

Resource Degradation, Property Rights, Social Capital and Community Forestry in Cambodia

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Abstract

Following the dynamics prevailing in other Asia-Pacific countries, Cambodia has experienced high rates of deforestation over the past decade at the hands of logging concessionaires. Despite international efforts to reform the concession system, the Kingdom's forests have been severely degraded, and although there has been increasing interest in community forestry in recent years, the devolution of forest management to local communities is still in its early stages in Cambodia. This paper identifies significant obstacles to the successful development of community forestry. These include the absence of secured property rights for resources under common management and the depletion of social capital, the result of thirty years of violent conflicts. While there remain opportunities to grant local people control of forests, only degraded areas with little timber value have been allocated to community forestry. Community forestry in Cambodia requires more policy-making attention and more financial and technical resources if it is to make any significant contribution to biodiversity conservation and poverty alleviation in Cambodia.

Keywords: Community forestry, Deforestation, Property rights, Social capital, Cambodia.

1. Introduction

Following thirty years of genocide and violent conflicts, the Kingdom of Cambodia is slowly emerging at the dawn of the twenty-first century as an essentially agrarian society with limited infrastructures and human resources. The country lags far behind its neighbours on all basic social indicators, including infant mortality, educational enrolment, and access to safe drinking water. With a gross national income of U.S.\$280 per capita, Cambodia belongs to the group of the twenty poorest countries in the world (World Bank 2003). At least 36 percent of the population, or more than four million people, are unable to buy food to meet the daily requirements of 2,100 calories and 58 grams of protein (MoP 1999). This poverty line corresponds to the ability to spend 45 cents a day on basic food, clothing, and shelter. Cambodia is ranked among the leading twenty countries for its dependence on international aid when measured as a percentage of gross national product (GNP), as a percentage of export receipts, and as a percentage of government revenue (Godfrey et al. 2000). The Kingdom is endowed with bountiful natural resources, in particular tropical forests, which may provide an opportunity for its social and economic development. Unfortunately, as in many other Asia-Pacific countries, deforestation has proceeded unabated over the past decade, leading to the gradual depletion of the resource base and wide-ranging negative social and environmental impacts. While the bulk of government and international efforts and resources in Cambodia have focused on reforming the forest concession system, community forestry has often

been marginalised (McKenney and Prom 2002).

The property rights regime literature examines the management of natural resources by local users and the conditions under which self-governance may be successful (Baland and Platteau 1996; Gibson, McKean, and Ostrom 2000; Ostrom 1990, 1999; Stevenson 1991). The attributes of the forest resources to be managed and the attributes of the communities responsible for their management determine the likelihood of local people willingly forming self-governing institutions. Against these attributes, the purpose of this paper is to assess the social, economic, and biological conditions underlying community forestry initiatives in Cambodia. The paper focuses on the following more salient resource and user attributes of community forestry activities in Cambodia: the characteristics of forest resources under community management, the existing social capital in traditional Cambodian communities, the prevailing property regimes for resource management, and the contribution of community forestry to social and economic development.

2. Trends in deforestation and stakeholder exclusion

2.1 Towards the exhaustion of forest resources

The first post-war assessment of Cambodia's forests was produced in 1993 using Landsat satellite imagery interpretation. The forest cover was then estimated at 9.1 million hectares (ha), or 62 percent of the total land area. Between 1973 and 1993, the country had lost 1.4 million ha of forests (Thung 1994). The most recently available assessment dates back to 1997 and reports a 58 percent

forest cover rate (World Bank 1999). In the political vacuum following the fall of the Khmer Rouge regime in 1979, deforestation rates increased substantially, as the main contending factions engaged in widespread logging to bolster their military capabilities for controlling the country (Talbot 1998; Le Billon 2000). The 1993 Paris Accords, signed under the aegis of the United Nations, ushered in a new era of unstable parliamentary democracy in the Kingdom of Cambodia. In 1994, the newly elected Royal Government of Cambodia (RGC) established a system of timber concessions granting logging rights to private companies. While the annual allowable cut for sustained production has been estimated to be 500,000 cubic meters (m³) per year, actual levels of harvesting have been up to eight times higher. The Secretariat of the National Environmental Action Plan (NEAP) has suggested removals close to 2.3 million m³ in 1995 (MoE 1998). A log-monitoring project funded by the International Development Association (IDA) reported that the actual harvest was four million m³ of timber in 1997 (IDA 1998). In the year 2000, the Asian Development Bank (ADB) performed a wide-ranging assessment of the Cambodian forestry sector. The study discovered that half of the concession area had no timber of commercial value left, and concluded that without major re-organisation of the concession system, Cambodia's forest resources would be exhausted within six years (ADB 2000).

