# *Traditional Khmer Systems of Forest Management*[1]

PETER SWIFT AND ANDREW COCK

**Abstract**

*Aid donors, civil society groups and the Cambodian government have tended to focus their policy initiatives concerned with communities and their forests on Cambodia's indigenous minorities. Few attempts have been made to document the relationship between ethnic Khmers and forests. However, with almost three quarters of Cambodia covered with forests until quite recently, and a large proportion of the Khmer population living in proximity to forests, it is not surprising that Cambodia's dominant ethnic group has had a close and meaningful relationship with forests. In this article, we examine the traditional systems of forest management of Khmer social groups and how these systems are changing. We argue that traditional Khmer systems of forest management are still relevant in the context of the rapid changes that have occurred in rural Cambodia over the past two decades. These systems shape how Khmer groups make sense of the natural world and claim rights of tenure over forest areas. They continue to play a vital role in preserving Cambodia's natural forests in the face of deforestation driven by plantation schemes and logging operations.*

## Introduction

Historians have observed a distinction made by Khmers between *srok* - ស្រុក (inhabited areas) and *prei* - ព្រៃ (forests). This distinction suggests a degree of fear of and aversion to *prei* among Khmers, and a feeling of relative comfort in *srok*. However, with almost three quarters of Cambodia covered with forests until quite recently, and a large proportion of the Khmer population living in proximity to forests, it is not surprising that Khmers have had a close and meaningful relationship with forests growing in areas near where they live. Few attempts have been made to document this relationship, a neglect compounded by the approach to social forestry issues in Cambodia adopted by foreign development agencies and the accelerating destruction of Cambodia's forest heritage driven in large part by the plantation schemes of the ruling elite.

Aid donors, civil society groups and the Cambodian government have tended to focus their policy initiatives concerned with communities and their forests on the status of the indigenous minorities living in the north, northeast and in the southwest and west

[1]The authors would like to express their appreciation to a referee for providing very helpful comments and suggestions. Andrew Cock also acknowledges the support provided via the Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship (grant P12011).

*JRAS*, *Series 3*, 25, 1 (2015), pp. 153–173
doi:10.1017/S135618631400039X

(Cardamom Mountains). Aid donors and civil society groups have often downplayed the degree to which ethnic Khmer communities use and rely on forests. Special provisions incorporated in Cambodia's recently rewritten land and forest laws envisage legal protection for the claims of indigenous minority groups to the lands and natural resources that are integral to their distinctive social structures. Although provisions exist in Cambodia's forest law for the creation of community forests, Khmer communities living near forests have fewer *de jure* rights than the indigenous minorities do. Without wishing to diminish the significance of forests to these minority groups, we doubt whether historical evidence and contemporary forest practices by rural communities supports such a rigid legal and policy division. "Community forestry" as framed in contemporary Cambodian law fails to encompass and support the diversity of forest management practices traditionally undertaken by Khmer communities.

The underlying question addressed in what follows is what traditional systems of forest management ethnic Khmer social groups have had and how these systems are changing even as they remain of importance to the ways in which communities conceive of their use of forest areas. We argue that traditional Khmer systems of forest management are still relevant in the context of the rapid changes that have occurred in rural Cambodia over the past two decades. During this time large areas of forest have been cleared, almost all remaining forests degraded, and the rural population has grown rapidly and become more market-oriented in its productive activities. These systems shape how Khmer groups claim rights of tenure over forest areas and play a vital role in preserving Cambodia's natural forests.

The conception of "traditional Khmer forest management systems" that we deploy has four dimensions:

(a) They are traditional in that when they were practiced before the 1970s they were considered to be a well-established way of doing things.
(b) They entail activities undertaken by social groups that broadly consider themselves to be Khmer.
(c) They constitute "forest management" in the sense of being mechanisms for shaping the forests for some particular goal.
(d) They can be called "systems" in the sense of entailing practices widely understood and in being driven towards ends considered to be legitimate by the relevant social groups.

In examining traditional Khmer forest management systems, we will suggest that forests are more than an appendix to productive activities and cultural understandings anchored to rice farming. But "management" does not adequately convey how these communities make use of and think about the forest. While the notion of "management" highlights how their activities have led, over time, to a reshaping of forest areas, these activities have not necessarily been aimed consciously at shaping the forest per se.[2] They are therefore extremely

[2]Collins *et al* note one way that Cambodian forests have been reshaped: "In their original form, the forests of Cambodia would probably have been evergreen over almost the entire area except in a south-east/north-west swathe from the delta along the line of the Tonlé Sap . . . . In Indochina, evergreen forests degrade first to semi-evergreen. As fire begins to play a dominant role, the forests become deciduous, and finally degrade to open woodland formations, bamboo and grasslands." See N. Mark Collins, Jeffrey A. Sayer, and Timothy C. Whitmore, "Cambodia," in *The conservation atlas of tropical forests: Asia and the Pacific*, (ed.) N. Mark Collins, Jeffrey A. Sayer,

vulnerable to external pressures driving the extraction of forest resources, and the conversion of forestlands into plantation schemes.

