

Working Paper No. 15

FAIR AND UNFAIR

A Study into the ***Bethma*** System in Two
Sri Lankan Village Irrigation Systems

by

Ijsbrand H. de Jong

INTERNATIONAL IRRIGATION MANAGEMENT INSTITUTE

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Sri Lanka Field Operations

INTERNATIONAL IRRIGATION MANAGEMENT INSTITUTE

P.O. Box 2075
Colombo
Sri Lanka

The author Ijsbrand H. de Jong holds an M.Sc. from Agricultural University, Wageningen, The Netherlands, and is presently a Ph.D. candidate at the same University. He spent about six months at IIMI to develop a collaborative research project between Agricultural University, Wageningen, and IIMI on the theme, "law as a strategic resource."

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Ijsbrand H. de Jong

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FAIR AND UNFAIR

INTRODUCTION

Account of the Present Study

Throughout the Dry Zone of Sri Lanka, tank irrigation systems make up the predominant type of irrigation. Being highly dependent on runoff of drainage water from their catchment area, and hence on rainfall, they enable farmers who depend on those tanks to grow irrigated rice. As rainfall in the Dry Zone is mainly concentrated in maha season (September to January), and only a small amount of rain falls in yala season (March to July), maha is much more important in terms of production and income.

The government of Sri Lanka has, especially in combination with tank rehabilitation projects such as the Village Irrigation Rehabilitation Program (VIRP), embarked on a water-management program that involves the saving of water during maha for use during yala. An early start of the maha season, a rotational water supply and the introduction of modern rice varieties and other field crops form part of this water-management program. Still, yala cultivation seems to be the exception in the vast majority of the tanks in the Dry Zone, especially in the 1989 yala.

There are two reasons for devoting attention to yala season and the bethma¹ cultivation, the way in which farmers cultivate during yala.

First, although yala cultivation might not have a de facto importance at this moment, it offers attractive possibilities for increased production levels. When water-saving techniques in maha start to become accepted cultivation practices, more water will become available during yala season, and production levels will increase. That this is a profitable strategy, has recently been shown in relation to the VIRP by Herath et al. (1989:133), who concluded that the highest economic benefit cost ratios (computed for 36 tanks) were obtained for the cases where yala cultivation was made possible after rehabilitation.

Second, bethma has attracted the attention of many scholars and it is frequently claimed to be a reflection of the norms of equity that are said to prevail within village irrigation systems. A study into bethma therefore is also scientifically motivated. The answers to the research questions may contribute to a better understanding of village irrigation, on the basis of which improved intervention programs can be designed.

This report tries to answer two basic clusters of questions. The first is related to the way in which bethma is practiced. What are the rules that govern it, how do farmers make use of them and what is the role of the government, are questions that will be asked. This will be done in the

¹This can be generally described as a traditional custom in small, communal tanks of Sri Lanka, whereby water supplies which are not adequate for the full command area are allocated to part of the area, and all farmers are given proportional land shares in the irrigated part. Editor.

sections under BETHMA: RULES AND REALITY (p. 5). A literature survey forms part of this. The second cluster of questions is related to the supposedly harmonious character of bethma. How come that indeed conflicts happen less frequently during bethma, why do farmers practice bethma and what are their perceptions, are some of the questions. These will be addressed in the sections under THE SIGNIFICANCE OF BETHMA (p. 19). Finally, in the last section (p. 25), some conclusions and recommendations will be formulated.

Research Site

The research site was located in Anuradhapura District, North Central Province. Two tanks were selected, Ulpota Wewa and Henukiriya, the only criterion being whether bethma was practiced. The two neighboring tanks are located at the leeward of Ritigalla, one of the highest peaks in Sri Lanka, ensuring those two and all other surrounding tanks with a more than average water supply. In this respect, the tanks cannot said to be representative of the majority of the tanks in the Dry Zone, as in most of them no yala cultivation was possible in 1989.

Ulpota Wewa has a command area of 188 acres (76 hectares [ha]), cultivated by 50 households. The total number of people is 214, and all people living in Ulpota Wewa are Muslims. The tank had been rehabilitated under the VIRP in 1980. Bethma is practiced in the poropalawa, which is badu idam, land leased from the government. Forty-six farmers practice bethma on 20 acres (8.1 ha) (for an elaboration on the acreage see section under Akkara Kala [p. 16]).

Contrary to Ulpota Wewa, in Henukiriya, tank and village do not coincide. The village itself is divided into two more or less separate parts, from each of which farmers participated in bethma. In fact, there are five tanks belonging to the villagers, of which one is a private tank (the others being, according to the farmers, "government tanks"). The main tank, Maha Wewa, is presently being rehabilitated and maha cultivation had not been possible last season, but farmers still practiced bethma under this tank. The reason for the rehabilitation had more to do with the bad condition of the ditches than with the condition of the tank bund, and bethma was practiced in a part that could easily be irrigated out of the only ditch (out of three) that could be used. Bethma was practiced in the tail-end part of the purana wela (old rice field). The command area of Maha Wewa is 121 acres (49 ha), and 583 people in 157 households are living in Henukiriya, all Sinhalese. Bethma is practiced on 50 acres (20.2 ha) and 72 farmers participate. In the following, Henukiriya will be used when referring to the village, and Maha Wewa will be used when referring to the tank. Although the fact that five different tanks are used might have had an influence on the way farmers practiced bethma, the issue of the interrelations of the five tanks and the way in which they are used was not part of the research question and was therefore not studied separately.

Methodology

The two tanks were visited almost daily during a period of two months in July and August 1989. During this period, most of the farmers and both Vel

Vidanes (farmer leaders) were interviewed, some of them twice, on a regular basis. Also, relevant government officers (Cultivation Officers, a Technical Assistant, a Divisional Officer, and a Grama Sevaka [administrative officer at village level]) were interviewed and visits were made to neighboring tanks and to the nearby Mahaweli area.

The study focused specifically on the legal aspects of bethma, especially on what has commonly come to be known as customary law. On the other hand, attention was paid to the interference of the government, and the rules that were (tried to be) implemented. A detailed in-depth study was made of the ways in which those rules had an influence on the behavior of farmers and government officers, and of the ways in which these people made use of and oriented themselves to those rules.

Based on recent developments within the discipline of legal anthropology (see von Benda Beckmann, 1983, 1984), the study was undertaken on the following premises:

- * social actors are conceptualized as drawing on variable sets of normative resources, depending on the perceptions they have of those resources and their relevance to the specific interaction settings they find themselves in;
- * legal structures are not only "constraining" in that they limit the behavioral alternatives of actors, but also "enabling" in that they offer new options to actors;
- * tank irrigation systems cannot be studied independently from external factors such as the state and the economy. They can be better understood by conceiving the rules according to which the day-to-day irrigation takes place as originating from the daily interaction between farmers and officials in social fields; and
- * a design of a tank irrigation system is both implicitly and explicitly based on, and a reflection of, normative resources dealing with water management, maintenance, and the way in which the communication between farmers and field staff takes place, i.e., they say something about the way in which the system should be used.

BETHMA: RULES AND REALITY

Before embarking on the description of how bethma is practiced in both tanks, a basic understanding of it is necessary. The description that follows is based on the literature but does not pretend to be of general applicability to all village tanks, nor does this report pretend to do so. It is felt useful, however, to describe the way bethma is practiced against the background of the literature.

Literature

In general, the principle of bethma involves the cultivation of a limited area when water is scarce. If in the beginning of yala season there is not enough water in the tank to cultivate the entire command area, farmers demarcate a smaller area, the size of which depends on how much water is actually available in the tank. Demarcating the area is a first step. Bethma is especially designed to give all farmers an opportunity to cultivate, and not just the lucky few who happen to have land close to the tank. The way in which the selection of the bethma area enables all farmers to cultivate is different and can be used as a criterion to distinguish among the various types of bethma.

