

Can Decentralization and Community-Based Development Reduce Corruption in Natural Resource Management – Insights from Irrigation in Ghana and Forestry in Indonesia

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Abstract

Forestry and irrigation are two sectors that are particularly prone to corruption. In forestry, corruption is typically linked to illegal resource extraction, whereas in irrigation, corruption occurs mainly in the construction of irrigation schemes and in the allocation of irrigation water. In both sectors, decentralization of management authority to lower levels of government and to local community groups has been a major approach to reduce corruption and associated conflicts. Using case studies of forest management in Indonesia and small-scale irrigation in Ghana, the paper shows that this approach does not necessarily reduce corruption in natural resource management. Based on the case studies, the paper identifies a range of policy options which can address problems of corruption and mismanagement in decentralized natural resource management. The study suggests that it is the combination of empowering local community and reforming public sector institutions, which has the best chances of reducing corruption in natural resource management.

1 Introduction

The last decades have seen increasing global efforts to meet the challenge of sustainable development: improving the living conditions of the world's growing population while at the same time maintaining the natural resource base for future generations. Yet in spite of these efforts, the degradation of natural resource systems continues at alarming rates (European Communities, 2008). The Millennium Ecosystem Assessment found that the degradation of ecosystems, including agricultural land, forests, rangelands and freshwater resources, could even grow significantly worse during the first half of this century, which is also a barrier to achieving the Millennium Development Goals (Millennium Ecosystem Assessment, 2005). As a legacy of colonial times, early approaches to deal with resource degradation in developing countries have been characterized by strong state intervention and a command-and-control approach. However, in view of limited state capacity, low government effectiveness, weak rule of law and widespread corruption, this approach was largely doomed to fail. Against this background, the last decades have seen an increasing trend towards decentralization and devolution in natural resource management in developing countries (Meinzen-Dick & Knox, 2001). While decentralization refers to the shift of authority to lower levels of government, devolution implies the shift of authority to entities outside the state sector, such as local user groups. These developments have to be seen in the context of a general trend: 80 percent of all developing countries have experimented with some form of decentralization in recent years, and 70 percent of Sub-Saharan countries have pursued political decentralization (Work, 2002). Decentralization and devolution are expected to promote development and improve natural resource management by bringing

government closer to the people and by empowering local communities to take charge of their own development.

In spite of the high hopes placed on decentralization and devolution for solving problems of natural resource management, the experience with these policies has been rather mixed (Meinzen-Dick et al., 2001). Therefore, the question arises under which conditions these strategies will be successful. This paper aims at addressing this question by analyzing the role that decentralization and devolution can play in addressing one of the major challenges of natural resource management: corruption.

Corruption affects natural resource management in different ways, which depend on country-specific conditions and on the type of the natural resource sector. This paper deals with corruption in two sectors that are important for poverty reduction in developing countries: irrigation and forestry. Corruption in forestry is typically linked to illegal resource extraction, whereas corruption in irrigation occurs mainly during the construction of irrigation schemes and in the allocation of irrigation water. In line with the general trend described above, decentralization and devolution have been common approaches to improve the management of both forestry and irrigation systems. To better understand the ways in which these approaches may or may not succeed in combating corruption, this paper presents two case studies. The first case study deals with the provision of irrigation infrastructure in Ghana, and the second case with forest management in Indonesia. The two cases have been selected because they demonstrate the role that local politics play in determining whether or not corruption problems can be overcome in a decentralized setting.

This paper proceeds as follows: Section 2 presents the case of irrigation in Ghana and Section 3 the case of the forest management in Indonesia. Section 4 compares the two cases and summarizes the policy implications.

2 The Case of Irrigation Management in Ghana

Small reservoirs are considered as an important avenue for bringing more land under irrigation in Africa while avoiding the economic, ecological and social problems that have plagued large-scale irrigation on this continent (cf Rydzewski, 1990; Biswas, 1987; Alam, 1991). However, the question arises whether small reservoirs can indeed avoid the problems of corruption and mismanagement that have characterized large-scale irrigation. Some authors have questioned the sustainability and economic profitability of small reservoirs (cf Aberra, 2004), but the available evidence is rather scarce.

2.1 The case study area and data collection

The case study deals with small reservoirs in the Upper East Region of Ghana, a semi-arid area in West Africa. With the support of several international donor organizations, the Ministry of Food and Agriculture (MoFA) and the Ghana Irrigation Development Authority (GIDA) have promoted the construction and rehabilitation of small reservoirs as a major development strategy for the region.

Based on government statistics and a satellite image, 126 small reservoirs were identified in the Upper East Region. All reservoirs were visited for data collection. A “Quality of Infrastructure” questionnaire was used, which captures characteristics of the small reservoirs that are observable, such as the state of erosion of the dam walls, the existence of canals, and whether crop

cultivation takes place. Additional information was collected from members of the local communities, such as year of construction. In 31 cases, a Water User Association (WUA) was in charge of managing the small reservoir. In these cases, a WUA representative was interviewed as well, focusing on the structure and functioning of the association in managing and using the small reservoir. Data from 31 WUAs were collected. In addition, key informant interviews were held with actors involved in the construction of small reservoirs, including contractors.