## What is a Khmer tradition?

In the Khmer lexicon, a broad distinction exists between the ordered, cultivated social realm – the *srok* and the wild, forested zones of what used to be Cambodia's periphery – the *prei*.[3] But Khmer language also contains a vast array of terms for the plants growing in Cambodia's forests, including remarkably fine grades of distinction within plant species not recognised in the botanical terms deployed within the Linnaean system.[4] Linguistic complexity mirrors historical reality. Until recently, and particularly prior to Democratic Kampuchea's and subsequent People's Republic of Kampuchea attempts at modifying the rural landscape through irrigation and extensive forest clearance schemes, more Khmer people lived closer to the forest than they do today.[5] Historically, most Khmers, apart from those living in urban centres, lived on the fringes of the forest and relied in part upon forest produce for their livelihoods and the forested landscapes to make sense of their social world.[6] These factors suggest that there must have been traditional Khmer systems of forest management that might in some form have been retained through to the present.

A preliminary question is who are the Khmers?[7] Many contemporary forest users who identify themselves as Khmer live in communities that may have descended from indigenous minority peoples or live in settlements in areas where such people used to live. Ethnic identity is flexible and may shift depending on the context, and assimilation of members of one ethnic group into another is common.[8] Changes in ethnic identity have clearly been underway in many of the forested areas of Cambodia (as elsewhere) and continue today. Thus a group of people who self-identify as Khmer may be descended from people who could have earlier been identified as Kui, Stieng, Por, or another ethnonym.

In what follows we describe systems practiced by people who identify as Khmer. In some cases those practices may be derived from those of other ethnic groups from whom some Khmer descend. In other cases, Khmer have moved into close proximity of other ethnic

and Timothy C. Whitmore (New York, Simon and Schuster in association with the International Union for Conservation of Nature and Natural Resources, 1991), p. 115.

[3]David P. Chandler, "Songs at the Edge of the Forest: Perceptions of Order in Three Cambodian Texts", in *Moral Order and the Question of Change: Essays on Southeast Asian Thought*, (ed.) D.K. Wyatt and A. Woodside, *Southeast Asia Studies, Monograph Series No. 24* (New Haven, 1982). On the periphery, more broadly, in the mainland Southeast Asian context, see James C. Scott, *The art of not being governed: an anarchist history of upland Southeast Asia* (New Haven, 2009).

[4]S. Lewitz and B. Rollet, "Lexique des noms d'arbres et d'arbustes du Cambodge," *Bulletin de l'École Française d'Extrême-Orient (BEFEO)* 60(1973).

[5]For one example of these large scale attempts at forest clearance, see Margaret Slocomb, "The K5 Gamble: national defence and nation building under the People's Republic of Kampuchea," *Journal of Southeast Asian Studies* 32, no. 2 (2001).

[6]Penny Edwards, "Between a song and a *prei*: tracking Cambodian history and cosmology through the forest," in *At the edge of the forest: essays on Cambodia, history, and narrative in honor of David Chandler*, (ed.) Anne Ruth Hansen and Judy Ledgerwood, *Studies on Southeast Asia* (Ithaca, 2008).

[7]For background, see Ian W. Mabbett and David Chandler, *The Khmers* (Oxford, 1995).

[8]See Fredrik Barth, *Ethnic groups and boundaries : the social organization of culture difference* (London, 1969). Barth's book is a seminal work in the study of ethnicity that shows how ethnicities are flexible and contextual.

groups with the practices possibly transmitted to the Khmer from those other groups.[9] And in others, the practices may be part of a much longer "Khmer" cultural tradition. The practices we describe below were well established among Khmer communities prior to the 1970s and we were not able to ascertain which of these cases were relevant.

## Four important Khmer forest management systems

Khmers use forests in numerous ways, some of which can be understood in systemic terms. A sample of the multitude of these forest uses is listed in the table included as an appendix. However the forest management systems on which we focus are those broadly practiced due to their material importance or cultural significance and endurance from pre-civil war times to the present. These systems include: swidden based cultivation practices; spirit forests/zones; resin tapping; timber harvesting, foraging, and opportunistic collection activities. Significant to each system is the framework of knowledge through which practices and institutions endure and are legitimated.

We base our analysis on interviews conducted over more than a decade with people from Prey Veng, Takeo, Kompong Speu, Kompong Chhnang, Pursat, Oddar Meanchey, and Kompong Thom provinces. The insights we collected into Khmer forest management systems came from interviews and observations with a variety of people engaged in forest collection and agricultural activities in and around forest areas as well as with forest product traders, government officials and NGO workers. More targeted interviews, some of which are cited below, were carried out in 2010 and 2011. They included extended conversations with NGO workers who grew up in villages and have extensive experience in forest collection practices as part of their own livelihood activities in earlier times. The informants cited in this paper are people who consider themselves to be Khmer and believe that their ancestors were Khmer.