Leach (1961:169) describes a type of bethma in which the layout of the fields in the command area enables farmers to practice bethma. The command area of Pul Eliya is divided into three zones, in all of which all farmers have a share of land. Noncultivation of the one or two tail-end zones in times of water scarcity simply is bethma. This type of bethma thus fully depends on the layout of the command area and not on the fact that "individual Singhalese (*sic*) farmers get along so well" (ibid. 1961:171). The same type of bethma is also described by Uphoff et al. (1981:13) and by Gooneratne and Madduma Bandara (1989:23). Leach refers to another type of bethma as described by Farmer (1957), but suggests that this type, involving the redistribution of land whereby top-end farmers give land to tail-end farmers, is a government invention (and not, as Wilkins-Wells [1989:17] suggests, in all types of bethma). Leach's opinion is based on his assumption that farmers would never be prepared voluntarily to give land to other farmers. Still, this type of bethma seems to have become the paradigmatical type of bethma in the literature. Gunasekera (1981), Abeyratne and Perera (1986), Ekanayake and Groenfeldt (1987), Murray-Rust and Rao (1987), Begum (1987), and Perera (1986) all describe bethma as the redistribution of land among the farmers, whereby top-end farmers indeed give land voluntarily to tail-end farmers, though some authors have detected some kinds of payments to land-giving farmers by land-receiving farmers (e.g., Begum [1987:94], Perera [1986:11], Murray-Rust and Rao [1987:17]) or a kind of land redistribution in which the land received depends on the land owned in the purana wela (Begum [1987:20], Gunasekera [1981:10]).

A third type of bethma is the cultivation of a different part of the command area in consecutive years, thus ensuring production to all farmers at least once in a few seasons. Finally, Madduma Bandara (1989:23) refers to

iravilla, during which the fields between ditch and drain are only cultivated in part, thus dividing the water among more farmers, on a smaller area per farmer.

On the above basis, general features of bethma can be summarized as:

- * the cultivation of only part of the command area when water is not sufficient to cultivate the entire area;
- * the concentration of the cultivated land in one part, to better control the water and, if located at the top end, diminish water losses through seepage and percolation; and
- * the access to water by both top enders and tail enders.

Bethma thus is a solution for top- and tail-end conflicts, although bethma itself can also generate top- and tail-end conflicts (an example of which will be given in the section under Normative Aspects of Fencing [p. 14]). Given the much better fit between land and amount of water, these conflicts can be expected to be less severe than without bethma. There is evidence that bethma especially served the purpose of giving the farmers at least their seed for the next season. As the landowner was to provide these inputs, tenants, leasers and mortgagors could be excluded (Perera [1987:192], Abeyratne and Perera [1986:80]). Finally, every time bethma is referred to, at the same time the fact that it is hardly practiced anymore is noted. Even in 1899, Ievers found that "[bethma] is never practiced today" (Wilkins-Wells [1989:17]).

Especially the paradigmatical case of bethma, in which top enders give land to tail enders, has attracted the attention of many scholars and it has tempted many of them to describe not only yala season, but also agriculture, even life in general in purana (old) village tanks as traditional, harmonious and egalitarian (see Gunasekera [1981:10], Uphoff et al. [1981:13], and Chambers [1982:34]). The World Bank (1981:11) writes: "bethma is an impressive way of ensuring equity."

In this report, no such opinion will be embraced a priori. Given the fact that conflicts indeed seem to happen less frequently in yala, under the section Maha and Yala (p. 20), the question will be answered: "why?."

Bethma in Detail

In this section, attention will be paid to an in-depth analysis of bethma. Reference will be made to the rules according to which bethma is practiced and to the way in which farmers orient themselves to those rules.

At the beginning of the yala season, the Cultivation Officer, the Technical Assistant and the Vel Vidane come together to plan for that particular season. In yala, the decision boils down to a choice between no cultivation or bethma cultivation, in combination with a specific crop. This decision is taken primarily on the basis of the water left in the tank after maha season, although in the studied tanks some extra runoff can be expected due to the excellent catchment area. Also, they convene a kanna meeting, in which their proposal and a time schedule for the various activities will be discussed by the farmers.

In 1989 yala, enough water was left in the tank and the proposal was bethma cultivation; the crop to be cultivated was chilies. Especially in Ulpota Wewa, bethma has been practiced on a regular basis since 1978. In Maha Wewa, bethma has only been practiced two or three times since 1978.

Before that time, some farmers remember having practiced bethma once somewhere in the fifties.

Based on the crop to be grown and the soil characteristics of the command area, the part of the command area where bethma is to be practiced is selected. In both tanks, however, this choice was somewhat restricted. In Ulpota Wewa, some farmers were still cultivating in the purana wela at the time the others wanted to start bethma. Expecting a good price for chilies in early yala season, they did not want to wait until those still cultivating in the purana wela had harvested. In fact, some of the farmers complained about the unsuitability of the present selected area, claiming that part of the purana wela is more suitable. In Maha Wewa, the ditches commanding the top end of the purana wela were totally silted and could hardly even be traced in the field anymore. Only one ditch, serving the tail-end part of the purana wela, could be used. Thick bushes covered the top-end part, suggesting that it had not been cultivated for at least several years. Last year, they had even buried the remains of an old respected man in the purana wela on his request, in his own field. Farmers, however, did not seem to bother about these problems much. In fact, their reasoning was rather circular: asked why the purana wela was not cultivated, they said that the ditches were silted; asked why the ditches were silted, they answered that it was because the purana wela had not been used for a long time. Farmers in Maha Wewa gave another reason for selecting that particular part: due to seepage through the tank bund, the fields immediately downstream of the bund were too waterlogged to allow for chili cultivation.

It can thus be concluded that part of the bethma-principle, the diminution of conveyance losses due to the transport of water, was not attained because of various reasons.

In both villages, the kanna meeting could not be held due to the prevailing security situation at that time. Various informal meetings between the farmers were held. Especially in Ulpota Wewa, the mosque served as a weekly focal point, and in fact, every Friday a kanna meeting could be said to be held. According to the Vel Vidane of Ulpota Wewa these meetings could not be called kanna meetings as no government officers were present.

Once the part of the command area, the acreage, and the crop were selected, the land was redistributed among the farmers, i.e., the permanent property boundaries that apply in maha were abolished for the season and farmers were assigned land.

In Ulpota Wewa, this happened primarily on the basis of landownership. Part of a plot in the bethma area was given by the Vel Vidane to the original landowners and the other part to their close relatives. Also, the so-called troublemakers were tried to be located in the tail end of the area: people who came late to show their interest in that season's bethma, and thus had infrequent contacts with the other farmers, were considered to be troublemakers and were given land in the tail end. Before actually dividing the land, land of uninterested or outside farmers within the bethma area was appropriated by the mosque and leased.

In Maha Wewa, the land was redistributed in a much more rigorous way, on the basis of a list of farmers prepared by the Vel Vidane. Hardly any farmer indeed cultivated on his own land. The sequence of this list will be discussed in the section under Normative Aspects of Fencing.

Apart from a technical rearrangement of the fields, bethma consists of a specific set of rules that is implemented as well. First of all, landless

are to be included in bethma. So, whereas they can only cultivate in maha via ande or lease, during bethma they receive land free. Farmers summarized this rule as "all farmers are entitled to bethma." Also, outsiders, i.e., people who do not live in that particular village are excluded (for a more elaborate definition of outsiders, see section under Outsiders [p. 8]). Finally, land is to be distributed among the farmers (i.e., one farmer per household) in equal portions. The amount of land cultivated during bethma thus does not depend on family size or landownership.