Based on the preliminary findings, an “Influence-Process-Mapping” was carried out with a stakeholder focus group that included members of the different government agencies involved, academics, and NGO and farmer representatives. The mapping which is based on the Net-Map method developed by Eva Schiffer,¹ was carried out as follows: The group members first identified the different steps in the construction of a small reservoir, starting from the planning phase. All actors involved in the process were noted on a large sheet of paper. The different interactions between the actors, such as flows of funds, supervision, etc., were indicated by arrows between the actors, using different colors. Subsequently, the focus group members identified how much influence on a scale from 1 to 10 the different actors have on the ultimate outcome, i.e., the quality and functioning of the small reservoirs. These “influence numbers” were also noted on the paper. Using this map as a basis, the focus group then discussed where the major problems in the process are, and what strategies could be applied to deal with this problem. For triangulation, a similar mapping was also conducted individually with two key informants.

2.2 Construction and functioning of small reservoirs

2.2.1 Functioning of small reservoirs

As shown in Figure 1, the survey of the small reservoirs indicated that the majority of the small reservoirs are not used for irrigation purposes. Even out of the 29 reservoirs that were built within the past five years with considerable public investment, only five reservoirs were actually used for irrigation. The research findings suggest that hydrological or agronomic factors did not play a major role in preventing the use of the reservoirs for irrigation. Land rights issues and collective action problems among communities played some role. However a major obstacle to using the reservoirs for irrigation were problems related to their construction resulting in inferior infrastructure quality (cf. McCarthy et al., 2008).

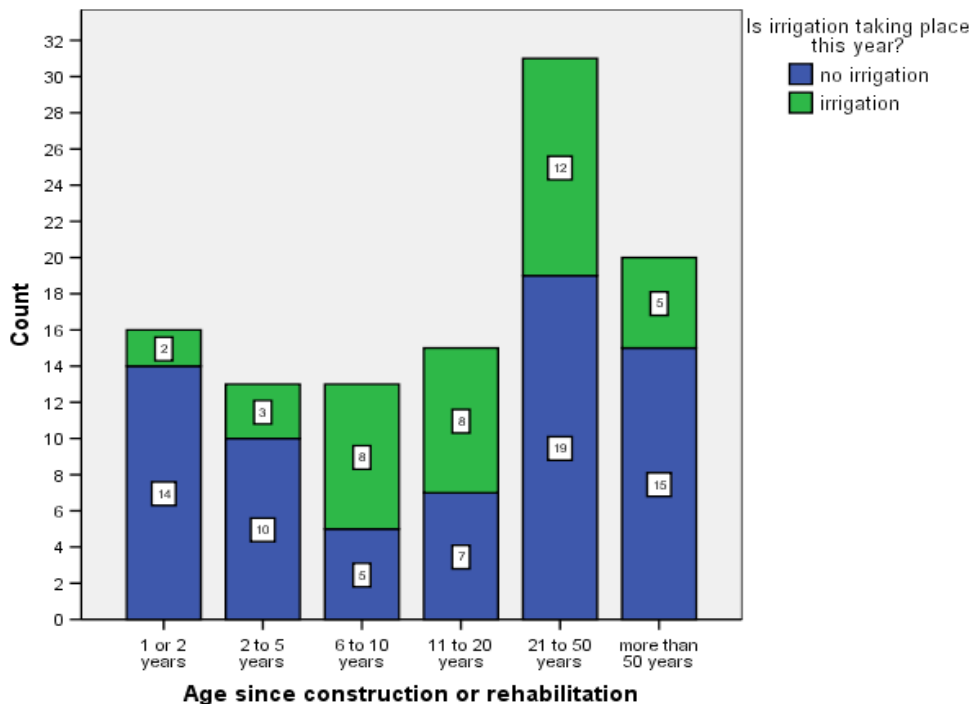
2.2.2 The construction process

To better understand the problems related to construction, it is useful to look at the entire process of constructing a small reservoir in more detail. Figure 2 displays the actors involved. The process typically involves the following steps: A community expresses its interest in the construction or rehabilitation of a small reservoir to its District Assembly Member or to its traditional chief, who conveys this interest to the district administration, which is referred to as the District Assembly. Communities may also approach the Ministry of Food and Agriculture (MOFA). The District Administration asks MOFA and the Ghana Irrigation Development Authority (GIDA) to assess the suggested site for the reservoir. The decision to construct a small reservoir is then made by the district administration. In principle, all small reservoirs should be included in the District Development Plan, which is approved by the elected District Assembly

¹ See <http://netmap.wordpress.com/>

Members. In practice, however, District Development Plans often include more small reservoirs than can be constructed with available funding. Therefore, MoFA and the district administration have a strong influence on the location where small reservoirs are actually built. Once a decision is made, the district administration asks either GIDA or contracts a consultant (design consultant) to design the small reservoir.

