
SECURING ACCESS TO THE SEA:

THE CREATION OF AN 'ARTIFICIAL COMMON PROPERTY RESOURCE'¹

Nathalie Steins²

Dept. of Rural Development Sociology, Wageningen Agricultural University, the Netherlands

ABSTRACT

A strategy for a group of people who fear that future access to a common resource is endangered, is to create an 'artificial common property' within this resource. The question is whether this strategy forms a sound basis for the sustainable management of this new property and, on its turn, the management of the larger resource.

In Connemara, Ireland, a group of fishermen felt that the expansion of finfish farms in the local bay resulted in a decreasing catch and an increased number of restricted areas. They initiated a shellfish farming co-operative under the guise of expanding the fishing season and providing the area with employment opportunities through revitalizing the bay's derelict oyster beds. Shareholders' rights on dredging permits are based on a yearly 'voluntary labour' obligation.

The establishment of this co-operative can be considered as a strategic action. Once the necessary licenses had been obtained and access to part of the sea had been secured many shareholders chucked it. More than two third of them have become free-riders. The necessary work at the oyster resource has been done through a government-sponsored social employment scheme. Shareholders' willingness to sustain the oyster resource has been influenced by (a) conflicting individual interests; (b) the (still) relatively unimportant position the co-op has in the community's socio-economic structure, aggravated by opportunity costs in other areas and the four years' waiting period between labour contributions and first uncertain rewards; (c) the institutionalised reluctance to sanction free-riders; (d) lack of back-up from social coercion mechanisms in community; and (e) external institutions prepared to support the co-op 'in the name of development', but whose well-intended interventions stimulated a reverse process.

The fishermen may have 'saved' their bay from the finfish farms, but the future of the revitalized oyster resource is uncertain..

Introduction

During the past decennium the search for sustainable use of the earth's natural resource base has become a central issue in development policies and academic literature. Sustainability becomes a key objective when land use leads to deterioration of a resource base and the continuity of human life becomes threatened (Röling, 1994). Researchers, policy makers, academics and extensionists have put their heads together to find solutions to the degeneration of the resource base. The position the common properties hold, has gained increased attention in this search.

In literature on common property resource management, there has been a shift from the thought that eventually all the commons will be subjected to Hardin's tragedy unless they are privatised or regulated by an external agency (Picardi *et al.*, 1976; Hardin, 1968), to the idea

¹ Paper for the 'Fifth Common Property Conference: Reinventing The Commons', organised by the International Association for the Study of Common Property, 24-28 May 1995, Bodo, Norway ('Best student paper competition').

² Nathalie Steins is a student at Wageningen Agricultural University, the Netherlands. In 1994 she completed a M.Sc.-thesis in Extension Science. In August 1995, she will receive her M.Sc. degree in Rural Development Sociology.

that local communities are capable agents in the management of their commons. Many studies on CPRM have reported successes on the commons (e.g. McKean, 1992; Wade, 1988). The 're-invention of the commons', the academic exploration for understanding the role local institutions can play in equitable and sustainable management of their common property resource (IASCP, 1995), can be seen in the light of a changing positivist perspective into a more constructivist approach. The latter focuses on interaction and agreement as problem solving mechanisms rather than instrumental control (Röling, 1995: pers. comm.). In this respect sustainability as an aspiration is defined as a social construct that gains salience when all stakeholders in a resource come to appreciate deterioration of the resource as a problem (*ibid.*).

In this paper I will examine the role of a local institution in the management of a common pool resource, the sea. I will show that in their struggle to secure access to the sea, a group of Irish fishermen takes advantage of an existing body of state agencies, and how they strategically deal with the social and economic structure. In the first, empirical part of this paper I will introduce the co-operative for shellfish farming initiated by the fishermen and the arena in which their collective actions take place. The factors influencing the co-operative's resource management, will then be examined. I will argue that shareholders are strategic actors³, who act expediently with respect to their natural, socio-economic and institutional environment. In the second part, the empirical findings will be discussed from a more theoretical perspective. The 're-invention of the commons' will be the starting-point of this discussion.