2.2 Stakeholder confrontation in the forests of Cambodia

In separate works, the author has discussed the stakeholder dynamics that drive deforestation in Cambodia (De Lopez 2001a, 2002). Over the past ten years, the international community has attempted, without success, to control deforestation and to ensure the preservation of a forest resource base for development. The objective of sustainable and equitable use of forest resources remains at odds with the interests of powerful stakeholder groups, including the economic, political, and military elites.

Rural people have essentially been excluded from decision-making and benefit sharing. Timber companies prevent local people not only from logging but also from collecting firewood, medicine, or food from the forests. Armed employees and military personnel strictly enforce concession rights. The cost of deforestation is economically significant for local communities, while the benefits of the concession system, in terms of sustainable employment and community infrastructures, have yet to materialise. Since 1995, confrontation over the implementation of sustainable forestry has placed Global Witness, a non-governmental environmental advocacy organisation, in opposition against the government and logging concessionaires. Global Witness has been a harsh critique of Cambodia's "deforestation without limits," using "investigative techniques" to publicise illegal logging activities (Global Witness 1996a, 1996b, 1998, 1999a, 1999b, 2000, 2001, 2002). The organisation's

country director was molested near her office in 2002 and left with a warning to "quit" (Barron 2003a, 2003b; Farrell and Vann 2003). In 2003, the government severed all working relationships with Global Witness, accusing the organisation of exaggerating reports of illegal logging activities. The Cambodian forestry sector is characterised by an atmosphere of distrust of local people for government agencies and logging companies. In a climate of bullying and intimidation, conflicts commonly occur as a result of denied access of local communities to forest resources (McKenney and Prom 2002; Koroma 2002).

3. Community forestry experiments

The Cambodian Development Resource Institute (CDRI) has developed an inventory of community forestry activities in Cambodia based on existing documents and interviews, but without field verification (McKenney and Tola 2002). A total of 237 "community forests" were identified, covering 71,724 ha and affecting 411,440 people. More than half of these were initiated before the year 2000, the earliest in 1991. The data suggests that most community forests were started in the late 1990s, and that the rate of establishment has increased since the year 2000. A team lead by Jürgen Fichtenau has similarly conducted stocktaking of "community forestry initiatives" in Cambodia (Fichtenau et al. 2002) and identified a total of 57 community forestry initiatives that cover a combined area of 83,000 ha, distributed among eighteen different administrative provinces of Cambodia. Some 404 villages, representing an estimated population of 415,000 people, are involved in community forestry initiatives. These figures appear to be comparable to those of CDRI. Two-thirds of all community forestry initiatives are located in areas with heavily degraded forest or no forest at all, while half are located in agricultural areas with a population density of over 235 people per square kilometre (km²). As there is no centralised registry, the number of ongoing community forestry projects may be much larger, but it is unlikely to be substantially more significant in area covered.

4. Forests without trees for local people

The reported figure of 415,000 beneficiaries from community forestry initiatives requires further discussion (Fichtenau et al. 2002). This number may have been inflated by both national and international organisations involved in community forestry in Cambodia, as it represents an indicator by which funding agencies may measure the success of their projects. The question arises as to whether or not local people derive economic benefits from community forestry activities to help improve their livelihoods.