Figure 1: Use of small reservoir for irrigation



Source: IFPRI Water Challenge Project Survey, 2006/2007

The next step is the tender process. Small reservoirs are typically handled by the District Tender Board and a Review Committee, in which both technical staff and local politicians are represented. The contractor who wins the bid is supervised either by GIDA or by a supervising consultant who is contracted for the purpose. The community is involved in the construction by contributing labor, which is required by the donors. When the construction is finalized, a meeting is held, where the District Chief Executive, the design consultant, and the supervising consultant have to sign that the work was completed satisfactorily. Some donors require that community members sign, as well. The elected District Assembly Member who represents the community receives a copy of the final document, but is not required to sign. The dam is then handed over to the community, often in a ceremony.

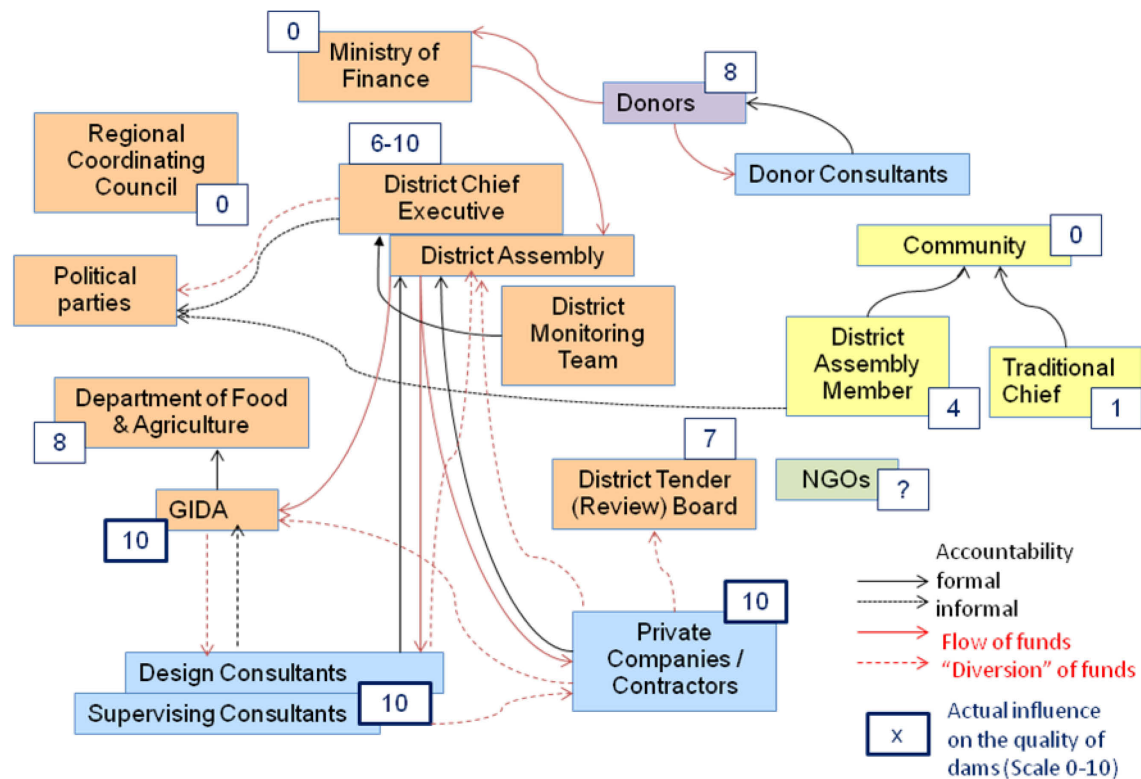
Figure 2 indicates the fund flows and the relations of accountability. The funds flow from the donor agency to the Ministry of Finance, and from there to the District Assembly. The Regional Coordinating Council is informed about the process, but not involved in the handling of the funds. The funds are disbursed from the district administration in tranches. The release is conditional on the report of the supervising consultant that the work was carried out correctly. The district administration also has a Monitoring Team, which includes the District Engineer and

the MOFA head. The District Chief Executive relies on the Monitoring Team for the supervision of the work. If consultants are hired for design and supervision, they are also contracted by the district administration. If GIDA is hired for that purpose, funding is provided to GIDA. According to the interview information, hiring of consultants is typically the preferred option. The original idea of introducing this option may have been to create competition with GIDA. In practice, however, the consultancies “informally” hire GIDA staff to carry out the respective design and supervision activities, since they do not have own personnel with the respective expertise.