PART I⁴

Securing access to the sea: the creation of an artificial common property

The establishment of a shellfish farming co-operative

North West Connemara is a isolated region on the Irish Western seaboard. The region is dominated by rocky mountains and bogs. Agriculture, mainly focused on raising sheep, is the main source of livelihood. Inshore fishing is the second form of income generation. Since the area is characterised by a beautiful natural environment, tourism is an important source of supplementary income. In the area a number of large scale commercial finfish farms can be found. Although the number of these farms is increasing, direct economic benefits for the local people remain only little.

The expansion of finfish farms managed by 'outsiders' causes a lot of concern amongst the local fishermen and their families. Finfish farming (and especially salmon production) goes hand in hand with large scale application of chemicals. The fishermen's catch is getting less every year for which they blame the finfish farms. Furthermore, the expansion of these farms in the local bay results in an increased number of areas restricted for fishing. The fact that the economic benefits of the finfish farms do not stay in the area, is another issue of frustration. The fishermen, who hold a strong belief that action regarding the finfish farms is necessary, started to look for strategic possibilities to secure their access to the sea.

In 1991, a group of local fishermen initiated the establishment of a shellfish farming co-operative. By revitalising the derelict native oyster beds in their local bay, they want to

³ Following Jürgen Habermas, an actor becomes a strategic actor at the moment he acknowledges that the other people in his environment are, like himself, subjects who base their actions (like himself) on rational decisions. The core of strategic action is the effort to depend one's own decision on predictions about others' behaviour (Koningsveld and Mertens, 1986).

⁴ The empirical findings presented in this part are based on my M.Sc. thesis: 'A co-operative, common property resource management and socio-economic development - The case of a shellfish farming co-operative in North West Connemara, Ireland' (Unpublished). Department of Rural Development Sociology, Wageningen Agricultural University, The Netherlands. January 1995.

provide their shareholders with an add-on income. Besides native oysters (*Ostrea edulis*), the co-op produces Pacific oysters (*Crassostrea gigas*).

The co-operative has 75 shareholders. Their share consists of a once-only payment of IR£ 150 and a yearly 'voluntary work obligation'. The co-op's rules certify that only those shareholders who have paid their complete share will receive a dredging permit. The co-operative's first output is expected in 1995.

At the time of its establishment, the co-operative's shareholders lacked two basic needs, namely capital and knowledge. Therefore, the initiators turned to several organisations for support. Their efforts were fruitful: for the past four years the co-operative has been relying heavily on support provided by two external agents. FORUM, a community development project under the EC's Poverty 3 Programme, assists the co-op through administrative and technical back up. The Irish Sea Fisheries Board (BIM) is extremely interested in the development of the sea resource base and supports the co-operative through grant aid. As a result of their so-called 'partnership for development', the two organisations employ a Shellfish Development Officer, who is responsible for intensive technical, managerial and administrative assistance to the co-operative.

The co-operative has experienced many problems during its four years' development phase. In the first year, technical problems related to the restocking of the native oyster beds caused a delay in time and a lot of frustration. Furthermore, the market price for native oysters collapsed, implying that the estimated economic benefits would be far less than expected. However, the most critical problem was the failure of the voluntary work scheme. Many shareholders became free-riders who did not contribute to resource management. In order to keep the work at the co-op going, the Board of Management successfully applied for a government-sponsored Social Employment Scheme⁵. In the end, four years after the establishment of this co-operative, two third of the shareholders can be called free-riders.

The urge to keep the finfish farms from expanding in the local bay has been the main incentive for the establishment of this co-operative. The co-op obtained the required aquaculture licenses and in this way an 'artificial common property' was created, only accessible to shareholders. The existing oyster resource was strategically used as a mechanism to secure their access to the sea. Once the necessary licenses had been obtained and access to the bay had been safeguarded, the majority of the shareholders chucked it. I will discuss that the co-op's shareholders do not only use their natural environment strategically; both free-riders and so-called 'committed shareholders' also seize the opportunities present in the socio-economic and institutional environment to legitimize their actions with respect to resource management. Before examining how shareholders do this, it is necessary to examine a number of factors influencing shareholders' willingness to manage the co-op's common oyster resources.