If 415,000 people are to share the benefits of 83,000 ha of forests, this is equivalent to a ratio of 0.2 ha of forest per person. Assuming a maximum allowable cut of ten m³ per ha, as stipulated in the Cambodian forestry law, the annual timber harvest would represent some two m³ per community forestry member. The problem is ex-

acerbated by the fact that the majority of these community forestry initiatives only grant local people stewardship over degraded ecosystems in densely populated areas. Without commitment to intensive forest rehabilitation over longer periods, the timber benefits are likely to be low or insignificant. The main objective of existing community forestry activities has been to plant trees by providing seedlings to local people and by promoting smallholder tree growing. Thus, the management of forests, using the definition of the Food and Agriculture Organisation of the United Nations (FAO) of areas with a minimum of ten percent crown cover, has not been, to date, granted to local people. In Cambodia, there exists no example of undisturbed forest under local self-governance. Thus, in the Cambodian context, the expression “community forestry” is misleading, as it is limited to community replanting and rehabilitation programmes, and does not include the management of forests with mature trees.

The Santi Sena community forestry project, as observed by Bey Phal and Cheam Mony (2000), provides an illustration of the prevailing attributes of forests under self-governance in Cambodia. The project is located in the province of Svay Rieng, some 135 km to the east of the capital city, Phnom Penh. The Santi Sena community forest covers an area of 500 ha that had been totally logged by 1994, when the local pagoda formed a non-government organisation to undertake activities in environmental protection and awareness raising, agricultural development, and the promotion of peace in the aftermath of three decades of war. At the establishment of the community forestry project, only three Dipterocarp trees remained standing. Villagers believed that these were under the protection of forests spirits, also known as “Venerable Old Men” or *Neak Ta*; ox carts used to try to transport trees had their axles broken, and loggers went accursed. The objective of the community forestry project has been to undertake reforestation work. Villagers have received food for germinating and planting tree seedlings, and demarcating and patrolling the area. As trees are not expected to reach maturity for 25 to 30 years, the benefits to the local communities solely consists of non-timber forest products such as firewood, medicinal plants, mushrooms, and fish from flooded areas. Sante Sena is considered to be one of the more successful community forestry projects in Cambodia. Unlike the overwhelming majority of community initiatives in Cambodia, this one has actually come from local users and not international agencies. Sante Sena has attracted funding from a variety of donors, including Cooperation Internationale pour le Developpement et la Solidarité (CIDSE), Oxfam Great Britain, the Konrad Adenauer Foundation, and the Canada Fund. Given the highly degraded nature of the area, however, and the fact that benefits from timber may only materialise in the longer term, the project remains dependent on outside financial assistance for investments in small-scale infrastructure and reforestation.

From an economic perspective, local people are more likely to form a self-governing institution if the benefits of doing so outweigh the costs (Baland and Platteau 1996; Ostrom 1990, 1999). Community forestry requires financial and technical resources for agreeing upon and enforcing new institutional arrangements. Restrictive harvesting rules for forest products may impose costs on communities that have few alternative economic opportunities. If the forest is at such a point of deterioration that improvement is not feasible without intensive rehabilitation, there may be little advantage resulting from the community self-organising. If the resource is perceived as abundant, there is no reason for communities to organise either. Thus, community self-management of forests is more likely to occur when local people have already observed a substantial decrease in existing forest resources. If over-logged tropical forests are set aside, they may regenerate to recover ecosystem functions. However, the cost and complexity of these operations cannot be underestimated (Whitmore 1975; Banerjee 1994). A major impediment facing existing community forestry projects in Cambodia stems from the relatively high costs incurred by users for managing degraded or non-existent forest resources, when compared to the limited benefits generated from non-timber forest resources. Heavily degraded land and scrubland not only have reduced growing stocks of trees but also reduced ecological productivity for non-timber forest products.

5. Community forestry without community property rights

Economists traditionally distinguish between four broad types of resource management regimes: state property regimes, private property regimes, common property regimes, and open-access regimes (Bromley 1991). A resource management regime may be defined as a structure of rights and duties characterising the relationship between individuals with regards to their use of a particular environmental resource, such as forests. In a state property regime, ownership and control of forests rest with the state, which may directly manage and control the use of forests, or grant organisations or individuals usufruct rights over forests. Private property regimes are characterised by the sole control and use of the forest resource by an owner. Under the common property regime, a group of individuals, such as a group of people from the same village, tribe, or family, hold ownership rights of the forest resource. The behaviour of all members of the group is governed by accepted rules over the use of the forest and the distribution of its benefits. Common property is fundamentally similar to private property in regards of the fact that non-owners are excluded from decision-making and from using the forest. Thus, common property is essentially private property for a specific group. Open-access regimes are characterised by the absence of any kind of property rights; the resource is available to any individual who captures it first.