In some cases, NGOs are involved in the process. They have financed the construction or rehabilitation of a few small reservoirs. In other cases, they have played a role in sensitizing the community, or in providing information on problems related to reservoirs.

Figure 2 also displays the level of influence on the ultimate quality of the reservoir, as perceived by the focus group. The figure provides important clues regarding the problems in the construction of the small reservoirs. Even though there is a strong rhetoric about community involvement, the focus group agreed that in practice, communities cannot really influence the quality of the reservoir construction at all (zero influence level).

Figure 2: Actors involved in construction of small reservoirs



Source: author

The two actors that have the strongest influence on the quality of the reservoir are the contractors, the consultants in charge of design and supervision, and GIDA. Among those who have influence, only the elected District Assembly members and the local chiefs are accountable to the local communities. These actors have, however, also a relatively low level of influence,

since they are not formally involved in the supervision of the work and are not required to sign off when the contractor hands over the reservoir. Since in Ghana the District Chief Executive is appointed rather than elected, he or she has is accountable to the political party that supports him or her. To some extent, elected District Assembly members are also accountable to the political parties that support them. Formally, elections at the District Assembly level are non-partisan, but in practice, political parties play an important role down to the grassroots level. The political parties have to satisfy the voters, but this accountability link is rather generalized and does not seem to contribute much to an improved quality of small reservoir infrastructure. According to the key informant interviews, the District Chief Executive has an obligation to contribute to political party financing, and funds from public infrastructure projects are well known as an important source for this purpose. Private companies contribute to election campaigns and are “compensated” afterwards with preferential access to contracts. According to the information collected from key informants, the contracting process is subject to an informal “10% rule”, according to which different actors involved in the process receive 10% of the funding. According to the interviewed contractors, the funds that are in the end are hardly sufficient to construct the reservoir according to required standards. As indicated in Figure 2, contractors have incentives to bribe the consultants who are supposed to supervise their work. In case of small reservoirs, supervisors need to be on-site daily when the construction is going on, otherwise it is very difficult to assess the quality of the construction. Bribing seems to be more difficult for consultants that the donor agencies themselves hire to put additional checks on the system. It is actually for this reason that donors that hire their own consultants are perceived to have a rather high influence on the quality of the reservoir (influence level 8 of 10).

The focus group members had different perceptions regarding the actual influence that the District Chief Executive has on the quality of infrastructure provision. The influence was ranked between 6 and 10. He has to rely on his Monitoring Team to be able to influence the quality of the construction work, and the effectiveness of this team seems to vary across districts. Unlike the supervising consultants, however, the members of the Monitoring Team are not able to be daily at the construction site.

Next to the problem that influential actors are not accountable to the local communities, there is also the problem that the specialized government agencies, GIDA and MOFA, are not accountable to local or regional governments, but rather to their parent ministries at the central level. This is the consequence of an incomplete decentralization process in Ghana (NCG & DEGE Consult, 2007). The central ministries, however, do not seem to have influence on the ground. Another major problem leading to low construction quality is the lack of liability. There are no legal consequences for the contractor, or anyone else involved, in case that a reservoir cannot be used for irrigation.

The possibilities of local communities to monitor the construction process are confronted with several problems. As indicated above, their signature is not required when the reservoir is handed over by the contractor, except in cases where donors make this a requirement. Moreover, there are limitations regarding the technical knowledge that is required for monitoring. Collective action problems and uncertainty also reduce the incentives for community-based monitoring, since individual community members may not be sure whether or not they will ultimately benefit from the reservoir.

2.3 What can be done?

This section presents a range of policy options that were identified to address the problems encountered in the construction of small reservoirs based on the analysis derived from Figure 2 and the feedback from the persons and groups interviewed for the studies. We distinguish options that can be pursued within the current system and can, therefore be realized in the short run, and policy options that require more far-reaching structural change, and may only be feasible in the long run as part of more general governance reforms.

2.3.1 Short-term policy options

Local communities/Water User Associations: Involving the communities from the design stage onwards more actively in the construction process would certainly go a long way in addressing the construction problems, because they are the ones who have the strongest stake in the functioning of the reservoirs. When handing over the reservoir, it would therefore be useful to formally require the signature of the District Assembly member, as the elected representative of the community and the signature of the head of the Water User Association. It would also be useful to increase the capacity of community members to monitor the construction. This may require the training Water User Association members for that purpose. A more far-reaching approach, which follows the “community-driven development” paradigm, would transfer the authority to handle the funding for the small reservoirs to the Water User Associations. However, one needs to be careful not to pass the entire management and supervision burden on the local community, expecting their voluntary contributions, while letting the experts that are officially responsible and paid for this purpose “off the hook.”

Chiefs: The traditional chiefs are well-respected in rural Ghanaian societies and they could exercise more influence, for example, by making public statements on their expectations regarding the quality of small reservoir construction. It may also be a useful strategy to require the signature of the chief when handing over a reservoir.