Although bethma is supposedly an ancient practice, the origin of these rules is quite recent. The Cultivation Officer was not too sure whether farmers already divided the land equally when he started working in that area in 1978, but immediately added that the equal distribution of land was easier for him, and a redistribution of land according to family size or original landownership in the purana wela was highly unfair in his eyes. Still, it was not an official government policy. In fact, a high-level government officer, when confronted with this norm of equity, was of the opinion that an equal distribution of land was highly unfair. This norm of equity only applies to bethma, and most certainly not to maha.

Also, the inclusion of landless was an invention of the Cultivation Officer. He had insisted to the Vel Vidanes that all farmers be entitled to bethma. The origin of the norm of exclusion of outsiders is not so clear. Farmers endorsed it by saying that outsiders, living far away and not being able to come to their fields daily, neglected their duties, did not fence, did not watch at night and usually only came to sow and to harvest. On the other hand, outsiders themselves denied the existence of this rule, claiming that if they wanted to cultivate, they could do so. At that time, they did not cultivate because, they said, they did not want to cultivate. As some farmers from Ulpota Wewa and Henukiriya own land in other tanks, the question is whether they themselves cultivate (as outsiders) in those other tanks. The Vel Vidane of Ulpota Wewa said that he did not cultivate his land in other tanks on the condition that outsiders did not come to cultivate in Ulpota Wewa. As with the equal distribution of land, the exclusion of outsiders only applied to yala, and was in fact totally inconceivable in maha.

Observance of Rules

Having described these rules, nothing has been said about their observance by the farmers. This will be done in the following sections. Outsiders and equal land will be the subject of the two sub-sections, whereas landless will be dealt with in section under Chilies (p. 12).

Outsiders. Although the spirit of the norm excluding outsiders applies to all outsiders alike, in practice two categories of outsiders can be discerned: those who own land under the particular tank and those who do not. Those who own land but live outside the village have gained access to land by a combination of inheritance and marriage: he/she or his/her spouse lives in his/her ancestral village, but each has inherited. Those who do not own land (as opposed to those who do) have no legitimate basis to claim a right to cultivation, and could, in principle, be anybody. Although farmers did not discern between the two categories, such a distinction is functional in terms

of the legitimacy of their claims, and the legitimacy of their exclusion. Problems might be expected in the case of landowners who live outside the village, and not in the case of non-landowning outsiders. As said before, outsiders were excluded because insiders claimed they did not attend to the cultivation as insiders did. However true the objections of the insiders might be, three remarks can be made.

First, outsiders are not excluded during maha season, although the same objections could be brought against them: they live far away, do not come to their fields daily and hence, do not attend to their duties as they should. Yet, outsiders are not excluded at that time. Second, for outsiders themselves it is a nuisance to walk daily to their remote fields. Outsiders therefore develop various strategies not to cultivate but still make use of their land. They lease it, give it on an *ande* basis, have their sons attend those outside fields or make arrangements with their relatives in that particular village. This holds true for both maha and yala seasons. A real outsider, that is, somebody who really walks 5 or 10 kilometers (km) to his fields is hardly ever found, as there is ample opportunity to pursue one of the alternative strategies. During *bethma*, although some of the outsiders indeed did not cultivate, others had made some or a combination of the above arrangements. So, of the seven farmers living in nearby *Bamulagama*, only one did not cultivate.

Third, although no outsiders were cultivating in *Maha Wewa*, six outsiders were cultivating in *Ulpota Wewa*. They had gained access to land in various ways. The first and most important one is leasing from the mosque. At the beginning of yala, some land is assigned to the mosque for that season and is leased for Rs 1000 per acre (0.41 ha), to be given to the mosque. In total four non-landowning outsiders (and only outsiders) had leased land from the mosque, one of them even three acres (1.21 ha), although villagers were only entitled to a quarter (1/4) acre (0.1 ha). Also, one of them was not married, in fact the only unmarried man who cultivated independently in *Ulpota Wewa*. So, in exchange for money (or in the case of mosque-land, which happens to be the same), three norms were violated: the equal distribution of land, the exclusion of outsiders, and the non-access to land to young, unmarried farmers. Still, the outsiders all claimed to be in fact the best farmers in *Ulpota Wewa*, and this might very well be true. Having paid Rs 1000 per acre (0.41 ha) (a lot of money as compared to the Rs 700 per acre (0.41 ha) in the nearby *Mahaweli* system) they can be expected to have a very good incentive not to neglect their crop. But also, the objections of the insiders against outsiders played a role in their behavior. They all were keenly aware of the norm to exclude outsiders and all stressed their special relationships to the farmers of *Ulpota Wewa* and the mutual trust that existed between them. Not the fact that they had paid money (which anybody could, in their eyes), but especially their good relations had enabled them to cultivate and their behaving well would ensure them prior rights to cultivation next season.

The other two outsiders who were cultivating in *Ulpota Wewa* were the Cultivation Officer and a woman from *Henukiriya*. The Cultivation Officer, a Muslim himself, went along very well with the Muslim villagers of *Ulpota Wewa*. He frequently visited the mosque (had a skull-cap in his pocket every time he visited the field) and, although being responsible for six villages (including *Henukiriya*), he had his office in *Ulpota Wewa*. He frequently complained about *Henukiriya* and about the attitude of the farmers, saying

that they were more interested in illicit liquor than in proper cultivation. Though owning land in Ulpota Wewa and his sister being married to a man there, he lived about 5 km away, making him an outsider in any sense and liable to the complaints of the farmers about outsiders. Still, he cultivated and had not leased land from the mosque.

The woman from Henukiriya did not own land in Ulpota Wewa in a proper sense, but one of the Ulpota Wewa farmers had mortgaged his land to her. On that basis, she had claimed being entitled to bethma to the Vel Vidane, who had granted her claim. Moreover, she lived in the western part of Henukiriya, not far away from Ulpota Wewa. Though being an outsider in a social sense, she was more insider than some Ulpota Wewa insiders in the sense of distance. The mortgagor had informed her and had attended the kanna meeting (that was held in the mosque that season) on her behalf, but he himself had cultivated also.

Clearly, the rule of the exclusion of outsiders is not as rigid as the reasons given by the farmers for its existence might suggest. Also, the rule cannot be said to exist in a general way, both spatially and in time. Non-cultivating outsiders denied the existence of the rule, saying they were just not interested in cultivating, and clearly, the rule does not apply to maha.

Equal Amount of Land. Except for those who had leased from the mosque, all farmers had been given 1/4 acre (0.1 ha), regardless of the size of their household, regardless of the amount of land they own, as was frequently stressed by both Vel Vidanes and the farmers.

Although the initial issuing of land might indeed have been in equal plots of 1/4 acre (0.1 ha), soon afterwards various kinds of rearrangements occurred. It is especially because of these rearrangements that bethma, as simple as it might look on paper, requires a good organization of the farmers. Measured at the end of the season, these rearrangements had resulted in differences close to 300 percent in both tanks. In the table (p. 11), the areas of nine randomly selected fields in each tank are given. From this table, it can also be concluded that 1/4 acre (0.1 ha) in Ulpota Wewa is somewhat bigger than 1/4 acre (0.1 ha) in Maha Wewa (see section under Akkara Kala [p. 16]).