Each of the main systems examined forms part of community memory and hence as a source of community aspirations concerning how its members wish to live. This continues to be the case more recently, and has motivated Khmer and indigenous minority forest community protests against plantation schemes that aim to clear forest areas in many parts of Cambodia.[10] To grasp these dimensions of community aspirations we have sought to

[9]The transmission of knowledge likely flowed in both directions. According to one study, policies were implemented by Prince Sihanouk during the first Kingdom of Cambodia (1953–70) under which "the government invited Khmer peasant and soldier families from the lowlands to settle in the sparsely populated hill areas in the northeast. In return for being allowed to help themselves to land, these "pioneers" were supposed to provide a good example for the uplanders to follow, such as cultivating paddy and wearing proper clothes". Jan Ovesen and Ing-Britt Trankell, "Foreigners and honorary Khmers: ethnic minorities in Cambodia," in *Civilizing the margins: Southeast Asian government policies for the development of minorities*, (ed.) Christopher R. Duncan (Ithaca, 2004), p. 246.

[10]See, for instance, Khoun Narim and Paul Vrieze, "Prey Long campaigners say police harassment continues," *The Cambodia Daily*, 14 November 2011. Opposition to these types of schemes is perhaps an enduring theme of center-periphery interaction in the Cambodian context. As David Chandler noted in his book, *Brother Number One* of the period from the late 1960s, "Over the next four years Ieng Sary and other high-ranking members of the Party lived and worked among these people. Over the years, the people of Rattanakiri, Kratie, and Mondulkiri had grown increasingly hostile to the Phnom Penh government as roads, rubber plantations, settlers, and foresters advanced into the lands. 'They hated all the Khmer', a Party member later recalled." David P. Chandler, *Brother number one : a political biography of Pol Pot*, Revised edition, (Boulder, Colo., 1999), p. 76. For a discussion of this theme at the Khmer Rouge Tribunal, see also "Transcript of Trial Proceedings Public Case File

document how Khmer systems of forest management operate and the nature of the changes that have occurred as forests have been degraded.

## Swidden systems

Apart from fuel-wood collection, if that can be generalised as a system, no forestland activity has been more widely practiced than the periodic clearance, cultivation, and regeneration of forest areas. Swidden is commonly referred to in Khmer as the making of a *chamkar* - ចំការ, in Cambodian legislation as *chamkar ponechar* - ចំការពនេចរ (shifting *chamkar*)[11], and by civil society organisations as *chamkar vil chum* - ចំការវិលជុំ (rotating *chamkar*). Swidden involves the clearance of an area of forest for cultivation for a limited period of time. A series of crops may be planted over a succession of years before the land is left fallow and is slowly encroached upon by the surrounding forest. Clearance activities, though entailing burning, may be selective in that not all trees of the area designated for cultivation are removed. Gabrielle Martel, Marie Alexandrine Martin and Jean Delvert undertook anthropological research in pre-civil war Cambodia and each chronicled aspects of the practice.[12]

Swidden cultivation by minority peoples, particularly in Cambodia's northeast, is still common and has been recognised in Cambodia's 2002 Forestry Law.[13] Khmer villagers interviewed from Aoral, Thpong and Phnom Sruoch districts in Kompong Speu all suggested that Khmer people in their areas traditionally undertook swidden activities until recently.

The practices they describe seem superficially similar to swidden as practiced by highland communities; less certain are the meanings different groups attached to the cycle of clearance, fallow, and planting. To cultivate swiddens, people cut an area of forest, then pile up the cleared material (including felled trees) to burn and subsequently plant crops. Crops planted varied from place to place, though rice was the principal crop and usually planted initially. Other crops were planted in subsequent years. Areas were farmed for several years, and then left idle to allow forest to reclaim the cleared plot when crop yields declined; bananas were often one of the last crops to be planted. The number of years an area was cultivated varied. A fallow swidden area is known as *boh* - បុស, with this land allowed to regrow as secondary forest.[14] The length of time swiddens were left fallow varied. In general, only the first person who cleared an area of land could resume cultivation after the periodic fallow. Since the beginning of the new century, the same areas have been planted continuously in the areas of Kompong Speu where interviews were conducted.

No 002/19-09-2007-ECCC-TC," (Extraordinary Chambers in the Courts of Cambodia, Kingdom of Cambodia, Phnom Penh, Trial Day 83, 24 July 2012), p. 86.

[11]See Kingdom of Cambodia, "Law on Forestry," (Phnom Penh: NS/RKM/0802/016, 15 August 2002).

[12]Gabrielle Martel, *Lovea, village des environs d'Angkor: aspects démographiques, économiques et sociologiques du monde rural Cambodgien dans la province de Siem-Réap* (Paris, 1975); Jean Delvert, *Le paysan cambodgien*, Recherches asiatiques (Paris, 1994); Marie Alexandrine Martin, *Les Khmers Daeum, "Khmers de l'origine" : Societe montagnarde et exploitation de la foret : de l'ecologie a l'histoire* (Paris, 1997). Delvert's study was first published in 1961.