NGOs and development workers: In villages, where NGOs and development workers are active, they could play an important role by sensitizing the community before the project starts, and by alerting community about potential problems. They could also engage in advocacy for selecting good contractors and play a “watch-dog” function for contractors and supervising consultants.

District administration: In principle, the district administration could blacklist and publicize non-performing contractors. The challenge of this approach is to overcome the political obstacles to this measure, since non-performing contractors may play an important role in political campaign financing. It may also be useful to improve the technical capacity of District Assembly Monitoring Team, since its members are not usually specialized in irrigation infrastructure.

Elected District Assembly Members: As indicated above, the elected District Assembly Members, could play a more formalized role in the monitoring process, since their stakes in the outcomes in terms of the quality of small reservoirs are more closely aligned with the stakes of the community members than is the case for other actors involved. District Assembly Members could also play a mediating role between community members and contractors by communicating concerns and problems to contractors with more authority than community members are able to. However, since they have many obligations and their time is not paid, it

does not seem to be a good strategy to overburden them with the demanding task of monitoring small reservoir construction.

GIDA and consultants: The staff of GIDA plays a particularly important role with regard to the quality of the reservoirs. If GIDA is in charge of supervision, they directly supervise the contractors. If consultancies are contracted for that task, they informally act on behalf of the consultancies. According to the interviewees, they face disincentives because there is a substantial difference in the salary they receive and the remuneration that the contractor is able to get for himself. Yet, since they are government staff, it is not possible to change their salary levels. If they work informally for the consultancies, they receive a higher remuneration, but the difference remains substantial, thus creating ample scope for bribery and collusion. A possible entry point in the short run is to create incentives for the consultancies that informally hire GIDA staff as supervisors. If these consultancies are blacklisted in case of low quality infrastructure, their incentives to ensure a better supervision may increase. Using more supervisors hired by the donors may also be an option, even though making the system more dependent on donors does not seem to be a desirable long-term solution.

Contractors: While it may be difficult to change the incentives of contractors in the short run, given their role in political campaign financing, improving their technical knowledge regarding small reservoir construction may already help to achieve better quality within the given constraints. Creating more competition among contractors by inviting contractors from other regions or even other countries may also help. In other regions of Ghana, it was reportedly beneficial that Chinese contractors were invited to bid. Ghana's procurement law has already been reformed and complies, in principle, with international standards. It is rather the implementation of the procurement process that needs improvement.

Central level ministries and agencies: As indicated above, the decentralization process in Ghana is incomplete and the district-level offices of MoFA remain mainly accountable to the regional and central units of their own ministry, rather than the District Assemblies. Likewise, local units of GIDA remain upward accountable to the head office. Making use of this situation, the central level ministries and agencies could try to influence the quality of the reservoirs by a stronger supervision and inspection that is exercised from the central level. The central level ministries could use the instruments they have in terms of human resource management (performance contracts, annual performance reviews, promotion rules) to exercise more pressure on local staff. Since they are less involved in local politics, central level supervisors or inspectors may be more effective than local ones. The challenge, however, is to create incentives for the central-level agencies to use such instruments.

Media: Last, but not least, the media could play a more important role, for example, by publicizing low performance in small reservoir construction. Recent years have seen an increase in local radio stations, which may be well suited to publicize problems related to the quality of small reservoirs.

2.3.2 Long-term policy options

As the analysis shows, the low quality of small reservoirs construction is influenced by structural problems of the political, administrative and legal system, which are not specific to small-scale irrigation. These include in particular the incomplete decentralization process, the lack of alternative political party finance mechanisms, and the absence of liability rules for public infrastructure that can be enforced. Entrenched problems in the civil service, such as

dysfunctional pay-scales and a lack of mission-orientation contribute to low infrastructure quality, as well. Improvements in the quality of small reservoirs, and accordingly the possibilities to use this approach to promote sustainable agricultural development in Northern Ghana, will ultimately depend on general governance reforms that address these problems.

3 The Case of Forestry Management in Indonesia

The second case deals with the problem of illegal logging in Indonesia.² During the Suharto regime, illegal logging in Indonesia was mostly associated with a comparatively small number of large-scale timber companies, which controlled the major share of Indonesia's forest resources, due to their close connections with the Suharto family and the army. In fact, five timber companies controlled 30% of Indonesia's total timber concession holdings. However, local leaders and lower administrative units were also involved in logging operations, for example by allowing concessionaires to log in community forests and protected areas in exchange for monetary resources (Casson & Obidzinsky, 2002). After the fall of the Suharto regime and the subsequent political reform process, small-scale concessions managed by local government gained importance. In a far-reaching process of decentralization (also referred to as regional autonomy), authority for natural resource management was devolved to provincial and district authorities. Provincial governors and Regents were allowed to grant forestry concessions. Several studies found that illegal logging in Indonesia increased subsequently. Next to other factors, such as a decline in law and order and the economic crisis, this has been attributed to the incentives of local governments to create revenues by granting logging concessions (Casson et al., 2002). In view of these problems, the question arises whether and under which conditions local communities are able to use the authority they gained through decentralization for a more sustainable management of forest resources. To throw light on this question, the case study provides a village-level perspective on forest management under the decentralized system.