Resource management at the co-operative

A common interest to sustain a common resource is one of the conditions for its collective management. Wade's study in South Indian villages reveals that villagers are prepared to contribute voluntarily to a common interest because this will safeguard their own personal benefits (Wade, 1988). In the case of the Irish shellfish farming co-operative, collective management of the oyster resource seems to be a problem as is evident from the large number of free-riders. Although securing access to the sea was the underlying idea of the establishment of the co-operative, there seems to be no common interest in the co-op as such. Shareholders appear to have different motivations to join the co-op. The following (overlapping) interest groups can be identified: (1) Board of Management, aimed at the realisation of the co-op's objectives; (2) activists, who want to prevent the finfish farms from expanding in the bay; (3) fishermen, who are interested in extending the fishing season; (4)

⁵ A Social Employment Scheme aims to help long term unemployed to re-enter the active work-force, and to help voluntary groups and public sector bodies to do work which they could not otherwise have undertaken. These schemes are a common phenomenon in Ireland's economically less well of areas.

resource managers, who want to develop the existing natural resource; and (5) investors, who want to receive a future reward for partly or completely paid contribution of the share. It is obvious that for the realisation of each group's interests, a more or less sustainable management of the co-op's common property is a prerequisite. This recognition seems to form a basis for a common interest. Why then is the management of the oyster resource such an uphill battle? In the first place, there are conflicting basic interests. While one group of the shareholders are 'activists' only, the other group wants to reap economic benefits in future. The pure activists have reached their goal; they have secured access to the sea. However, they do not seem to realize that if the co-operative becomes a failure project due to mismanagement of the common resource, the licenses will be withdrawn.

Secondly, the socio-economic environment has a tremendous impact on resource management. In summer, tourism is an important source of supplementary income for the people in the area. This is also the period when a lot of work at the oyster resource needs to be done. While tourism-related activities result in direct economic benefits, the rewards from the co-operative will not be generated until 1995. Thus the long waiting period between contribution of the share and first economic benefits is a major constraint to the shareholders' participation in resource management. Shareholders will prefer a direct reward over a postponed remuneration (also Galjart, 1992). In this light, there is another factor influencing shareholders' willingness to contribute to resource management. The oyster resource is not vital to the area's socio-economic structure. The co-op is seen as a means that might generate an add-on income in future, but not as a means to sustain one's livelihood. In all, the net collective benefit, indicated by Wade (1987) as a key factor determining voluntary contributions to resource management, is perceived to be minor. The people in the area still have to be convinced there is a collective benefit through the future performance of the co-op.

A key issue related to resource management are the free-riders, a 'common problem' in collective action literature (e.g. Olson, 1965; Hardin, 1968; Mannix 1991). In the situation of the shellfish co-operative, free-riders can be divided in two groups, namely (a) shareholders who have not paid their share; and (b) poachers. Although the co-op has a framework of rules dealing with free-riders, none of them have been punished. In this small and isolated area, people feel they are dependent on each other. The prevailing idea is that it is impossible to sanction fellow community members, since it would turn *them* into the scapegoats rather than the defectors. Therefore, sanctioning free-riders can only be done by bailiffs and policemen who, by the law, are legitimised to do so. Despite the fact that the Board of Management wants to realize the co-op's objectives, this group feels the seem way. The same phenomenon was observed by Taylor (1987), who was told by a group of fishermen that 'the river would run red with blood' if they had to punish the defectors themselves. This issue can also be related to a previously mentioned aspect of resource management. In his study, Taylor (1987) found that fishermen violating the rules, were 'punished' by the social control system. In this case, the whole community was protecting their (vital) common property. However, since the oyster resource is not vital to the area's socio-economic structure, social coercion mechanisms (e.g. social control, the grapevine) are ineffective.