In 1975, the Khmer Rouge abolished land ownership to transform Cambodia into an “indentured agrarian state” and organised into massive gangs of labourers (Kiernan 1996). Private landownership was only re-established in 1992. The years of conflict had destroyed pre-existing cadastral records. Even in cases where property rights could be demonstrated by documents pre-dating the war, the state decided to allocate land on the basis of present occupation and cultivation. From the fall of the Khmer Rouge in 1979 to the re-establishment of land ownership in 1992, Cambodia’s natural resources were under a management regime approaching open access, which resulted from a breakdown of the state authority and management system, combined with the dissolution of social capital and traditional common property regimes. The theory of the property rights regime predicts that in cases of open access, where anyone can enter a resource pool and appropriate resource units, over-exploitation of the resource will result (Dasgupta and Heal 1979). Under open-access regimes, forest access is completely non-exclusive—no one can be prevented from exploiting the resource. The prescribed policy has traditionally been for government to impose a different set of institutions on open-access resources, notably the creation of private property or common property as more efficient forms of ownership.

Most of Cambodia’s forests are currently under state ownership. The Ministry of Agriculture, Forestry and Fisheries (MAFF) manages forest reserves for timber production, while the Ministry of Environment (MoE) manages protected areas for biodiversity conservation. In 1994, the Royal Government of Cambodia introduced a system of forest concessions giving usufruct rights to private companies. Weak institutional resources and budgetary constraints greatly limited the state’s ability to effectively manage the national forest estate. Concessions were touted as a panacea to curtail illegal logging activities and to increase timber royalties for the government (World Bank 1996). Within three years, the control of seven million ha of forests was transferred to thirty-three different concessions managed by Cambodian, Chinese, Japanese, Malaysian, Russian, Taiwanese, and Thai companies. The process through which concessions were granted consisted of direct and non-transparent negotiations between the state and the private companies, thus leaving ample room for nepotism and corruption (White and Case 1998; World Bank 1996). Concessionaires must abide by the Cambodian Forestry Law and the Sub-Decree on Environmental Impact Assessment (EIA), which clearly articulate sustainable forest management practices, including allowable annual cut and environmental impact mitigation requirements (RGC 2002; MoE 1999). Following an assessment of forest concessions in the year 2000, the ADB concluded that the operational practices of the majority of forest concessionaires were “alarmingly at odds with the goal of sustainability” (ADB 2000). Deforestation in Cambodia is part of a broader trend of large-scale degradation perpe-

trated by multinational logging firms across the Asia-Pacific region, as they move from country to country, exhausting national forest resources (Dauvergne 1997, 2001; Ross 2001). Many of the firms operating in Cambodia have more than thirty years of experience in rapidly extracting timber resources, building political and military support, and resisting meaningful attempts at environmental reforms. Patterns in Cambodia of the corruption of government officials, client-patron relationships, military involvement, exclusion of local communities, and disregard for environmental standards are reminiscent of the forestry sectors of Indonesia, the Philippines, and the Solomon Islands.

Resource degradation in state property regimes occurs when government agencies cannot properly control the behaviour of those authorised to use forest resources, such as logging concessionaires, and when government is weak and unable to confront powerful interests (Bromley 1999). These conditions have been broadly prevalent in Cambodia. Part of the state apparatus may have also been unwilling, rather than unable, to enforce environmental legislation. Forest concessionaires have benefited from client-patron relationships with the Cambodian political and military elites, thus confounding national and international attempts to reform the concession system (De Lopez 2001a).