[13]Article 37 states, "Local communities that traditionally practice shifting cultivation may conduct such practices on land property of indigenous community which registered with the state". Kingdom of Cambodia, "Law on Forestry".

[14]This term is used across Cambodia for fallow swiddens, perhaps indicating the prevalence of swidden cultivation among Khmers.

Residents in Kompong Speu described changes in the normative basis for undertaking cultivation. Clearing of land required a practice of *sen* - សែន (making an offering) when large trees were to be cut. The belief was, and perhaps still to an extent is, that large trees have spirits living in them, and these spirits must be appeased or perhaps transplanted to some other location before the tree can be cut.[15] While ceremonies were previously an integral part of the swidden cycle, there is less need to make offerings – to "*sen*" – as the same locations are continually farmed. Other ceremonies that may have traditionally been conducted to guide and make sense of the swidden cycle have yet to be documented. It appears that Khmers had fewer ceremonies for spirits during the swidden cycle than minority highland groups.

In Kompong Chhnang, Khmers continue to practice an apparently unique type of swidden, known as *bangkoe* - បង្កើ. This is used for preparing seedbeds. An area of forest is cleared, and the land seeded in rice. The rice is then pulled out and replanted in rice fields. After 3–4 years the area can be cleared again. While people seem to avoid places spirits are thought to inhabit, there are no ceremonies associated with making *bangkoe*.

## Spirit forests/zones

In the Khmer social world, spirits pervade the landscape both in and around villages and further away. Most Khmer villages have a guardian spirit, or *neak ta* - អ្នកតា, often associated with specific trees or distinctive geographic features.[16] Many Khmer villages have annual ceremonies for their village guardian spirit. Countless other spirits are also recognised, associated with specific trees, specific forest areas, and forests in general, in addition to other physical objects or places.[17] Some of these other spirits are called up during the ceremony for the village guardian spirit. Beliefs of this kind have made people reluctant or even fearful to cut trees or to clear areas of forest. We heard about these beliefs from people in all the provinces where interviews were conducted.

Many spirits have a close association with large trees. While forest spirits are generally referred to as *areak* - អារក្ស or *neak ta* - អ្នកតា, in some areas spirits associated with large trees are called divinities or *tevada* - ទេវតា. This was the case, for example, in Prey Veng and Pursat. In the past, people held ceremonies for these spirits before cutting large trees, or didn't cut the large trees at all. In Kompong Speu, if someone cut a large tree, he would take three

[15]These spirits may also be called upon to protect trees. For instance, in April 2012 residents of Krakor district in Pursat, held a ceremony to pray to *Neak Ta Kuch* and *Neak Ta Yeung Nop* to protect the forests and farmland from the Pheapimex company. Kuch Veng, a 47 year old resident, stated: "Villagers have prayed to the spirit to curse those who destroyed our natural resources and our farmland . . . . We are asking the spirit to remove the company who has been grabbing our farmland". See Khuon Narim, "Villagers in Pursat ask spirits to curse Pheapimex Company", *The Cambodia Weekly*, 7–13 April 2012.

[16]For backgrounds on this concept, see May Mayko Ebihara, "Interrelations between Buddhism and Social Systems in Cambodian Peasant Culture," in *Anthropological Studies in Theravada Buddhism*, (ed.) M. Nash, *Southeast Asia Studies, Cultural Report Series No. 13* (New Haven, 1966); Eveline Porée-Maspéro, *Etudes sur les rites agraires des Cambodgiens* (Paris and The Hague, 1962–1969). See particularly Porée-Maspéro, volume 1, pp. 3–16 for an analysis of the cult of *neak ta*.

[17]Of a recently discovered log, believed to contain magical powers, Pursat Province deputy director of the cults and religions department noted: "People are so into the log, that's why they are making a shelter for the log . . . .They believe it has a soul, so they have to protect the log and its soul." Cited in Phorn Bopha, "Magical log to get shelter as crowds persist", *The Cambodia Weekly*, 28 July - 3 August 2012.

stalks of dead *prech* - ព្រិច (a small bamboo) and using it as though it were a joss stick, say "I'm sorry for cutting this tree".[18] After cutting the tree, he would plant another *prech* in the middle of the stump. An informant from Prey Veng said:

> "Before 1965 or 1967, people didn't dare cut large trees – they said there is a *tevada*, *aruk areak neak ta* - ទេវតា អារុក្ខអារក្សអ្នកតា there. This applied to any large tree that was the largest tree in an area. People would cut the smaller trees around it, but they would light incense and ask for the tree – they are talking to the large tree".[19]

An informant from Pursat said that if one wanted to cut a large tree, he or she first had to light incense, and ask the *tevada* to leave.