The institutional environment in which the co-operative is operating is a final factor having a bearing on resource management. Two external organisations, FORUM and BIM, heavily support the co-operative. Furthermore, the work at the oyster resource is done through a government-sponsored employment scheme. FORUM and BIM both aim at the realisation of a structural development in the area. By giving the co-operative a helping hand during its start-off, they hoped to have contributed to a major development. However, a reverse effect has manifested; the co-op almost entirely depends on grant aid, the help of the Shellfish Development Officer and the allocation of social employment schemes. Without these, resource development and management would be rather difficult.

Although it seems that the co-op's socio-economic and institutional environment brings about severe constraints to sustainable development and management of the oyster resource, the

shareholders can put these same restrictions to their advantage. Their strategic actions will be discussed below.

The socio-economic and institutional environment: options for strategic action

The co-operative formulated a number of rules, which are backed up by a system of punishment against free-riders. According to Wade (1987) the existence of a back up system of punishment 'helps to reassure any one person that if he follows the rules he will not be suckered, and which at times of crisis can easily deter' (p. 193). However, in the case of this co-operative the reluctance to sanction free-riders interferes with the execution of the rules and therefore with the management of the common property resource. People feel that sanctioning a fellow community member would turn them into the scapegoats rather than the defector. A strategic actor can use this belief as a cover to shirk, provided the other community members support this conception. It may be that this belief institutionalised over the years; in other words, the dependence on other community members may have become less than before, but is still used as a mechanism to back out of one's obligations despite an existing framework of coercion mechanisms. The fact that the future net collective benefit is estimated to be minor, eases the effect of this institutionalised 'excuse mechanism'.

Another basis for strategic action is laid by the institutional environment. Although the shareholders do not value their dependence on external agents positively, a certain opportunism concerning the external organisations can be identified. Both FORUM and BIM want a reward for their development efforts; they want to see a successful co-operative capable of sustainable resource management. However, the co-operative's dependence on their support, has created certain obligations. Currently, the supportive organisations cannot withdraw since the co-op is not yet able to stand on its own. A large sum of development grants and personal efforts would be wasted if the co-operative turned out to be a failure project. The shareholders who realise the interdependent nature of their relation with the development agents, exert this knowledge. In case of financial, technical or administrative problems, they call for assistance. In many situations, the problems come down on the locally-based Shellfish Development Officer, but there also is an opportunistic attitude towards the provision of grant aid. 'Seize whatever grant you can get' seems to be the best way to describe this attitude. This way of thinking may be related to the rather extensive experiences the local people have concerning (failure) development projects. While extracting as many benefits from these project as possible, the prevailing attitude is 'wait and see'. The same phenomenon can be observed in the African country Burkina Faso, where farmers have seen many projects coming and going during the past decennia (Lekanne dit Deprez, 1994: pers. comm.).

The Social Employment Scheme is another example of shareholders' expedient behaviour. The shareholders were expected to contribute a large part of the share through work at the oyster resource. In Ireland, a lot of (community) work is done through Social Employment Schemes. The possibility of applying for such a scheme was already mentioned at the time of the co-op's start-off in 1991. The shareholders thus already knew beforehand that the Board of Management could apply for a scheme. It is likely they calculated that if the work obligation was not fulfilled, the Board of Management would have to solve the problem. The application for a scheme seemed to be a predictable solution. The free-riders have based their decision to contribute to resource management on the expected actions of the committed shareholders. The reluctance of the committed shareholders to sanction free-riding community members is at the heart of this calculation.