An authority system willing and able to uphold the rights and duties of owners is an essential component of any property rights regime (Bromley 1991). To have a property right is to have secure control over the benefits stream of the forest resource, and to be able to call upon the authority system to enforce this control when it is threatened by non-owners. While forest concessionaires have been able to enjoy exclusive and enforceable usufruct rights over Cambodia’s forest resources, the rural population remains vulnerable to land dispossession. Forest concessions have prevented local people from using both timber and non-timber forest resources (Global Witness 2000, 2001, 2002). In contrast, due to the inefficient pace of land titling, fewer than ten percent of rural families who own land have been able to obtain full legal titles (Oxfam Great Britain 1999; United Nations World Food Programme 1999; World Bank 2000). Common property ownership and the traditional rights structure of forest resources have largely been ignored by policy-makers in Cambodia. For instance, the five-year plan for the forestry sector (2001–2005) discusses “community forestry management” in fewer than 150 words (Department of Forestry and Wildlife 2001). Without any exception, none of the communities participating in community forestry initiatives has secured usufruct or property rights over forest resources. Common property resource regimes have no legal basis in Cambodia. Community forestry initiatives and their participants largely depend on the leniency and discretion of local and national agencies in granting them limited rights over forest resources on an ad hoc basis.

The national community forestry programme imple-

mented by the non-governmental organisation Concern Worldwide exemplifies common property rights issues in Cambodia (Concern Worldwide 2003). The programme was initiated in 1991 to provide rural people with supplies of forest products on a sustainable basis, as well as to preserve their cultural and spiritual uses of forests. In the provinces of Kompong Chnang and Pursat, community forestry activities essentially consist of the assisted regeneration of degraded forests. Villagers have formed local management committees responsible for setting up and enforcing rules for sustainable practices, including a ban on logging and grazing. The transfer of management to local villages is governed by a special agreement with the Provincial Department of Forestry, and remains an "experiment in local management." Villagers worry that once the trees have reached maturity, "the Forestry Department would simply come in and cut them down for sale," denying local people the benefits from having protected the forest.

The recognition of common regimes and traditional property rights remains in its infancy in Cambodia. Under the instigation, support, and leadership of international organisations involved in community forestry initiatives in Cambodia, the government has developed a draft Sub-Decree on Community Forestry (RGC 2002). It governs the establishment, use, and management of forest resources by communities. A community is defined as "a group of residents in one or more villages in the Kingdom of Cambodia who share a common social, cultural, traditional and economic interest in the sustainable use of an area of natural resources, which they live in or near, for subsistence and livelihood improvement purposes." A "community forestry agreement" is a written agreement between communities and the state authority responsible for monitoring and evaluating community forestry activities and ensuring the sustainable use of forest resources. The Ministry of Agriculture, Forestry and Fisheries has jurisdiction over community forestry management outside of protected areas and the Angkor Management Area, which respectively fall under the purview of the Ministry of Environment and the AP-SARA Authority (Authority for the Protection and Management of Angkor and the Region of Siem Reap). Communities are responsible for establishing a forestry management plan and rules governing sustainable use, rights of access, user fees, benefit sharing, and fines for violations. Communities have the right to harvest and sell mature timber as well as non-timber forest products. There is a moratorium on timber harvesting in the first five years of approval of a community forestry agreement. The law includes the following as non-timber forest products: deadwood, wild fruits, products from beehives, and resin. Community forestry agreements remain in effect for a period of fifteen years from the date of their approval. One year before the expiration, communities may apply for an additional fifteen-year term.

Although not explicitly listed as a non-timber forest product, the spirit of the law could be interpreted so as to

include carbon sequestration benefits from carbon-offset schemes, such as the Clean Development Mechanism (CDM) of the Kyoto Protocol. Thus, the sub-decree grants local communities wide-ranging control over the use of both timber and non-timber forest products. However, the limitation of the community forestry agreement to fifteen years may push local people to harvest trees before maturity lest a request for extension should be rejected. In addition, at any point in time, with a six-month notice, community forestry agreements are subject to unilateral termination by the state if "there is another purpose which provides a higher social and public benefit to the Kingdom of Cambodia." This clause of the sub-decree may perpetuate the present situation of unsecured common property rights, as it endows state agencies with the option of dispossessing local people under the fallacious rationale of higher social benefits. It was originally argued that the transfer of state forests to logging concessionaires would provide higher social and public benefits for the country. The Sub-Decree on Community Forestry was adopted by the Council of Ministers in October 2003.