These beliefs continue to some extent today. Informants in Prey Veng said that people are still afraid to cut large trees, but sell standing trees to people from Vietnam who cut them down. The Vietnamese reportedly say that at most they'll have to offer two pig heads to the spirit so they can cut the tree down. An informant from Kompong Speu said that young people no longer burn bamboo ("joss sticks") when they cut a tree, and there is just one tree that people know has a spirit so no one dares to cut it down.

In addition to beliefs associated with large trees, there were also beliefs and practices associated with specific forest areas (spirit forests - ខ្ទមព្រអ្នកតា). All of the informants were able to identify such areas. In some villages annual spirit ceremonies for the village spirit were held in the spirit forest.

People were afraid of spirit areas, and generally did not dare enter them, cut trees there, or clear the forest there. They say that people might get lost if they went into a spirit forest, and if someone cut a tree in a spirit forest, he might get sick. Cutting in spirit forests could also have consequences for the village. A World Bank Inspection Panel Investigation undertaken in Cambodia in 2005 noted: "During its visits to communities in northeastern Cambodia, the Panel Team heard very sincere and heart-wrenching accounts from villagers about sicknesses and difficulties in their villages, attributed to the fact that spirit forests had been cut by loggers".[20]

In numerous places, people recounted that in the past they could ask spirits for pots and dishes, which they would use in the ceremonies held for the spirits.[21] During the spirit ceremony, the spirit possessed a medium, who was typically a *neak sacha* - អ្នកសច្ចា (very honest person). Ceremonies might last three days. An informant from Kompong Speu described a spirit forest called *Preah Ang Bey* - ព្រះអង្គបី:

> "Before 1979 (sic), at 5pm every *tngay sel* - ថ្ងៃសីល (holy day or Buddhist sabbath) people could hear *phleng pinpeat* - ភ្លេងពិណពាទ្យ (a kind of music) coming from the mountain. People went there to ask for pots and pans when they held a ceremony; they got the pots and pans for the ceremonies which they held every three years in the forest on the mountain. People from all the villages in the commune participated. People went with the *smoeng* - ស្មឹង (medium). They played music, had

[18] Villager from Thpong district, Kompong Speu province, interviewed Sept. 12, 2010.
[19] NGO worker from Kompong Trabek district, Prey Veng, interviewed Sept 16, 2010.
[20] World Bank (Inspection Panel), "Report and Recommendation. Cambodia: Forest Concession Management and Control Pilot Project (Credit No. 3365-KH and Trust Fund. 26419-JPN)", (Washington, D.C., The Inspection Panel, March 30, 2005), p. 79.
[21] We did not learn the details of how this happened in practice.

> betel . . . .Three *neak ta* (spirits) possessed the medium. They were Ta Koy - តាកុយ, Lok Ta Krong Cheh - លោកតាក្រុងចេះ, and Lok Ta Thom - លោកតាធំ; they entered the medium in that order. Then people could ask for pots and dishes and food. They could ask for a *kouprey* - គោព្រៃ or a banteng; the spirits would tell them which direction to go to find one. After they killed it, they had to divide it up on the mountain. They couldn't take it home; if they didn't eat it all, they threw it away. Everyone had to get the same amount".

The same informant described another spirit forest on Phnom (mount) Preah: "Even if one cut a tree that didn't have a spirit in it, when he went to get a cart to haul it away, by the time he got back he would find that the tree had all rotted and he had wasted his effort. Thus trees could not be hauled out of this forest".[22] When going out into the forest, people took precautions to avoid provoking the spirits to cause problems for them. This involved caution concerning what was said and the making of offerings to the spirits. An informant from Pursat said that in some places, people made offerings ("*sen*") before going into the forest, to ask for permission ("*som teuk*" - សុំទឹក). There might be ten people going into the forest together, and they would *sen* before going.

An informant from Kompong Speu said: "When people go into the forest, they have to pass by the site of a spirit, Ta Koy. When they get there, if they have cigarettes or candy, they give him some. On the way back, they do it again".[23] An informant from Kompong Chhnang said: "When people walked by a forest carrying something, like a piece of fruit, they would give some to the spirit. If they didn't have anything, they would say, "all I have is a *kramar*" - ខ្ញុំមានតែក្រមារទេ. This still happens today".[24] Another from Prey Veng said:

> "If children went to tend cattle, when they were eating lunch, they would give a little rice and food for the spirit, and say: '*Som sranok sok sabay*' - សុំស្រណុកសុខសប្បាយ (please make things comfortable and pleasant for us). No matter where they went with cattle, they did this. Old people told them – whatever you eat, you need to give some. '*Lok Ngit'* - លោកងិត, even if you can't see him, he is everywhere. So you need to give him a little of your food".[25]

Special words were used when talking with the spirits. People said "*Lok ta oey, sep saoy*" - លោកតាអើយសេពសោយ which in the language of the spirits means "eat".[26] If they said "*som ma sabay*" - សុំមួយសប្បាយ, they wanted music. This is the language of ghosts. The informant in Pursat said that people who went into the deep forest used special words: "*saoy saray*" - សោយសារ៉ាយ instead of smoking and "*kom yum khlang pek*" - កុំយំខ្លាំងពេក (don't weep too loudly) when referring to laughing. Otherwise they would encounter problems. One person recounted:

> "They couldn't make a lot of noise scraping a rice pot, or use a rice pot to scoop up water. People could cut trees, but asked the spirits (*mchas teuk mchas dey* - ម្ចាស់ទឹកម្ចាស់ដី) first. If people got rocks to take home, they put leaves on the rocks, then when they got near their home they

[22]Villager from Thpong district, Kompong Speu province, interviewed Sept. 12, 2010.
[23]Villager from Thpong district, Kompong Speu province, interviewed Sept. 12, 2010.
[24]NGO worker from Kompong Trabek district, Prey Veng province, interviewed Sept. 13, 2010.
[25]NGO worker from Kompong Trabek district, Prey Veng province, interviewed Sept 16, 2010.
[26]*Maha samtoenh* - មហាសម្ដើញ refers to pig head; *kantuon bak kor* - កន្ទួនប៉ាក់ក refers to banana; *aka sahao* - អាកាសាហាវ refers to alcohol; *kapang* - កប៉ាំង refers to money.

https://doi.org/10.1017/S135618631400039X Published online by Cambridge University Press

took the leaves off; they couldn't just take them home directly. They couldn't just take rattan (*pdao* - ផ្តៅ); they had to roll it up".[27]

In Kompong Speu, a person who caught wild elephants was particularly careful when going into the forest. There were many taboos associated with this métier. When he went out hunting, his wife couldn't wash her face, comb her hair, or change clothes. If she didn't follow these restrictions, he would be endangered. Similarly people who collected *chan krisna* – ចំន្ទន៍ក្រឹស្ណា (*Aquilaria crassna*) also followed restrictions, such as sleeping on a bed rather than a hammock. Their group leader knew how to ask spirits to let them into the forest.

Spirit forests continue to be important today. In Prey Veng, in areas where almost all forests are gone, people continue to believe spirits are associated with remaining small wooded areas. An informant said of a former local forest: "Prey Ponhea Chak - ព្រៃពញ្ញាចាក់ has become smaller over time and was finished off a few years ago when people converted it to ricefields . . . . At Prey Ponhea Chak, people no longer hold a ceremony for this *neak ta* but hold a ceremony for one nearby". But at Prey Kuy, "two people have died in recent years because of the spirit. As a result, nowadays no one dares to go into this forest".[28]

An informant from Kompong Speu said that "the spirits at Phnom Preah are still powerful". A spirit ceremony is held near the village every year. But at Preah Ang Bey, "since 1979, people have not been able to ask the spirits for plates and dishes". Still, as part of ceremonies that are held during a normal year, such as weddings, people call up the spirits.

While spirits are now considered less powerful than in the past and spirit forest areas are reduced, spirit forests still tend to be in better condition than other forest areas. People also feel a certain attachment to them, and are more interested in protecting and rehabilitating them than other areas. Cambodia's forest law, at least nominally, complements this traditional practice. Article 45, though irregularly implemented, states: "Ministry of Agriculture, Forestry and Fisheries shall recognise the religious forest of local communities, living within or near the forest, as Protection Forest serving religious, cultural or conservation purposes. It is prohibited to harvest any spirit trees, thus they may be specially marked and shall be identified in a Community Forest Management Plan".[29] Despite their wide existence, very few spirit forest areas have been recognised by this formal procedure. Part of the reason is that many of the Khmer communities are not considered by government agencies to be living near enough to the forest estate. But more catastrophically, plantation businesses closely connected to the ruling elite have destroyed much of this cultural heritage of both Khmer and minority groups. Bill Herod of the NGO "Village Focus Cambodia" stated of the impact of one such scheme, run by the Socfin rubber plantation company in Mondulkiri, "[The Bunong] didn't know which way to turn. They are still unclear about exactly what's happening . . . or where they're supposed to farm . . . .From the perspective of the [Bunong], the giant machines ploughing their forests, rice fields, gardens, graves and other spiritual sites are weapons of mass destruction".[30]

[27]Villager from Boribor district, Kompong Chhnang province, interviewed September 16, 2010.
[28]NGO worker from Kompong Trabek district, Prey Veng, interviewed September 13, 2010.
[29]Kingdom of Cambodia, "Law on Forestry".
[30]Chrann Chamroeun, "Mondulkiri activists subject to restrictions, threats: NGOs," *Phnom Penh Post*, 23 June 2009. See also Geneviève Paul and Noam Leandri, "Cambodia Land Cleared for Rubber Rights Bulldozed:

## Resin collection

Resin tapping is probably the most materially significant Khmer forest management system. It is widely practiced by Khmers and ethnic minorities. It offers significant potential as a stimulus for forest preservation, although received little attention from policy-makers and reform-promoting external actors prior to 2001 when resin tree owners began to complain about the impact of logging concessions on their livelihoods.[31]

Resin is a liquid that is extracted from several species of *Dipterocarp* trees that grow in evergreen and deciduous forest areas throughout Cambodia. *Dipterocarpus alatus* (*chhoe teal* - ឈើទាល) grow in evergreen forests and *Dipterocarpus intricatus* (*trach* - ត្រាច) in deciduous forests and along the edges of rice fields. In some areas, people also reported tapping *Dipterocarpus tuberculatus* (*khlong* - ខ្លុង), which grow in deciduous forests.