Summary

In their struggle to secure access to the sea, a group of fishermen has created an artificial common property through the establishment of a shellfish co-operative. While one group of shareholders feel they have reached their goals, the other group realises that continued management of their oyster resource is a prerequisite to retain the licenses necessary to claim their rights over the resource. More than two third of the shareholders have become free-riders. On the one hand, shareholders' willingness to contribute to resource management is

influenced by opportunities and constraints present in their socio-economic and institutional environment. On the other hand, these opportunities and constraints offer a certain basis for strategic action, especially in relation to shirking the rules. In this light, the committed shareholders can also be considered free-riders; they as well use an institutionalised excuse mechanism to back out of their obligations of executing the rules concerning free-riders. The fishermen may have 'saved' their bay from the finfish farms, but the future of the revitalised oyster resource is uncertain. Structural changes regarding resource management and the execution of the rules are necessary to safeguard the co-op's continuation. This, amongst others, implies that the local actors have to be convinced there is a net collective benefit to be obtained from the management of the resource. It also means action regarding the group of 'visible free-riders' is a necessity. They have to be convinced that only through a successful co-op access to the sea is guaranteed. The relevance of this case to the debate of the 're-invention of the commons' will be discussed in the second part of this paper.

PART II

The re-invention of the commons

Local people/institutions in sustainable and equitable resource management

Along with the search for possibilities concerning a sustainable use of the earth's natural resource base, more and more attention is being paid to the role local people and local institutions can play in sustainable resource management and development. Local people are in an increasing degree considered to be active decision-makers capable of managing their own environment. This belief not only occurs in the discourse of researchers and academics (e.g. Chambers *et al.*, 1989; Fairhead, 1992), but also manifests at policy level in programmes like Integrated Pest Management in Indonesia and Land Care in Australia (respectively: Van de Fliert, 1993; Campbell, 1994). However, we must be aware not to romanticize the idea that local knowledge and practices as a matter of course guarantee sustainable resource management. Instead of overvaluation, we have to recognize both its limitations and its potential contributions to resource management and development within its specific context (Thrupp, 1989). In this exploration, the emphasis should be on agreement between local institutions of common ownership and the external agents rather than the imposition of the latter groups' solutions to a sustainability problem perceived by them. As outlined in the introduction, sustainability as an aspiration is a social construct that does not gain salience until all stakeholders come to appreciate the deterioration of a resource as a problem. In this light, it is important to clarify the meaning of the concept sustainability.

Sustainability has become a veiled concept to which different meanings are attributed by different people. Do we emphasize ecological sustainability or do we mean economic or social sustainability? In general, it seems that researchers and policy-makers are inclined to view sustainable resource management in terms of ecological sustainability. But local resource managers often have a different point of view. For example, research in the hills of Nepal revealed that the concept sustainable agriculture cannot be made explicit by farmers. These farmers see the management of their resources in terms of continuity, which means to them: 'enough yields to feed their families, enough labour to work the fields and non-decreasing soil fertility'. Thus their notion of continuity and the researchers' notion of sustainability (ecological) were differently constructed (Oerlemans and Steins, 1994).

In the discussion concerning the re-invention of the commons, the issues I touched on should hold an important position. When we talk about 'how and why institutions of common ownership can manage resources in an equitable and sustainable way in a changing environment' (IASCP, 1994: 4), we need to make explicit which meaning we ascribe to sustainability. We also must explore the local institutions' meaning of sustainable resource management. In this process we should realize that our idea of sustainability may be at right angles to the local institutions' ideas, and secondly, that a certain type of sustainability (e.g. economic) may be preferred over long term ecological sustainable resource management. The same goes for the concept of equity.

There is another important factor to be taken into account in this exploration; we have to realize that local institutions in their role of resource managers will be guided by opportunities and constraints present in their environment, as was the case in the situation of the shellfish co-operative in the first part of this paper. Now what is the significance of this case to the discussion of the re-invention of the commons?