6. Social capital destroyed

There are many existing definitions of social capital, which broadly encompasses interactions that lead to and result from social organisation. Robert Putnam (1993) describes social capital as features of social organisation, such as networks, norms, and trust, which facilitate coordination and cooperation for mutual benefits. Francis Fukuyama (1995) considers trust to be a measure of social capital, which is accumulated through reciprocity and cooperation, and which provides a basis for prosperous societies. Norman Uphoff (2000) distinguishes between structural and cognitive social capital. Structural capital consists of relationships, networks, associations, and institutions, while cognitive social capital includes values, norms, civic responsibility, reciprocity, altruism, and trust. A general consensus exists among researchers that social capital facilitates collective action for development. As discussed earlier, trust and prior organisational experience constitute elements of social capital that are conducive to the self-governance of forests resources.

Jack Ruitenbeek and Cynthia Cartier (2001) have suggested that "adaptive co-management" of forest resources may frequently emerge naturally. The defining attributes of adaptive co-management are: (1) shared rights and responsibilities for the stakeholders and (2) learning of the stakeholders through actions and modifications of these actions over time. Adaptive co-management is a long-term management structure where stakeholders share management responsibility within a specific system of natural resources and learn from their actions to adapt and modify the rules of their participation. The term "adaptive co-management" is referred to by other authors as adaptive management, joint-management, or community management. The lit-

erature reports cases where adaptive co-management of forest resources evolves without apparent external intervention (Ruitenbeek and Cartier 2001). Specific attributes of the forest resource and attributes of the users may be more conducive to the emergence of self-governance regimes, including perceived scarcity of the resource and prior organisational experience (Balland and Plateau 1996; Ostrom 1990, 1999). Thus, if adaptive co-management emerges naturally, rather than try to introduce a self-governance regime of forest resources forcefully, policy should take an education and enabling role to remove the barriers to emergence, including the preservation of social capital (Ruitenbeek and Cartier 2001).

There is little doubt that, in the aftermath of three decades of internecine and international conflicts, Cambodia's social capital has been dramatically depleted and undergone long-lasting transformation. Conflict started in 1970 with a military coup d'état backed by the United States, dragging Cambodia into the Vietnam War. April 1975 saw the victory of the Khmer Rouge and the establishment of Democratic Kampuchea, a regime which oversaw the genocide of a third of the Cambodian population—over two million people—in “cynical deception and stupefying violence” (Kiernan 1996). The Khmer Rouge turned Cambodia into a nationwide labour camp following the Maoist ideology of the “Great Leap Forward” (*Moha Laut Phloh*). Cities were emptied of their populations, and villages were broken up, their inhabitants uprooted and relocated across the country (Becker 1986; Bizot 2000; Chandler 1991, 1999, 2002; Kiernan 1993, 1996; Vickery 1986). The population was divided up between “old” people or rural peasants, and “new” people, those associated with the former political and economic elites, the intellectuals, or more often those who could read. Democratic Kampuchea wiped out traditional Cambodian culture, norms, religion, organisations, and networks. The Khmer Rouge were eventually overthrown by Vietnamese troops in 1979, but they waged a guerrilla war against the invaders in a coalition with the Royalist faction. In 1991, the international community brokered a peace agreement that led to the re-establishment of a parliamentary monarchy in the Kingdom of Cambodia. Civil war erupted again in 1997, when the members of the coalition government, the royalist and people's parties clashed militarily. With the 1998 parliamentary elections, the people's party strengthened its hold on power, but was able to form a government only with a new coalition with the royalist party. Following parliamentary elections in July 2003, an eleven-month political standoff opposed the “alliance of democrats” to the people's party, neither side being able to rule without forming a coalition.

Nat Colletta and Michelle Cullen (2000) have argued that the direct impact on social capital of the Khmer Rouge's rule consisted of the fragmentation of communities and families, and the dissolution of primary bonds of kinship and secondary bridges of association. Neighbours

and relatives were encouraged to spy on each other, thus “destroying trust and planting the seeds of deeply rooted fear.” In addition, social capital between civil society and the state was shattered by state-sponsored persecution, victimisation, and killings. Thus, reconstruction efforts may be more fruitful if focused on re-building familial and associational relations, rather than on relations between government and communities.

