inkomstenverwerving. Politieke patronage en de verdeling van middelen via politieke lijnen blijken instrumenteel in het creëren van electorale steun.

Het laatste hoofdstuk, hoofdstuk tien, reflecteert op de strategieën van boeren, en op de methode die gebruikt werd om het functioneren van boerenorganisaties te beoordelen. Dit hoofdstuk benadrukt dat, voor de beoordeling van het functioneren van de boerenorganisaties, de rol, positie en strategieën van boeren en boerenvertegenwoordigers op andere terreinen dan irrigatiebeheer minstens zo belangrijk zijn als het ontwerp en de regels van het irrigatiebeheer.

Een vergelijking van het functioneren van boerenorganisaties tussen de casestudie gebieden laat zien dat de vertegenwoordigers van ‘succesvolle’ boerenorganisaties het irrigatiesysteem benaderen als middelen die beheerd en georganiseerd moeten worden. De vertegenwoordigers van boerenorganisaties die veel kritiek uitlokken en weerstand ondervinden benaderen het irrigatiesysteem daarentegen meer als een bron van sociale, economische en politieke macht. In dorpen met een sterke concentratie van sociale, economische en politieke macht, is de boerenorganisatie niet meer dan een platform waarin bestaande machtsverhoudingen geprojecteerd zijn en zichzelf versterken. Alleen in die dorpen waar de concentratie van macht veel minder duidelijk geconcentreerd is, heeft de boerenorganisatie de potentie om te veranderen in een platform waarin onderhandeld kan worden en waarin participatie daadwerkelijk plaatsvindt.