The shellfish co-operative versus the re-invention of the commons

The discussion of the shellfish co-operative in the first part showed that the shareholders of this institution wanted to secure their access to the local bay, which they felt was threatened by the expansion of commercial finfish farms. Under the guise of providing an add-on income to the fishermen through revitalising the bay's derelict native oyster resource, they initiated a co-operative. When evaluating resource management of this local institution of common ownership, it becomes evident that despite the existence of a framework of rules and coercion mechanisms, the majority of the owners shirks the rules. Shareholders' willingness to sustain the oyster resource are influenced by (a) conflicting individual interests; (b) the (still) relatively unimportant position the co-op has in the area's socio-economic structure, aggravated by changing opportunity costs and the waiting period between contributions and first uncertain rewards; (c) the institutionalised reluctance to sanction free-riders; (d) lack of back-up from social coercion mechanisms in community; and (e) external institutions prepared to support the co-op 'in the name of development', but whose well-intended interventions stimulated a reverse process.

In their role of resource managers it seems shareholders are guided by strategic motivations only. Their first strategic move was to turn an existing common-pool resource in the natural environment into a common property in order to exclude others from parts of the bay. Their second strategic action is related to their responsibility as owners of a common resource. As outlined in part one, shareholders use the constraints and opportunities in their socio-economic and institutional environment (a) to back out of their obligations as resource managers; and (b) to transfer these obligations to a group of external agents by tying them down. The question is whether these strategies form a sound basis for an ecologically sustainable management of the oyster property and, on its turn, the management of the local bay.

If the co-operative's shareholders want to secure long term access to part of the local bay, a certain level of ecological, economic and social sustainability will have to be guaranteed. Ecological sustainability is a prerequisite for a continued regeneration of the oyster resource. Economic sustainability is necessary as a 'reward mechanism'; if the net collective benefit is low, shareholders will lose interest in the co-operative which is aggravated by changing opportunity costs in other fields of activity. Social sustainability is related to the local actors' belief whether or not the co-op's existence generates, besides economic advantages, a collective social advantage, such as the protection of local resources against outsiders. These levels of sustainability can only be achieved through appropriate management of the oyster resource. If this condition is not fulfilled, the continuity of the co-operative becomes endangered. In the worst case scenario, the co-op's licenses will be withdrawn; the shareholders will lose their access to parts of the bay and new channels are open for the commercial finfish farms.

When we ask ourselves which role this institution of local ownership can play in sustainable management of the sea resources, it is evident that unless the local actors recognise their strategic actions do not ensure long term access to the sea, their role in resource management can only be marginal. Only if they acknowledge the continuity of the co-operative as the condition guaranteeing long term access to the bay, a dialogue can take place between external agents responsible for ecological sustainability of the state's natural resources, and the local actors responsible for their own common property resource. This dialogue should concentrate upon agreement on the different contributions the groups involved can make to resource management (e.g. a redefinition of the co-op's rules and structure, and fundamental changes in the nature of the support provided by external agents). In this process we must keep in mind that in the various phases of the co-op's development

as an independent, capable institution of common resource management, a reassessment of the actors' contributions and rewards will be necessary in order to establish a 'norm of equity'. The latter enables an individual contributor to determine whether or not he is the dupe of other persons' non co-operation (Galjart, 1992). The recognition that continuity of the co-op is the only way to secure long term access to the sea, is only one factor of extreme importance to resource management. Successful collective management of the common property will be strengthened the more (a) the visible effects of the co-operative, such as the net economic benefit, increase; and (b) the institution becomes more vital to the area's socio-economic structure.

As for the ecological sustainability of the whole bay, one of the fishermen's main problems related to the expansion of the commercial finfish farms is the increased pollution of the water in the bay, resulting in a decreasing catch. Nevertheless, the establishment of a co-operative has only resulted in the exclusion of the finfish farms from the co-op's artificial property. It has not solved the problem of polluted water. Native oysters need clean water. If the water is polluted they cannot reproduce and the risk of diseases such as *Bonamia* and Red Tide increases. However, polluted water will damage both the oyster *and* the fish resource. Keeping the water clean is in this respect a major priority, also to the commercial finfish farms. The ecological management of the bay is therefore a responsibility for all actors who benefit from the water in the bay. Besides the shellfish co-op and the commercial finfish farms, there is a task for the area's inhabitants who obtain a large additional part of their income from tourism-related activities. In this light, I would like to give a short comment on the local actors' perception on the pollution caused by the finfish farms. It is not clear whether the fishermen's catch decreases because of polluted waters or is due to overfishing. It is also not clear whether the pollution of the bay is the result of the application of chemicals by the finfish farms or by the area's inhabitants and tourists.