Trust between community members and prior organisational experience contribute to a favourable environment for the self-governance of forest resources (Balland and Plateau 1996; Ostrom 1990, 1992). Communities with high levels of trust and reciprocity face lower costs of monitoring and sanctioning. These costs include fencing and patrolling forest areas, building monitoring structures, and sanctioning violators. Transaction costs may form a barrier to collaboration and to the establishment of appropriate tenure arrangements (Bromley 1991). If local people had already voluntarily and successfully worked together through local associations, they would have acquired organisational skills and experience of social interactions that facilitate the establishment of community forestry initiatives. Communities with little organisational and associative experience are more dependent on external support and intervention to agree upon institutional changes and to adopt new rules governing common pool resources. In turn, the imposition of unfamiliar sustainable forestry practices by external stakeholders, such as international organisations and governmental agencies, may not gather sufficient long-lasting local support.

The family and the pagoda have been at the centre of traditional Cambodian society, where networks are essentially based on kinship and religion (Ebihara 1971; Ebihara, Morland, and Ledgerwood 1994). Beyond family and neighbours, the pagoda, or *wat*, remains the central social institution at the village level, and may provide a supporting role for community forestry initiatives (Ngim and Nhanh 1998; Tin et al. 1999). Pagodas have participated in raising environmental awareness, distributed seedlings, and organised meetings between local people and state agencies. Beyond the village and the pagoda, there remain few bridges of trust between communities and the state. A study lead by Toshiyasu Kato finds limited productive partnerships between the government and non-government sectors, in particular civil society (Toshiyasu et al. 2000). At the national level, the government lacks defined procedures for involving civil society in the decision-making process. Decision-making authority has generally not been devolved to local public officials who are closest to villages. In addition, there is still little accountability and transparency of governmental institutions to the general public. The Cambodian judiciary “does not yet meet acceptable standards in terms of independence, capability and integrity” (Toshiyasu et al. 2000). Some twenty-five years after the fall of Democratic Kampuchea, the Khmer Rouge remain unchallenged, undaunted, and remorseless. These factors have

resulted in a general mistrust of state agencies in the general public and little confidence in the rule of law. Efforts to bring Khmer Rouge leaders to international justice have faced opposition on fears of the political fallout for the present Cambodian regime and the former ideological and financial patron of the Khmer Rouge, namely, the People's Republic of China (Hunt 2003). It may well be that the surviving victims of the Khmer Rouge will never see justice, as several of their figurehead torturers have already died in old age (Becker 2003). Thus, the dissolution of social capital both within communities and between communities and government institutions constitutes a significant hurdle to the establishment of community forestry in Cambodia by external organisations, let alone its natural emergence in rural communities.

7. Community forestry for the poor

Community forestry initiatives in Cambodia all attempt to combine poverty reduction, alleviation, eradication, elimination, or termination with the rehabilitation of degraded forestland. The two largest community forestry programmes, in terms of area under management, exemplify these objectives. Concern Worldwide (2003) regards its national community forestry programme as an integral part of a partnership for development with poor communities. Local people are expected to benefit from forest resources "to meet essential livelihood needs, including food, transportation, tools, and fuel." The Food and Agriculture Organisation of the United Nations (FAO) similarly sees a double-dividend both in environmental conservation and development from its participatory natural resource management project's "*pioneering work* to assist communities to gain responsibility for protection and sustainable management of those resources upon which they depend" in the Tonle Sap region (FAO 2000). The FAO concludes that its project empowers communities to manage local forests to meet their needs for fuelwood and "other products." Thus, community forestry is expected to provide social and economic benefits for local people and to improve the state of degraded forest land.

There is a general agreement that community forestry generates benefits for local people in terms of non-timber forest products and environmental services, including protection from storms, fish habitat conservation, and watershed protection. However, the extent of these benefits is undetermined, as few studies have attempted monetary valuation of the benefit streams of common property regimes (Bann 1997a, 1997b; De Lopez 2001b, 2003). There is evidence that community fisheries have provided substantial economic benefits to the Cambodian poor, but the case for community forestry initiatives, particularly in regard to timber, is inconclusive. Community forestry has been introduced relatively recently in Cambodia, with the earliest programmes only a decade old. Most may not yield timber benefits from reforestation for at least another decade. The inventory of community forestry activities carried out by the Cambodian

Development Research Institute roughly estimates the stock of timber, non-timber forest products, and fuelwood available for household consumption and for selling (Mckinney and Prom 2002). Out of a grand total of 237, some 32 community forests have enough timber for household consumption and for selling, while an additional 37 have timber for just household consumption. The remainder of community forests do not have any timber for harvesting. In contrast, most community forests have enough fuelwood and non-timber forest products for both household consumption and for selling.