Three kinds of rearrangements can be discerned. First, farmers can and do ask the Vel Vidane for more land soon after he has divided the land. The Vel Vidane is not unwilling to honor these requests, but still maintains the validity of the equality norm. What happens in practice is that the Vel Vidane only gives more land to the first (more or less) 10 farmers who ask him. After that, when he thinks that everybody is "equal enough," he refuses to give more land. In this strategy, he is helped by the fence. The order is: first fencing, then giving more land. When there is no more land within the fenced area, to give more land has become an impossibility, as cultivating outside the fence is subject to strong sanctions. An elaboration on the normative aspects of fencing is given in the section under that name (p. 14).

Table. Areas of fields in square meters.

	Ulpota Wewa	Maha Wewa
1	968	574
2	1692	615
3	1977	517
4	1178	510
5	1282	395
6	1516	621
7	770	806
8	838	746
9	1779	534

Second, some farmers had put their name on the list, but renounced the right to cultivate later on. This land, lying fallow, was taken and cultivated by others. These transactions happen by and large outside the consultation of the Vel Vidane and are based on bilateral agreements. This possibility opened doors to some farmers for acquiring more land. In at least one case in Maha Wewa, a farmer had put the name of his mother on the list, without any intention to cultivate. This gave him 1/2 acre (0.2 ha) instead of the usual 1/4 acre (0.1 ha).

Third, as expressed by the rule to include landless in bethma, "all farmers" were entitled to cultivate. However, some farmers had managed to put another category of "all farmers" on the list -- their unmarried sons, members of their households, during maha, only helping their father and not cultivating on their own. This strategy only occurred in Maha Wewa, but a similar strategy is reported by Leach (1961:51). When the British colonial government issued the badu idam to landless farmers, especially sons of big landowners, who had not yet inherited, had gained access to this land. The fact that it didn't happen in Ulpota Wewa might perhaps be attributed to the fact that the status of unmarried, "beardless" sons in this Muslim village is somewhat lower. "If they ask, we would consider their request," one farmer in Ulpota Wewa said, precisely giving the difference between farmers and sons, and between claiming and having to ask. No unmarried sons were cultivating in Ulpota Wewa, except for the one who leased from the mosque. Still, this strategy did not seem to happen on a large scale in Maha Wewa. Only a few cases could be detected, but unmarried sons also managed to gain access to land in the other way mentioned above. Via bilateral arrangements with not-interested farmers in cultivating, they had gained access to land,

the youngest being 15 years old. A common characteristic of those young "farmers" was their high motivation and an excellent crop. As one put it "some farmers only come to sow and to harvest, and blame their low yield on a lack of water." Bethma in this sense acted as a kind of kindergarten, offering young farmers the opportunity to experiment and to gain experience.

Pure household equality, thus, is a situation that in fact might never have existed, or maybe only at the start of the season. Requesting or taking more land, making use of the possibilities offered by the concept "all farmers," resulted in large differences at the end of the season. This is not to say, however, that the norm of equality did not exist at all. Indeed, the Vel Vidanes of both tanks have refused more land to some farmers, claiming that land is to be cultivated equally. Moreover, in taking more land bilaterally, some farmers expected to come into conflict with other farmers, who could easily complain to the Cultivation Officer. As a consequence of the de facto inequality in land, some farmers could legitimately claim that distribution according to landownership was the norm, and some others could equally legitimately claim that distribution according to household size was the norm. As a consequence of the initial equal distribution of land, some other farmers could also legitimately claim that an equal distribution was the norm.

Chilies

Apart from implementing bethma and introducing the above rules in 1978, the government also promoted the cultivation of non-rice crops, particularly chilies. As chilies use less water than rice, a larger area in total and consequently a larger plot per farmer can be cultivated. Cultivation of chilies has been, at least in the two studied tanks, a quite successful strategy. Chilies were indeed grown by all participating farmers and they were pleased with the additional income it generated.

Cultivation of chilies has some disadvantages. The initial costs are much higher than for rice, cultivation practices are fairly unknown and the control of pests and plagues requires additional knowledge. Since 1978, farmers have grown chilies and have gained experience with it. The high initial costs still posed some problems for farmers.

The simultaneous promotion of chilies and the introduction of a new set of rules served to give a technical legitimation to these new rules, but also served to legitimate their circumvention. This will be explained below.

The specific soil and water requirements of chilies contributed to the choice of the bethma area in both Ulpota Wewa and Maha Wewa. A lighter textured soil and less water are needed for a successful crop. The top end of the purana wela in which seepage and percolation from the tank result in too much water and a too heavily textured soil, is not suitable for chilies. At the same time, however, the non-cultivation of the purana wela made it easier for the farmers to pursue their strategy to exclude outsiders. "Had the purana wela been cultivated, all those from outside would have come to cultivate," some farmers knew. In Maha Wewa, though the tail-end part of the purana wela was cultivated under bethma, outsiders did not show up. In the case of Ulpota Wewa, it might therefore be assumed that the choice of the area had also to do with the wish to exclude outsiders, especially because

not all farmers were equally satisfied with the suitability of the poropaluwa for chilies.

The fact that chili cultivation requires a considerable investment plays an important role in both the inclusion of landless and the evasion of the equality norm. First, landless are hardly ever in a position to grow chilies at all, and if they actually do so, they are not in a position to cultivate a large amount of land. As they are not able to get a bank loan, they have to resort to their own limited funds or privately borrowed money. Inclusion of landless therefore did not alter too much for other cultivators (especially their amount of land), as the landless farmers only cultivated a small amount of land. Landed farmers did not have to sacrifice large amounts of land to enable those landless farmers to cultivate and their inclusion will therefore not have met with serious objections. What applies to landless also applies to other farmers: not all are equally in a position to cultivate even the received 1/4 acre (0.1 ha). Hence, it does not make too much sense for poor farmers to ask for or take more land, which gives the wealthier farmers enough room to take into production additional land.

For the farmers, the above reasons resulted in a distinction between rice-bethma and chili-bethma, and it is concerning this matter that opinions diverge among the farmers. According to the old Vel Vidane of Maha Wewa, the present way of practicing bethma was only temporary, for as long as they practiced bethma with chilies. According to the present Vel Vidane, there was no difference between rice-bethma and chili-bethma. In both types of bethma, outsiders are to be excluded, landless are to be included and land is to be divided in an equal way. It is noted that in fact rice-bethma, practiced in the purana wela as conditions are favorable there, will attract outsiders, will enable landless to cultivate because of lower initial costs and, because of these lower costs, will enable the farmers more equally to cultivate the received amount of land. It is because of this that it is not difficult to predict that problems will arise if, in an exceptionally wet year, rice-bethma will be practiced. Insiders might continue to exclude outsiders, who are especially interested in rice cultivation in the purana wela; landless might claim land, based on their experience in the past years; less wealthy farmers might claim a better enforcement of the equality norm whereas wealthier farmers might try to reimpose the redistribution of land according to landownership in the purana wela or according to family size, as there will be no land to take from farmers who cannot bear the initial costs. It is therefore recommended not to reimplement rice-bethma but to resort to chili-bethma, even if water is abundant, as conflicts are likely to hamper an efficient production. Moreover, the present cultivation seems to fit nicely within the government policy to grow other field crops.

Also, if the government is really interested in an equal distribution of land (which remains to be seen, given the opposite opinions among officials) and in giving bethma land to landless farmers, better credit facilities should be made available to landless farmers. At the moment, landless farmers foster false hopes in their right to participate in bethma.