Discussion

The case of the shellfish co-operative has made clear that local institutions' roles of successful managers of common property resources should not be taken for granted. Notwithstanding the evidence from many publications on local successes on the commons (e.g. McKean, 1992; Wade, 1988), there will always be institutions which fail to manage their common resources successfully. However, this does not imply that these institutions must be written off as resource managers. It also does not automatically imply that their resources should be subjected to regulation by an external agent or to privatisation.

The former option is not feasible in the case of this shellfish farming co-operative. The local actors' trust in external agents (and especially the state) is only little. A citation from one of the fishermen is probably the best way to express their lack of trust: *'I hardly catch lobsters anymore. They all died because of the salmon farm over there. We went there with a group of fishermen, but they told us that the salmon need clean water as well, and also that their chemicals are non polluting. They also said the marine biologists from the Department of the Marine come to control the quality of the water. I have never seen them doing that, and anyway, the government is in league with them farms. It's all about economics...'* (Steins, 1994: fieldwork data). The latter possibility, privatisation, is also not viable. In part one, I already discussed that people's frustration concerning the extraction from local resources by the commercial finfish farms, leaving only marginal benefits for the area. Privatisation of the co-operative would result in a similar situation. Besides, access to the privatised resource, and thus to parts of the bay, would become impossible.

In those situations where local institutions of common ownership fail to manage their resources successfully, the challenge is to find out why the results of collective resource management are disappointing. Which are the actors' interests in resource management? Why are they engaged in the institution? Are they guided by strategic motivations or do they feel forced by external motives? How does the management take place? Who else is involved or has an interest in the resource? Which technical, physical, institutional and socio-economic factors influencing resource management can be identified? All these questions should be taken into account in our efforts to gain understanding in the way people manage their

resources. The next challenge is to find out whether and how these institutions can contribute to sustainable and equitable resource management. In this process, the local institutions' perceptions regarding such management should be the starting-point. This demands a constructivist perspective, where the emphasis is on interaction and agreement between local institutions and external agents as problem solving mechanisms, rather than instrumental control. In my opinion, this is the invitation to anyone who considers endogenous control over the commons to be a priority.

Conclusion

The exploration of the potential role of local institutions of common ownership in sustainable and equitable resource management, first of all requires an examination of the meanings external agents and the local institutions attribute to sustainability and equity. Secondly, we should be aware not to romanticize local knowledge and practices with respect to common resource management, but realize both its limitations and potentials in the specific situation; we have to keep in mind that local institutions of ownership may have strategic interests threatening resource management. Not until the why's and how's of resource management in its specific context are studied from a (multi) actor-oriented perspective (Long, 1989; Engel, 1995), is it possible to explore the potential roles of the different actors involved. The challenge is to let go of the prevailing positivist idea that instrumental control over the commons, either through state regulation or privatisation, is the key to sustainable use of the resource base. Rather we have to adopt a constructivist approach in which agreement between local institutions and external agents is at the centre, even in situations where, initially, collective common property management through a local institution seems to be futile.

ACKNOWLEDGEMENTS

I wish to thank ir. B. Lekanne dit Deprez of the Department of Rural Development Sociology at Wageningen Agricultural University, the Netherlands, for his support during the realisation of the paper. I also want to thank him for his efforts which enabled me to visit this conference. My gratitude also goes to professor Chris Curtin of University College Galway in Ireland. My sincere thanks go to the research community in Ireland. Finally, I want to thank Natasja Oerlemans, Isabel van den Wijngaerdt and Mustapha Malki for their comments on this paper.