3.1 Case study village and data collection

The case study focuses on a village that is located close to a National Park in Central Sulawesi, Indonesia. The village was chosen from a broader set of case study villages in the region because it appears particularly well suited to study the role of different actors and their diverse strategies in struggling over the use of forest resources. Data for this study were collected in 2000/2001, using the following methods: In-depth interviews were held with persons who have traditional or modern functions in the village, such as the village headman, the headmen of the different settlements of the village, members of the *Lembaga Adat* (i.e. the traditional village council), and leaders of different village organizations. In order to assess the role of villagers that do not hold official functions in the village, a simple random sample of 10% of these households was interviewed. The village has around 240 households. It is characterized by a high proportion of immigrants (40%) and comprises seven different ethnic groups.

The local government structure in Indonesia differs in some important aspects from the case of Ghana. There is a formally elected village headman, who is assisted by a council whose members are also elected. In addition, there is also a traditional council, the *Lembaga Adat*. However, in the study village, the *Lembaga Adat* became defunct in 1988, when its leader passed

² Illegal logging can be defined as the harvesting of logs in violation of laws and regulations that aim at preventing the overexploitation of forest resources.

away. In 1999, a NGO with the primary goal to promote the strengthening traditional village institutions supported the re-establishment of the *Lembaga Adat* in this village. They motivated a former candidate for the position of the village headman to become the Secretary of the *Lembaga Adat*. The re-establishment of the *Lembaga Adat* led to a power struggle with the elected village headman.

What is also important with regard to forest management in this village is the fact that an NGO was active there from 1994 to 1997. Apart from promoting income-generating agricultural activities, the NGO placed high emphasis on the creation of environmental awareness and engaged in the protection of the National Park. To facilitate its activities, the NGO supported the formation of organizations among its target households, the poor households in the village. This allowed a village leader to emerge, who had not held official functions in the village earlier and, in this sense, was not part of the traditional power structure.

3.2 Power struggles concerning deforestation and logging

Two major attempts of logging and deforestation occurred in the village during the period under consideration. The first case involved timber logging by a foreign company. The case started in the pre-reform era, and led to logging operations in 1997, which stopped in 1998. The second case concerns falls in the post-reform era and concerns a logging concession for an area of 300 ha, which was supposed to be converted into agricultural land.

3.2.1 The first case

The first case can be traced back to the promise of the village headman, prior to the 1994 elections in 1994, to help poor families to construct their own houses in the village. The headman was contacted by a foreign company that was interested in obtaining a logging concession for forest resources that belong to the area of the study village. The company promised to construct the 40 houses in exchange for the support of the village leaders to obtain a logging concession. According to key informants, the company also bribed the village headman. Even though the concession was not yet formally issued, the company constructed a saw mill in the village and—with the approval by the village headman—already started to log timber. However, the saw mill operator never constructed the promised houses for the villagers. This provoked resistance among the villagers, who went so far as to demand the election of a new village headman. These efforts failed due the lack of an alternative candidate. The villagers also tried to stop the logging operation. These efforts were led by the *Lembaga Adat* Secretary and the leader of a village organization founded by the NGO mentioned above. The leader was especially concerned about the environmental impact of the logging operation, because he assumed that the company was logging in critical watershed areas, which could affect the water supply of the village. The villagers were receptive for these arguments. In the household survey, more than half of the interviewed villagers mentioned water supply as a reason to protect the forest. Prevention of flooding and prevention of soil erosion were also mentioned by more than half of the interviewed villagers as reasons for forest protection.

The *Lembaga Adat* Secretary and the leader of the village organization mentioned above organized the collection of the signatures of almost 70 villagers for a complaint stating that the company was logging in the village area without having a valid permit. They also organized a demonstration in front of the People's Representative Assembly at the Regency level. However, the village headman addressed the villagers and urged them not to join the demonstration, highlighting that he will not take any responsibility in case that problems will arise after the

demonstration. He also pointed out that the logging company still promised to provide funds for the development of the village, even though the houses were not yet constructed. As a consequence, only six villagers eventually dared to join the demonstration.

However, the village leaders received support by NGOs. Besides the NGO that had worked in the village earlier, there were eleven other NGOs, all based in the Provincial capital, which supported the villagers to stop the concession. These NGOs were able to organize on short notice supporters among their staff and friends so that the demonstration could still take place. Afterwards, members of the Assembly, accompanied by members of the Forestry Department and staff of the Sub-District Office in charge inspected the saw mill and the logging operations. After this official inspection, members of a NGO based in the provincial capital visited the logging site again, without prior information. They discovered that the company continued to conduct their logging activities, even though they still had no official permit. After this event, the owner of the company decided to stop his operations in this village and removed the saw mill.