What applies to chili-bethma and rice-bethma, applies to bethma in general also. Farmers had different opinions on what bethma actually involved, and which rules were important. One of the landless farmers, for example, said that bethma meant that "all farmers are equal;" one of the landed farmers, however, characterized bethma as the system in which the landowners give land to the landless; another farmer denied the existence of

the equality norm, claiming that more land could be cultivated by farmers who were in a position to do so. Defining bethma according to either one of those descriptions therefore necessarily implies choosing either one of the definitions given by the farmers, or choosing one of the different groups that existed among the farmers. Defining, for example, the exclusion of outsiders as a characteristic of bethma, means taking sides with the insiders; defining the distribution of land in equal amounts as applying to bethma, means taking sides with certain government officers and against other officers. An answer to the question "what is bethma?," therefore necessarily implies legitimizing the claims of one of the different groups (farmers and government officers) that are formed around the issue of bethma. Answering the question "what is fair?," also means describing the group of people for whom this is fair.

Normative Aspects of Fencing

As described in the section under Bethma in Detail, the sequence of the farmers in the bethma area of Ulpota Wewa was according to original landownership and kinship. The sequence of the farmers in the bethma area of Maha Wewa was the subject of much unclarity among the farmers behind which a political conflict played a role. This will be described in the present section. The story starts, however, with a fence.

At the beginning of the 1989 yala season, one of the farmers, Mr. S.M.A. Banda, had started to cultivate in the upper top-end part of the purana wela, close to the tank bund. He had started before all other farmers, and, understandably, the other farmers were not amused. In fact, they complained to the Vel Vidane, who went to the Cultivation Officer. Having all this pressure on him, Mr. Banda stopped cultivating after having prepared his land. In the meantime, the other farmers had started cultivation as well and he could only start again in the tail-end part of the bethma area.

In both cases, both in his top-end and tail-end field, he had fenced his field independently. To understand this, we have to look into the reasons for fencing. Fencing happens in both seasons. The cultivated area is to be fenced by farmers, everyone fencing the side of his field bordering the outside of the cultivated area. As the division of land is according to strips (also in maha), and as each strip, in general is owned by one farmer, the upper-end and lower-end strip owners have to fence considerably more than other farmers. Various methods exist to compensate for this extra investment, like the right to cultivate extra land next to the fence. Strong sanctions exist against offenders who do not participate in fencing. The Vel Vidane of Maha Wewa told the story that he once built part of the fence himself and presented the bill to the offender. Backed by the Cultivation Officer, the offender paid and problems stopped occurring.

Farmers fence to prevent cattle and wild animals from entering the cultivated area and grazing the crop (although wild elephants frequently found their way into the fields). Fencing thus is in the interest of all the farmers and neglect by one means damage to all. At the start and at the end of the season farmers often neglect fencing, because after they have harvested or before they have sown, they are less interested in the fence. A timely and simultaneous start by all farmers thus ensures that all remain interested until all the crop has been harvested. This simultaneous start

furthermore prevents the persistent occurrence of pests and plagues and makes water distribution easier, especially when rotation is applied. If rice is grown, a simultaneous start decreases percolation losses, because the total area is inundated. For the same reason, also the variety (short- or long-term) or kind of the crop grown is agreed upon during the kanna meeting.

Keeping out the cattle adequately and hence fencing thus requires a simultaneous start of the cultivation by all farmers. Somebody who starts late needs to fence by himself, without compensation, and as this is costly and labor-intensive, farmers would think twice before starting late or early. Hence, fencing (or the costs involved in fencing independently) is an effective sanction against free-riding. It restricts people's behavior in that it compels farmers to start on time. On the other hand, fencing independently in principle offers the possibility of free-riding. If you are prepared to bear the costs and trouble of building your own fence, you do not need to bother about the time schedule of the other farmers anymore, nor do you have to stick to the selected crop or variety. Still, you need to be sure to some extent of the consent of the other farmers. Barbed wire is easily cut, and a herd of hungry cattle will, "unfortunately," most probably find its way to your crop.

When Mr. Banda started to cultivate early in the top end, outside the bethma area, he therefore had very good reasons to fence, as he had good reasons to expect other farmers to disagree with him. When he was convinced of the better chances of survival of his crop inside the bethma area, however, he rebuilt the fence, although there was a communal fence already. Obviously, he did not feel too sure about the restored relations with his fellow villagers and was not sure whether cattle would still remain outside his field, because he fenced immediately after he restarted, when the other farmers had not yet harvested.

On the background, a more fundamental conflict played a role. Mr. Banda was the candidate for the post of Vel Vidane during elections two years earlier but failed to win. The two candidates, and the two factions that supported them, were divided according to national political fracture-lines. In the eyes of Mr. Banda's supporters, as well as in those of some outsiders, Mr. Banda would make a much better Vel Vidane. He had once won an award for being the best farmer and owned land in both top and tail end, which made him automatically interested in both ends. The present Vel Vidane, however, owns only a small portion of land in the purana wela, and is because of this (according to his opponents) a jealous man.

The political reality also had an influence on the sequence of the list of farmers for that particular yala season, or better, on the perception of this sequence by Mr. Banda's supporters. That the Vel Vidane had managed to locate all his political friends in the top end and his political enemies in the tail end, was their firm opinion. The Vel Vidane, on the other hand, claimed that the sequence of the list was according to the order of signing of the list; his eleventh position on this same list contradicted the claim.

On both versions, some doubt can be cast. Also in the tail end, some of the political friends of the Vel Vidane appeared to be cultivating and the sequence of the list indeed seemed to be according to the order of signing the names by the farmers. The only thing for which the Vel Vidane could be reproached was that he had put up a notice only in one section of the village. Farmers living on the other side were not aware of this and only came to know of it when others had already signed. Things being as they

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were, during a field visit, the Vel Vidane could easily identify the top-end cultivators, but found it increasingly difficult to do so, walking towards the tail end.

From this case, some conclusions can be drawn. First, fencing and the risk that not fencing will result in the loss of the crop have a clear normative dimension, by which free-riding is limited, but also by which free-riding is made possible for whoever wants to take the trouble of fencing independently. Clearly, not everybody is equally in a position to fence independently, and hence not everybody has an equal access to the opportunities that this norm offers. Second, as was suggested earlier, the case gives some clues for assuming that it is not only soil and water that determine the choice of the bethma area. For, if we assume that Mr. Banda did not start to cultivate on the worst part of the command area and that it is even quite likely that he in fact started on the best part, then there is a contradiction between the reasons to which farmers attributed the selection of the bethma area and Mr. Banda's selection. Waterlogging and a too heavily textured soil were said to make chili cultivation impossible, but still it did not prevent Mr. Banda from selecting that same area. As suggested in section under Chilies (p. 12), we might find additional clues in looking into the status of purana wela land. In the section under Recommendations (p. 27), further research is recommended into the rights and duties derived from the purana wela as opposed to other fields.

Some Misunderstandings

Akkara Kala. As stated in the introduction, 20 acres (8.1 ha) were cultivated in Ulpota Wewa and 50 acres (20.2 ha) in Maha Wewa. There are some reasons to seriously doubt the accuracy of this measure. In the following, this will be explained.

In both tanks in the 1989 season, as well as in former seasons, and also in some surrounding tanks, farmers said they cultivate "akkara kala", i.e., 1/4 acre (0.1 ha). All tanks being different, with a different catchment area, a different command area, a different number of farmers and also with different rainfall-runoff-storage characteristics, the cultivation of 1/4 acre (0.1 ha) in a number of those tanks in consecutive years would be highly coincidental, given the way bethma is organized. For, if the division of land indeed follows the description of the farmers (i.e., looking at the water level, demarcating an area, counting the farmers, and dividing the land equally among them) then in most of the tanks a different amount of land would have to be cultivated.