Given the absence of secured common property rights for local people, timber revenues remain hypothetical. Then the question arises as to whether current community forestry programmes in Cambodia may alleviate poverty by providing people with benefits from non-timber forest products. Michael Arnold (2001) as well as Arild Angelsen and Sven Munder (2003) contend that non-timber forest products have generally been the lot of the poor, while it is the rich who have captured the benefits of tropical timber. Non-timber forest products constitute an essential safety net for rural people; that is, they are used for household subsistence rather than commercialisation, and they provide a buffer in times of shortfall and crises. Non-timber forest products "can make the difference between food security and starvation" (Angelsen and Munder 2003). Gathering most non-timber forest products is labour intensive and requires little capital and skill, which makes them more accessible to the rural poor. Yet, non-timber forest products are economically inferior goods that cannot generally compete with domesticated or factory-made substitutes. Non-timber forest products may only provide low returns and have limited potential for improving rural livelihoods (Campbell et al. 2002). In cases where a non-timber forest resource sustains increased market demand, making it increasingly attractive, external stakeholders may dispossess local people to appropriate the resource.

The literature further suggests that rural households adopt one of four possible strategies for taking advantage of commercial non-timber forest products (Belcher, Ruiz-Perez, and Achdiawan 2003): coping, integrated, supplementary, or specialised strategies. Specialised, supplementary, and integrated strategies require high market integration of local communities. In the coping strategy, forest products play a greater subsistence role and are less likely to be commercialised. As discussed earlier, the Cambodian village remains socially isolated, which leaves little prospect for successful market integration without external intervention. Access to urban consumers requires capital and marketing skills that local communities do not possess. Thus, the contribution of community forestry to poverty alleviation in Cambodia needs to be carefully qualified, as this may create unachievable expectations for local people. As a safety net, the role of non-timber forest products is undeniable. Local people are able to derive immediate benefits from

gathering firewood, fruits, fodder, and medicinal plants. This has been shown to be the case in Cambodia in the context of undisturbed forests and protected areas (Bann 1997a, 1997b; De Lopez 2001b, 2003). However, for the majority of existing community forestry initiatives, non-timber forest product collection will be limited by the extent of forest resources available and by population pressure. Timber remains the most promising alternative. Without transfer of timber-rich areas to common property regimes, community forestry will not contribute to poverty alleviation in Cambodia.

8. Conclusion

Community forestry is in its early stages in Cambodia and limited in scale and scope, when compared to the extent of forest resources available and to the dependence of the Cambodian population on these resources. Over the past decade, the state management of forests and the timber concession system have led to widespread deforestation with few benefits for rural people. Donor and government efforts have focussed on reforming the forest concession system, leaving inadequate resources for the development of community forestry. Local people have been allocated marginal land areas with severely degraded forests to manage. Ecosystems with low productivity cannot cope with local needs and added population pressure. As common resource management regimes have attracted little policy-making attention, the property rights of local communities over forest resources remain unsecured. In addition, the depletion of social capital in Cambodian society, as a result of some thirty years of conflicts, is likely to be less conducive to the emergence of community forestry.

Despite these unfavourable conditions for self-governance of forests, in many parts of Cambodia, local communities have voluntarily contributed resources and time to forest rehabilitation. People have planted trees together, on all but barren land, thus creating new partnership ties and rebuilding social capital. Because of these unfavourable conditions, there is also a strong argument for allocating more financial and technical resources to ensure the successful growth of community forestry in Cambodia. There are many opportunities for granting local communities ownership or usufruct rights over Cambodia's remaining forests. Less experimentation and more commitment is required if self-governance of the Kingdom's forests is to make a meaningful contribution to biodiversity conservation and poverty alleviation.

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