3.2.2 The second case

The second case concerns the conversion of 300 ha of forest to agricultural land to be used by the villagers. This forest is located outside the National Park and concerns the same area, where the company of the first case had conducted its logging operations. According to the village headman, he started to apply for the conversion of this forest land on behalf of his village in 1997, because he wanted to reduce the pressure on the National Park. The permit to convert the forest land was formally issued to the village in the end of 1999 by the head of the Regency Administration. The village headman established contracts with a local logging company, who promised to remove the forest cover as a prerequisite for land preparation, and to build a road and a bridge to facilitate access to the area.

The interviewed *Lembaga Adat* leader criticized that his traditional council had not been consulted as required by traditional customs. According to him, the *Lembaga Adat* would not approve the conversion of the entire 300 ha, since a part of it has to be protected according to traditional beliefs because it is a spirit forest (*Taolo* forest). The *Lembaga Adat* secretary, however, has agreed to the forest conversion plan, even though he played an important role in stopping the logging of the first case reported above. The plan is opposed by the other leading opponent of the forest concession in the first case, the person who led the NGO-supported village organization. He was able to obtain copies of official documents showing that a forest concession was only granted by the Forestry Office to the logging company for an area of only 25 ha. The opponents suspect that the company may use the concession of 25 ha to log a larger area, including a critical watershed area. The opponents also had doubts whether the company would ever be willing to fulfill the promise of constructing a road and a bridge, as the costs may easily exceed the benefits obtained from the proposed logging operation. Moreover, they questioned the need of the villagers for an additional area of 300 ha agricultural land, pointing out that some areas that are already deforested have not yet been cultivated.

In May, 2000, the NGOs supporting the opponents organized a workshop in the provincial capital, which was attended by the Director of the National Park located in the vicinity of the village. Besides the danger of logging in a watershed area, several other critical points were discussed, such as (1) the fact that the area is located in the buffer zone of the National Park, (2) doubts concerning the environmental impact assessment supporting the forest conversion permit, (3) doubts concerning the estimated timber volume, and (4) questions concerning the list

of beneficiaries, which appeared to include members of the Forestry Department. Based on the discussions during the workshop, the Director of the National Park wrote an official letter to the Forestry Department at Provincial level, with cc to the Provincial Governor, the Director General of Nature Conservation and Protected Forests at central level, the logging operator pursuing the concession, and the local NGOs. While this protest was successful in preventing the execution of the plan, the struggle continued, and ultimately, another logging company received a logging concession for the area (S. Adiwibowo, pers. comm., September 2002).

3.3 What can be done to prevent illegal logging?

The case study provides some insights on strategies that can help to avoid that the option of small-scale logging concessions is used to the benefit of local development without leading to massive deforestation. As in the case of Ghana, one can distinguish between short-term and long-term options

3.3.1 Short-term policy options

Village headman and traditional council: The case study indicates that the powerful role of the village headman, which is derived from his superior access to information and his discretionary decision-making power in land-related issues, constitutes an important factor that contributes to illegal logging. According to the legal regulations, the agreement of the village headman is of crucial importance for all higher-level decisions concerning land use within the administrative boundaries of the village. The village headman could also benefit from his contacts to officials from higher levels of government. Prior to the reform period, he had rather exclusionary access to relevant information, e.g., concerning the procedures of issuing logging permits or re-classifying forest land. Actors without official functions in the village, who wanted to prevent deforestation, had difficulties to establish such contacts and obtain relevant information. Improving access to information and providing more transparency regarding the actions of the village headman, however, could play an important role in creating stronger checks and balances. Therefore, inducing the public administration at the regency and district level to disclose information on logging concessions could be a useful step. The case study also indicates that the *Lembaga Adat* can play a role as a countervailing power to the village government. In the reform process that followed the fall of the Suharto regime, the role of traditional village organizations was strengthened, which can create entry points for sustainable resource management. However, the case study cautions against romanticizing traditional village institutions as the “true stewards” of the environment. As the case study shows, traditional village institutions can be reinvented for political reasons, their legitimacy may be limited and they can be subject to the same power struggles as the formal village institutions.

NGOs and village-based organizations: The case study shows that environmentally oriented NGOs can have a powerful influence on preventing illegal logging, especially if they succeed in creating or supporting community-based organizations that can provide countervailing power to both formal and traditional village organizations. As the case indicates, NGOs can combine the promotion of income-generating activities for the poor with the creation of environmental awareness. They can use political protest as an important advocacy strategy for sustainable natural resource management. Creating a conducive environment for NGOs and community-based organization can, thus, be an important strategy for resource conservation and sustainable development. As the case study shows, foreign funding of NGOs can play an important role in this regard, since it was an international NGO that provided the funding for the village-based

activities, which ultimately resulted in the resistance to illegal logging. In the long run, however, it might not be the most preferable strategy to make the system more dependent on donor interventions.