Three remarks can be made. First, although during bethma permanent property boundaries are abolished for the yala season, physical boundaries cannot be changed. Field bunds cannot be replaced or removed, ditches and drains cannot be realigned. This means that the bethma area is only demarcated in a very rough way, taking into account the physical layout and the number of farmers. The actual decision making is therefore somewhere in between the two extremes of "looking at the water level, demarcating the bethma area, counting the farmers, dividing the land" and "counting the farmers, multiplying the number with a certain amount of land, demarcating the bethma area". An area of 1/4 acre (0.1 ha) is in that case only a rough estimate of the actually cultivated area. Especially the nonalterable

character of the physical layout served to legitimate the fact that not all farmers cultivated an equal amount of land. These differences sometimes amounted close to 300 percent.

Second, to the farmers the measure of "akkara kala" includes everything from about 1/8 acre (0.05 ha) to less than 1/2 acre (0.2 ha), just because in the bethma context it doesn't make any sense to talk about the area in square meters. Moreover, most of the farmers in village tanks only have a very vague idea of how much land one acre amounts to, as evidenced also by Leach (1961:172), and by the fact that in both Ulpota Wewa and Maha Wewa the division of the total amount of land (20 (8.1 ha) and 50 acres (20.2 ha), respectively) by the number of participating farmers (46 and 72 farmers, respectively) does in neither of the cases result in 1/4 acre (0.1 ha) plots. Comparison with the 2.5 (1.01 ha) acres plots in the nearby Mahaweli system H is in many cases the only reference.² Old farmers sometimes use "bushel-bushel" division of land instead of 1/4 acre (0.1 ha), although 1 bushel does not necessarily equal 1/4 acre (0.1 ha).

Third, the word "akkara" stems from the twenties, when the British colonial government issued acre plots to farmers in private title. Although the size of these plots was measured in acres, the field in which those acre plots were issued was thereafter called "akkara wela", the acre-field. Apart from referring to a size of 1 acre, akkara thus also refers to the name of a field in a way much similar to the meaning of the word "akker" in Dutch. Also, "kala" not only means "1/4", but also refers to a strip of fields, also called isara. When saying akkara kala, farmers might therefore just say nothing more than "a strip of land" when answering the question how much land they own or cultivate.

Summarizing so far, we can safely say that akkara kala is a very rough measure of 1/4 acre (0.1 ha) and should not be used for official purposes, as seems to have happened when the government introduced the acre measure, and as sometimes seems to happen when the acre measure is used in scientific reports. Better results might be obtained by asking a better question.

Purana Wela and Akkara Wela. Another misunderstanding is the importance of the difference between purana wela and akkara wela. Under village tanks, four categories of land can be distinguished (see Leach [1961:46-52], Abeyratne and Perera [1986:55]):

- 1) purana wela, the old field, inherited from "thaththage thaththa", from father's father for centuries. Attached to landownership in the purana wela are claims concerning being a proper villager. Without land in the purana wela, a farmer can hardly be taken serious and is not a villager in the same sense as purana wela landowners are.
- 2) akkara wela, the acre-field, issued by the British colonial government until 1935 and sold to farmers in acre plots. This

²This, however, is certainly not to say that farmers do not have an idea of the amount of land they own or cultivate, but only of this amount measured in acres.

policy came to an end in 1935 when the ideas about landlordism changed.

- 3) badu idam, crown leasehold, issued by the British colonial government in the thirties, after the acre policy. According to Leach (1961:51), especially the sons of big farmers who had not yet inherited and thus were indeed "landless", had managed to get access to this land.
- 4) encroachments, still happening as farmers take into production additional land. This land is not necessarily located in the tail-end part of the command area, nor are poor landless farmers necessarily the encroachers. Once in a while, the government grants the claims of the encroachers and issues title deeds.

Biased as irrigation scientists sometimes are for development and a historical dimension, the above categories make sense, as they enable a distinction along historical lines. Still, for the farmers, other categories are more relevant and influence their behavior. For the farmers, a distinction between government land and private land is much more relevant, and so it can happen that according to the farmers, akkara wela is the same as purana wela and that akkara wela is also inherited from "thaththage thaththa", father's father. Other reasons for the identification of purana wela and akkara wela are the facts that the same inheritance rules apply (as opposed to badu idam) and that, as a consequence, the landownership in the akkara wela is as dispersed as in the purana wela. The question, then, is whether akkara wela indeed involves the same rights, the same status and the same duties as purana wela land. An answer could not be established in the present study, but we should not be surprised if this is indeed the case. In any sense, if we are to explain the behavior of the farmers, then we should look for factors influencing that behavior. As artificial scientific categories are not necessarily recognized by the farmers, they cannot be the basis for some kind of decision-making process.

THE SIGNIFICANCE OF BETHMA

In this chapter, the question will be answered why farmers practice bethma. This will be done in the section under Maha and Yala (p. 20). At the same time, an answer will be attempted to the question why conflicts in yala indeed seem to happen less often and why the conflicts that happen are less severe than those in maha. Part of the reason for this will be attributed to the respective characteristics of yala and maha seasons; part, however, also to the special character of bethma. This will be done in the section under Other Reasons (p. 22). First, the perception of farmers on bethma land will be described.

Perception on Land

As bethma involves abolishing the permanent property boundaries during the bethma season, the question "what is the perception on the land cultivated during bethma?" can be asked. This will be done by comparing bethma with the one extreme of cultivating one's own land during maha season on the one hand, and with leasing of land on the other hand.

Although bethma may be practiced in many consecutive yala seasons (as in fact was done in Ulpota Wewa), this does not mean that the same farmer cultivates the same land every time bethma is being practiced. There does not exist something like "bethma-ownership of land" (as opposed to ownership in maha season), on the basis of which farmers can claim a specific piece of land.³ The number of farmers is not the same every year, the location of their field in top- or tail-end differs, and the part of the command area in which bethma is practiced is not always the same. The cultivation of land during bethma, therefore, essentially involves only one season. After that, the landowner cultivates it, or it is left fallow.

There have been frequent instances of exchange of bethma land. After having received land, farmers can change their share with others, so that they can cultivate their own land. Some of them even preferred to own land in the tail end over bethma land at the top end.

That land is not individually owned and only temporarily cultivated is reflected by the fact that a different opinion existed among the farmers about who has to remove the chili-stalks at the end of the season, just as is the case with the lease of land. Some farmers claim that the bethma cultivator has to remove the stalks, others say that releasing the cattle in the area after harvest and letting them graze the stubble is enough. In September, one month after harvest, no one had cared to remove the stalks. Although this suggests that the perception of bethma land might be the same as the farmers' perception on leased land, inside farmers do not pay for the land. Contrary to frequent reports of payments by land-receiving farmers to

³They can (and do), however, claim participation in bethma, i.e., they claim a certain amount of land.

cultivation of one or two zones happens more frequently, i.e., during yala, bethma is practiced more often. Bethma and normal cultivation (non-bethma) coincide in this case, and one could equally well say that farmers practice bethma in maha when the rains fail. Although since Leach's study things have changed and the area to be cultivated in maha is now decided upon before the tank is full, the same question applies, since such a decision is not likely to amuse those farmers who happen to own land outside the selected part only. The other type of bethma that should be recalled involves the cultivation of a different part of the command area in every yala season, thus giving all farmers access to cultivation at least once a season.

Now this last type of bethma is precisely what happened in Ulpota Wewa during the last three maha seasons. During all of those seasons, only part of the command area was cultivated, and during all those maha seasons, the purana wela happened to be part of that area. Also, the reason of the limited cultivation in all those years was attributed to a lack of water. As it happened in maha season, however, it could not properly be called bethma, and hence the rules that apply to bethma were not valid. Landless were to lease land from others if they wanted to cultivate, outsiders could not be excluded and land was not even redistributed among all farmers, let alone in an equal way.