References

- Campbell, A. (1994). Landcare in Australia. In: *ILEIA, Vol. 10, No. 2.*, p. 24-26.
- Chambers, R.; Pacey, A.; Thrupp, L.A. (1989). *Farmer First - Farmer Innovation and Agricultural Research*. London: Intermediate Technology Publications.
- Engel, P.H.G. (1993). *Facilitating Innovation - An Action-oriented Approach and Participatory Methodology to Improve Innovative Social Practice in Agriculture* (Ph.D. Dissertation). Wageningen: Pudoc
- Fairhead, J. (1992). Indigenous technical knowledge and natural resource management in Sub-Saharan Africa: a critical overview (Unpublished version). Chatham, Kent: Natural Resources Institute.
- Fliert, E. van de (1993). *Integrated Pest Management: Farmer Field Schools Generate Sustainable Practices - A Case Study in Central Java Evaluating IPM Training* (Ph.D. dissertation). Wageningen University Papers 93-3. Wageningen: Pudoc.
- Galjart, B. (1992). Co-operation as pooling: a rational choice perspective. In: *Sociologia Ruralis, Vol. XXXII (4)*, p. 389-407.
- International Association for the Study of Common Property (1994). Information brochure to the Fifth Common Property Conference: Reinventing the Commons. Norway: IASCP.
- Koningsveld, H.; Mertens, J. (1986). *Communicatief en Strategisch Handelen - Inleiding tot de Handelingstheorie van Habermas*. Muiderberg: Coutinho.
- Long, N. (1989). Knowledge, networks and power: discontinuities and accommodations at the interface. Paper presented at the 'European Seminar on Knowledge Systems and Information Technology', Wageningen, The Netherlands, November 23-24, 1989.
- Mannix, E.A. (1991). Resource dilemmas and discount rates in decision-making groups. In: *Journal of Experimental Psychology, Vol. 27*, p. 379-391.
- McKean, M.A. (1992). Success on the commons - A comparative examination of institutions for common property resource management. In: *Journal of Theoretical Politics, 4 (3)*, p. 247-281.
- Olson, M. (1965). *The Logic of Collective Action - Public Goods and the Theory of Groups*. Cambridge: Harvard University Press.
- Röling, N. (1994). The changing role of agricultural extension. Paper presented at the 'Workshop on Agricultural Extension in Africa', Yaoundé, Cameroon, January 24-28, 1994.
- Oerlemans, N.J.; Steins, N.A. (1994). Continuity considered - The potential role of expert farmers in a village in the Hills of Nepal (Unpublished M.Sc. thesis). Department of Communication and Innovation Studies, Wageningen Agricultural University, The Netherlands.
- Picardi, A.; Siefert, W. (1976). A tragedy of the commons in the Sahel. In: *Technology Review, Vol. 78*.

Steins, N.A. (1995). A co-operative, common property resource management and socio-economic development - The case of a shellfish farming co-operative in North West Connemara, Ireland (Unpublished M.Sc. thesis). Department of Rural Development Sociology, Wageningen Agricultural University, The Netherlands.

Taylor, L. (1987). 'The river would run red with blood': Community and common property in an Irish fishing settlement. In: Mc Cay, B.J.; Acheson, J.M. (Eds.), *The Question of the Commons*. Tuscon: University of Arizona Press.

Thrupp, L.A. (1989). Legitimizing local knowledge: 'scientized packages' or empowerment for Third World people. In: Warren, D.M.; Slikkeveer, L.J.; Titilola, S.O. (eds.), *Indigenous Knowledge Systems: Implications for Agriculture and International Development*. Ames, p. 138-153.

Wade, R. (1987). The management of common property resources: collective action as an alternative to privatisation or state regulation. In: *Cambridge Journal of Economics*, Vol. 11, p. 95-106.

Wade, R. (1988). *Village Republics - Economic Conditions for Collective Action in South India*. Cambridge: Cambridge University Press.