Income generation: In principle, a small-scale logging concession can generate a constant income stream that could be used to the economic benefit of the villagers. In the case under consideration, however, the logging companies offered some economic benefits up front to “buy” political support, rather than sharing the income from the concession. More transparency about the logging concession might improve the possibilities of the villagers to get a fair share of the income generated by the concessions. Casson et al. (2002) recommend a restructuring of the concessions to cooperative/partnership arrangements with local communities, which include economic incentives for the communities. Moreover, developing strategies for local economic development that do not depend on forest degradation would reduce the pressure to rely on the logging concessions for economic benefits. The agricultural development activities that the NGO pursued in the study village in combination with environmental awareness creation are a good example.

Media: Similar to the Ghanaian case, local media can play an important role in publicizing cases of illegal logging and in reporting about villagers’ protests against it. In the first case, the NGOs tried to convince local newspapers to take up the case, but they did not succeed. After the fall of the Suharto regime, however, the scope for the local media to report on illegal logging cases increased considerably.

3.3.2 Long-term policy options

As in the case of Ghana, there is a range of general governance reforms, which can address the underlying structural problems that lead to illegal logging. These include civil service reforms that improve transparency and accountability in the forestry administration and create a stronger sense of professional ethics; legislation that strengthens citizens’ rights to information (a right to information law had been under consideration for several years); the creation of alternative revenue sources for local governments, and strengthening the capacity of local village organizations, such as the Council of Village Representatives, which have been established under Indonesia’s decentralization framework and which can provide checks and balances to the village headman.

4 Concluding remarks

Even though the two cases focus on different resource sectors, they have important parallels. Both cases dealt with a small-scale alternative to a large-scale resource management regime: small-scale versus large-scale forest concessions, and small-scale versus large-scale irrigation systems. In both cases, a decentralization process shifted authority for resource management to local governments, and both cases, local communities were supposed to be involved in the management of the respective resources. In line with the general concern that decentralization may just lead to a decentralization of corruption rather than to a solution of this problem, corruption continued to play a role in both cases. However, decentralization did create a number of entry points for reducing corruption, both in the short run and in the long run. As both case studies show, it is essential to analyze the role of corruption in the context of local politics in order to identify strategies to overcome it. Box 1 summarizes the main recommendations that can be derived for both cases. The recommendations are grouped into “community empowerment

strategies”, which aim at strengthening the role of local communities in a decentralized setting, and “public sector reform strategies,” which require reforms of the administrative and political system. The list of public sector reform strategies is not exhaustive. One could add a long list of anti-corruption strategies, ranging from public procurement reforms to the strengthening of supreme audit institutions. The box includes only two selected strategies that emerged from the case studies. Ultimately, success in combating corruption in decentralized natural resource management will depend the combination of empowering local communities and reforming public sector institutions, because the two types of reform strategies can reinforce each other. Public sector reform strategies will not be successful without a strengthened civil society that can exercise pressure on the public administration and politicians on hold them accountable. However, public sector reform remains essential as it will not fair be to pass on the entire burden of monitoring and supervision to the poorest section of the population.

Box 1: Strategies to combat corruption in decentralized natural resource management

Community empowerment strategies

(1) Support and empower community-based organizations

- Support the establishment of community-based organizations for natural resource management, e.g., water user organizations and forest user groups
- Create mechanisms to involve community organizations directly in natural resource management to create checks and balances for elected local leaders
 - For example, make signature of community organization leaders a formal requirement for when handing over irrigation infrastructure or when signing logging contracts
- Strengthen the capacity of community organizations to monitor, e.g., by increasing their technical knowledge on irrigation infrastructure

(2) Create an enabling environment and financial support for NGOs

- Strengthen the capacity of NGOs to support community-based organizations
- Strengthen the role of NGOs as “watch-dogs”

(3) Involve traditional authorities as a countervailing power

- In situations where traditional authorities enjoy legitimacy, make consultation with local authorities a requirement, e.g., before handing over irrigation infrastructure or signing logging contracts

(4) Increase transparency

- Strengthen citizen’s right to information, e.g., on logging contracts or contracts regarding the construction of irrigation infrastructure

(5) Use local media

- Encourage local radio stations to publicize problems related to natural resource management, such as low quality irrigation infrastructure, or logging without permit

Public sector reform strategies

(1) Increase accountability of the public administration

- Strengthen accountability of local public administration to locally elected governments, e.g., by requiring the signature of local assembly members on logging concessions or irrigation infrastructure contracts
- Combine local with central supervision and inspection mechanisms

(2) Reform political campaign financing

- Create checks on the role of contractors in financing political campaigns
- Develop alternative mechanism for political party financing

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