One of the possible answers is that, as in Leach's days, all farmers own land, not in three zones of the purana wela, but in the purana wela, the akkara wela and the badu idam. Cultivating, for example, only the purana wela would ensure all farmers a harvest. Yet, this is not the case. For example, of the forty-six farmers practicing bethma in Ulpota Wewa, twenty-nine do not own any land in the purana wela. Moreover, the question of why the bethma rules only apply to yala and not to maha would become only stronger in this case.

The answer is to be sought in the landownership of purana wela land. First of all, the literature gives ample evidence of the priority of the purana wela, so a confirmation of this priority in the case of bethma does not need to surprise us (see Leach [1961:47], Perera [1986:33], Abeyratne and Perera [1986:106]). In Ulpota Wewa, this is evidenced by the fact that the purana wela happened to be part of the cultivated area during the last three seasons. Second, the answers that were given by the farmers suggested this. Some said that landowners wouldn't allow bethma in maha, as they wanted to cultivate in a normal way. Some others said that the farmers indeed practiced bethma in maha, in that they cultivated a different part of the command area every other maha. The norms about equity, the landless, and outsiders, however, did not apply. In Maha Wewa, similar evidence could not be established due to the interruption of the maha cultivation there (section under Research Site [p. 2]). Also, the fact that farmers owned land under different tanks might have had an influence.

The foregoing makes especially clear what it means when we say that the purana wela has a prior importance to the farmers. Although the priority to water of the purana wela need not surprise us, the far-reaching consequences of this priority might. Because of the prior importance of the purana wela, farmers practice bethma. In the section under Chilies (p. 12), another suggestion for some consequences of the prior importance of the purana wela was given.

The foregoing further makes clear that bethma is better characterized by a set of rules than by "the type of cultivation that is practiced when water

is scarce," because the difference between maha season in Ulpota Wewa and bethma as the cultivation of a different part of the command area in every yala (thus between bethma and no-bethma) is exactly this set of rules, involving the equal distribution of land, the exclusion of outsiders and the inclusion of landless. The difference between bethma and no-bethma is not the cultivation of a limited amount of land in times of water scarcity. Bethma is better described by "giving those who did not (fully) cultivate during maha season because of lack of water, an opportunity to cultivate when water is scarce, but in yala season only, because in maha season the landowners in the purana wela want to cultivate."

Other Reasons

Deciding that farmers are more interested in maha and establishing the conclusion that therefore conflicts happen more often in maha season on the basis of the above evidence only, would be rather poor reasoning, and moreover not entirely true. Some other evidence can be given, as well as some specific characteristics of bethma because of which conflicts are less severe and less frequent during yala.

In the first place, the start of maha season coincides partly with chena cultivation (slash-and-burn). At the start of the rainy season, farmers clear their chena fields and start cultivating the rather profitable upland crops, in order to make full use of the available rainfall. Before these are harvested, the first irrigation starts and farmers are supposed to prepare their land and start the cultivation of rice. Neglect of fencing, grazing cattle and an untimely start of cultivation are frequent and endless sources of conflict. The higher importance of maha cultivation is further evidenced by the fact that farmers in Henukiriya turned to chena cultivation at the end of yala, leaving a considerable harvest of chilies to be picked.

Second, at the start of maha season farmers run out of money. For many farmers, maha season production means "all or nothing;" conflicts should be seen against that background.

Third, the early start of rice cultivation in maha season means that the decision how much of the command area is to be cultivated cannot be based on the amount of available water in the tank, but on the rain to be expected. Although some farmers claim to be able to predict the total rainfall on the basis of the first rains, the selected (size of the) area to be cultivated can be nothing more than a wild guess. During years in which this guess does not turn out well, water will be insufficient for the cultivated area and conflicts will be frequent and severe, especially in combination with the above reasons.

This last reason of why conflicts happen (much) more frequently during maha season, reveals also a specific characteristic of bethma, to which part of the reasons of less frequent occurrence of conflicts in yala can be attributed. The choice of the area is not based on the expected rainfall as in maha, but on the actually stored amount of water at the beginning of yala season. A much better fit of area and amount of water can thus be expected, especially in both tanks studied as they have excellent catchment areas and at least some runoff can be anticipated in yala.

Summarizing the above, we can attribute the fact that conflicts happen less frequently during bethma partly to the specific character of yala season, being less important than maha season. This means that not only are outsiders excluded, but also that outsiders let themselves be excluded, not only that landless are cultivating, but also that landless are allowed to cultivate. But partly, the less frequent occurrence of conflicts has to be attributed to the specific characteristic of bethma itself, because the area to be cultivated is decided upon on the basis of actual water and not on the expected amount. It is noted that the earlier start of cultivation during maha season, necessitating farmers to count on rainfall instead of on stored water, is a government policy in order to save water in maha for yala. Hence in the past, this character of bethma also applied to maha season. Supplementary to other literature on bethma, this study has shown that at least part of its harmonious character must be attributed to the specific character of yala as opposed to maha season, and to the accepted prior claim to water of purana wela landowners.

Still, bethma is special, in the sense that an answer to the question "would it surprise us when top-end farmers just cultivate in yala also, leaving the tail enders without harvest?" should be negative, as evidenced by an abundance of no-bethma cases in which this indeed happens. Bethma, therefore, should also be seen as a reflection of some sort of a legitimate claim on water by those who happened to be so unfortunate as not to cultivate during the much better and much more important maha season. Bethma is thus the expression of the equal right of all farmers to cultivate. A right, however, that cannot always be exercised in the much better maha season because some farmers are "more equal" than others.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Bethma is not the story of "the bad guys who take it all," as this is not the way farmers perceive it. It would not cost too much trouble to describe it in this way, though. The "bad guys," the purana wela landowners, deprive the "good guys," the other landowners, of their right to cultivate in maha; the cultivation of chilies implies that the "bad guys" take land from the "good guys;" the "bad guys" have a better access to the opportunities that the law offers them, whereas the "good guys" have to contend with the restrictions of the law. Farmers are aware of this, but legitimate it in various ways. To a lot of farmers, the difference between maha and yala indeed is a difference between day and night. The decision-making process in the beginning of the season serves as an explanation why bethma is practiced: the yala decisions are based on the actual amount of water, whereas the maha decisions are based on expectations.

Bethma is, however, the story of the implementation of a water-management practice and of the implementation of the rules that are (to be) invoked. Bethma is a typical example of a "modern" government intervention. Its implementation is legitimized by the fact that bethma is an ancient system, practiced by the farmers in the traditional purana villages. As bethma was not practiced anymore, reimplementation of this ancient practice is obvious and logical. In reviving it, the government can, in legal anthropological terms, be said to reproduce the ancient, traditional, customary rules of the farmers out of its own context. But the government did more. It changed the rules and implemented a new set of rules akin to the traditional bethma. As Abeyratne and Perera (1986:69) put it: "Now the practice of bethma has given a different meaning to suit the official programmes. Thus now the limited acreage in a difficult season is cultivated with other field crops - a new practice which goes against the traditional function of bethma of sharing water equitably among all farmers in a given season to cultivate paddy (*sic*).\" The fact is that bethma is an ancient practice applied in name only, and the government can equally well be said to have implemented an entirely new water-management practice.

The basic question that can be asked is whether interventions should build on established water-management practices or not. In the case of bethma, a new water-management practice that does not build on established norms was implemented fairly successfully, and we can even ask ourselves if a real copy of the ancient bethma could have been successfully implemented. The story of bethma therefore evidences that the success or failure of interventions does not necessarily depend on whether they derive their legitimacy from ancient, traditional, and customary rules. Whether the revival of ancient customs or, on the contrary, the implementation of entirely new practices is more successful is an empirical question, which cannot be answered *a priori*.