The tapper cuts a hole in the trunk of the tree, near the ground, and lights a fire in the hole. Resin collects in the hole, and the tapper comes back to collect it. He (or sometimes she) scoops the resin out of the hole in the tree and lights a fire in the hole to get the resin to flow again. There do not seem to be very significant differences in resin tapping practice between Khmers and minority people.[32]

In areas where there are just a few trees close to villages, people tend to collect the resin from them more often (sometimes every day) or put rotten wood into the hole to soak up resin for making torches. People in Kompong Speu said that in the case of *Dipterocarpus intricatus* (*trach*) trees, resin might be collected from a given tree up to once every 2–3 days (as per need). If collection was delayed for too long, the resin would drain onto the ground. Informants from Prey Veng said that holes were fired in the evening and resin collected the following morning. A tapper from Prey Veng told us of the practice followed: "One would burn the hole for about two minutes, then put it out by fanning with leaves. In the morning the person scooped out the resin and put dead *chhoe teal* leaves in the resin hole to get the last bit of resin. He mixed *chhoe teal* leaves and kapok to make torches, and wrapped in *tnaot* - ត្នោត (toddy palm) leaves".[33] Elsewhere the interval between collections was longer (usually a week or more) and when larger quantities were collected the resin was not mixed with anything.

Tapped resin trees go by different names in different parts of the country. In Kompong Thom, they are called *chbah* - ច្បាះ or "that which is cut". In Kompong Chhnang and Pursat, they are referred to as *rondao chor* - រណ្តៅជ័រ or "resin holes". Though dispersed naturally throughout the forest, the trees are held as a type of customary property by the tapper. According to established norms, no one else can tap a tree once someone has done so, and

The impact of rubber plantations by Socfin-KCD on indigenous communities in Bousra, Mondulkiri", (Paris, International Federation for Human Rights (FIDH), October, 2011).

[31]Stephen O'Connell and Bou Saroeun, "Ethnic oiltappers feel logging company heat," *Phnom Penh Post*, 12–25 May 2000; Van Roeun, "Preah Vihear hill tribe asks for logging halt", *The Cambodia Daily*, 18 May 2000; Kem Sokha [President of the Senate Commission on Human Rights and Reception of Complaints], "Attention to Excellency Minister of Agriculture, Forestry and Fisheries regarding to Colexim, Mien Ly Heng, GAT, and Pheapimex [Logging Concession] company that are violating the resin trees of people, Number 022 K.Sor.B.P., 31 January 2001" (Phnom Penh, Cambodia, 2001).

[32]Ian George Baird, "Private, Small Groups, or Communal: *Dipterocarpus* Wood Resin Tree Tenure and Management in Teun Commune, Kon Mum District, Ratanakiri Province, Northeastern Cambodia," *Society and Natural Resources* 23(2010).

[33]NGO worker from Kompong Trabek district, Prey Veng province, interviewed September 16, 2010.

no one would steal resin from another's tree. Trees can, however, be transferred from one person to another by sale, gift, or inheritance.

The number of people in a village with trees and the number of trees per family have varied from place to place. In some villages just a few families have had trees; in others almost all. The number of trees per family has varied from just a few to hundreds. An informant in Oral district, Kompong Speu said that in his village there were three groups of resin tappers. His group had three people, and together they held a claim over fifty trees. An informant in Pursat said that in his village, about ten out of a total of thirty families had resin trees; each resin tapper held about 100 trees. An informant from Kompong Chhnang said that in a village of 30 families, about 5 or 6 tapped resin.

In Prey Veng, resin trees were all on private land. This land was generally passed down from generation to generation, and might be in a different village from where the tapper lived. Someone other than the landowner might own trees since trees and land were inherited differently. Trees were divided up among offspring but the land would all go to the youngest.

Resin has long been used in Cambodia to make *chonloh* - ចន្លោះ (torches) of about 80–100 cm in length and for sealing wooden boats. Resin torches were until recently relied upon as a source of light but are now used primarily as fire starters. In Kompong Speu, people made torches and sold some in the village and gave some away to other villagers. Buyers from Kompong Speu also came to some villages to obtain resin. In Prey Veng, people mixed resin with kapok to make torches, some of which were ultimately given away and some sold to traders from Vietnam. People living along nearby rivers also purchased resin to seal their boats. In Kompong Chhnang and Pursat, some people took the resin elsewhere to sell (carrying it in buckets), while others prepared torches by combining the resin with rotten wood or *preal* - ព្រាល leaves.