The story of bethma serves to illustrate some of the assumptions made in the section under Methodology (p. 2). The question "what is bethma?" cannot

be answered unambiguously, without legitimizing the claims of some farmers and some government officials at the expense of others. When a landless farmer says that bethma means that "all farmers are equal," he has very good reasons to claim this; when an outsider denies the existence of a rule to exclude outsiders, he might ground this on reality.

Also, the norms that have been implemented simultaneously with the re-implementation of bethma were changed by the Cultivation Officer and were later on widely circumvented by the farmers. The norm of equity that probably never has existed in village irrigation systems was, because of that, only endorsed in words. This is not to say, however, that the norms are not valid or do not exist. Both Vel Vidanes have issued land in equal portions and have refused land to farmers who asked more. It is to say that norms should not be thought of as determining behavior in a causal way. Norms are interpreted and re-interpreted, produced and re-produced in the interaction among farmers themselves, between farmers and government officers and among government officers themselves. Farmers are not only reproducing their own customary rules, but also, as was shown, the norms of equity, of the exclusion of outsiders and of the inclusion of insiders, that were brought in from outside. Law not only constrains the behavior of people, but also enables them to pursue new strategies and to choose new options. Some people, however, have a better access to the enabling side of the law and can make better use of the possibilities that "all farmers are entitled to bethma" offers; some others have to contend with the norm of equity.

Finally, there are some suggestions that the layout of the fields and the specific rights that are attributed to it had an influence on the selection of the bethma area. The strong claims that are associated with land use in the purana wela might have had a bearing on the situation in Ulpota Wewa, as it made it more easily possible to exclude outsiders. In Maha Wewa, the choice of Mr. Banda in the beginning of the season contrasted to the supposed unsuitability of the top-end part. In any sense, the prior rights to water in maha attributed to ownership of purana wela land, was the main reason for the existence of bethma. Whether purana wela includes akkara wela as well is proposed to be the subject of further research.

Some conclusions regarding policy issues were drawn. Given the different and opposed perceptions of the farmers on the rules that apply to either rice-bethma or chili-bethma, practicing bethma with rice in yala will most probably result in severe conflicts between outsiders and insiders, between landless and landed, and between big landowners and small landowners.

Also, if the government has really committed itself to giving the landless access to bethma land, then it should do more than only say so. Better credit facilities are needed in order to support this policy. It is noted that the endorsement of the "all farmers" norm by the landed, might have had to do with the fact that the landless hardly cultivated, or with the fact that it gave those landed better opportunities to cultivate more land. The implementation of this policy might therefore meet with some objections of landed farmers.

Some lessons about the organization of farmers can be learned. In both villages, farmers seem very well able to take care of the administrative procedures involved in bethma, with hardly any interference of government field officers. In fact, the only interference of the Cultivation Officer consisted of complicating matters: he insisted that the landless should be entitled to bethma. Furthermore, the mosque in Ulpota Wewa should be the

focal point for any matters involving an organized approach by farmers, just as the farmers did themselves.

Finally, if it is relevant to know reliable acreage figures (e.g., in the case whether an irrigation system is to be classified as minor or major), then these should be obtained by measuring, and not by asking the farmers.

Recommendations

The purana wela has a prior right to water as was already shown (Leach [1961:47], Perera [1987:33], and Abeyratne and Perera [1986:106]). This study has shown that the consequences of this priority can be far-reaching. Furthermore, it has suggested that the purana wela has a bearing on bethma in other ways as well. Outsiders were said to be more easily excluded from the purana wela; some farmers complained about the unsuitability of the selected area; and the behavior of Mr. Banda cannot be explained if indeed the top-end part of the purana wela is unsuitable for chilies. Also, for the farmers a difference between purana wela and akkara wela did not appear to exist. Whether this means that the akkara wela involves the same rights also (e.g., priority to water), is unclear.

Because of these questions, it is recommended to pay more research attention to landownership in the purana wela and the rights and privileges that are associated with it. Not the fact that the purana wela has a prior right to water, but the consequences of this right should be the subject of such a study, as they might have a strong bearing on present and future intervention programs.

As in all research, this study also suffered from lack of time. The study of the legal aspects of village irrigation systems needs more time in order to establish more conclusions, evidenced in a more convincing way than could be done in the present study. Still, legal aspects are hardly paid attention to, and if done, are often in a historical perspective, as if customary law is the law that the farmers reproduced in ancient times. Customary law is still produced and reproduced. It is felt that the study of "law in action" can contribute importantly to the understanding of village irrigation.

REFERENCES

- Abeyratne, S. and Perera, J. 1986. Change and continuity in village irrigation systems: A case study in the Moneragala District. Colombo: Agrarian Research and Training Institute. (Agrarian Research and Training Institute Research Study No. 75).
- Begum, S. 1987. Minor tank water management in the dry zone of Sri Lanka. ARTI.
- Benda-Beckmann, Franz von. 1983. Why law does not behave - critical and constructive reflections on the social scientific perception of the social significance of law. Paper presented to the Symposium on folk law and legal pluralism. Xlth International Congress of Anthropological and Ethnological Sciences, Vancouver, Canada.
- Benda-Beckmann, Franz von. 1984. Law out of context: A comment on the creation of traditional law discussion. J.A.L. 28 (Nos. 1 and 2): (pp.28-33).
- Chambers, R. 1982. Irrigation management: Ends, means and opportunities; In Pont, N., Productivity and Equity in Irrigation Systems. New Delhi, India, Ashish Publishing House.
- Ekanayake, R. and Groenfeldt, D. 1987. Organizational aspects of irrigation management at Dewahuwa Tank during yala 1986. (IIMI Working Paper No. 3).
- Farmer, B.H. 1957. Pioneer peasant colonization in Ceylon: A study in Asian agrarian problems. Greenwood Press Publishers.
- Gunasekera, W. 1981. The role of traditional water management in modern paddy cultivation in Sri Lanka. The United Nations University, SIT.
- Herath, H.M.G.; Sivayoganathan, C.; Pinnaduwa, S.; and Bogahawatte, C. 1989. Socioeconomic evaluation of the Village Irrigation Rehabilitation Project. University of Peradeniya, Faculty of Agriculture.
- Leach, E.R. 1961. Pul Eliya: A Village in Ceylon: A study of land tenure and kinship. London: Cambridge University Press.
- Madduma Bandara, C.M. 1989. Management of village irrigation in the dry zone of Sri Lanka. In Gooneratne, W. (ed.): Traditional Irrigation Systems in Asia. Nagoya. (Forthcoming).
- Murray-Rust, D.H. and Rao, P.S. 1987. Learning from rehabilitation projects: The Case of the Tank Irrigation Modernization Project of Sri Lanka. In ODI/IIMI Irrigation Management Network, 87/2b.

Perera, J. 1986. Research on village irrigation systems in Sri Lanka: A Review. In Groenfeldt, D.; Alwis J.; and Perera J.: Strategies for Improving Minor Irrigation Systems in Sri Lanka. IIMI. (pp. 3-12).

Perera, J. 1987. Researching village irrigation systems in Sri Lanka. In Public Intervention in Farmer-Managed Irrigation Systems. IIMI. (pp. 181-198).

Uphoff, N.T.; Wickramasinghe, M.L.; and Wijayaratna, C.M. 1981. "Optimum" participation in water management. ARTI/Cornell University. Unpublished. (37pp.)

Wilkins-Wells, J. 1989. Water management issues in Sri Lanka: Farmer Organization for Water Management.

World Bank. 1981. Staff appraisal report, Sri Lanka - Village Irrigation Rehabilitation Project.

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