While fire is deployed as part of the tapping process, resin-tapping does not ordinarily hurt the trees that are tapped. Trees may be tapped for many years, and if a tree is no longer tapped, the hole will eventually grow over. The existence of many large resin trees that were tapped formerly and continue to thrive in the vicinity of the temples at Angkor are evidence of this.[34] Resin tree owners are often highly pro-active in the protection of their trees, preventing others from cutting them. In some cases, there may be an understanding at a community level that the resin tapper has rights over the surrounding forest, and the tapper might on this basis prevent others from clearing those areas.

Until the civil war commenced in 1970, resin tapping was practiced throughout much of Cambodia, by both Khmers and minority peoples. Khmer people in Prey Veng, Takeo, Kompong Speu, Kompong Chhnang, Pursat, Kompong Thom, Siem Reap and Kratie all reported resin tapping in the past.

The main tree tapped, *Dipterocarpus alatus*, is also one of the species used most commonly for timber. Periodic conflicts between resin tappers and loggers have resulted from this competition.[35] Prior to 1970, it appears that resin tappers were in a relatively strong position.

[34]On resin trees in the vicinity of Angkor, see Keiko Miura, "Social anthropological research on 'The People of Angkor: Living with a World Heritage Site'," *Siksācakr*, no. 2 (2000).

[35]Reports of the murder of one resin tapper by a guard of the Colexim concession company in Kompong Thom are contained in Global Witness, "Forest Crime Report, Sandan District, Kampong Thom," (Phnom Penh, Submitted 30 July, 2000).

An informant from Pursat said that in previous decades, if a logger wanted to cut trees on commune land, permission had to be obtained from the owner of the trees. (Resin tree owners couldn't complain about the cutting of their trees if they were outside of commune land, in a logging coupe, but the coupe owner would pay 20 *riel*s per resin tree.) Later, the People's Republic of Kampuchea forest practice rules, in Article 35, forbade the cutting of resin trees.[36] The 2002 forestry law, like its predecessor, also contains provisions protecting resin trees. Article 29 states that "it should be prohibited to harvest the following . . . .Trees that local communities have tapped to extract resin for customary use . . . ." Article 40 recognises the right of people to tap resin, stating:

> "For local communities living within or near the Permanent Forest Reserves, the state shall recognise and ensure their traditional user rights for the purpose of traditional customs, beliefs, religions and living as defined in this article.
>
> The traditional user rights of a local community for forest products and by-products shall not require a permit. The traditional user rights under this article consist of:
>
> 1. The collection of dead wood, picking wild fruit, collecting bees' honeys, taking resin, and collecting other forest by-products . . . ".[37]

Despite these provisions, logging has in recent decades destroyed huge areas of forest previously used for resin tapping. This was true of so-called "anarchic" loggers during the early 1990s and of logging concessions companies. As Prime Minister Hun Sen noted in a 1998 speech: " . . . the forest issue is the weakest point of the Royal Government in the first term. The anarchy in logging happened seriously during the period of 1994 to 1998. We can say that in the past four years the forests have been most seriously destroyed in the thousand year history of Cambodia".[38] More recently, remaining key areas of resin tapping are being lost through the massive clearance of forest areas for the purpose of creating plantation schemes. This is a prevalent trend in Kompong Thom, Siem Reap, Oddar Meanchey, and areas dominated by minority groups such as Preah Vihear, Kratie, Ratanakiri and Mondulkiri.[39]

In those provinces where resin was tapped before 1970, trees continued to be harnessed for this purpose in the post-2000 period. In Oral district, people tapped resin until 1994 when *chhoe teal* trees were depleted by logging, and people stopped tapping resin. In Prey Veng, there are still *chhoe teal* trees on private land that people tap, and because it is private land, no one else can cut the trees. An informant from Pursat stated that when people returned to their villages in the 1980s, they started tapping trees again. In more remote areas such as Kompong Thom, where suitable forests remain, tapping has expanded to meet heightened

[36]See Ministry of Agriculture Forestry and Fisheries [Department of Forestry and Wildlife], "Forestry Sector Law, *kret chbab* - ក្រឹត្យច្បាប់ [Decree Law] number 35, 25 June 1988," (Phnom Penh, People's Republic of Kampuchea1988); *ibid*.

[36]Kingdom of Cambodia, "Law on Forestry".

[38]Cited in Xinhua, "Cambodia to strengthen management of forest," *Xinhua News Agency*, 22 October 1998.

[39]VNA, "Rubber group speeds up rubber planting in Cambodia," *Vietnam News Agency Bulletin*, 20 June 2010; Alan D. Ziegler, Jefferson M. Fox, and Jianchu Xu, "The rubber juggernaut", *Science* (2009). For a good overview of these trends, see Global Witness, "The Rubber Barons: How Vietnamese Companies and International Financiers are Driving a Land Grabbing Crisis in Cambodia and Laos", (London, 2013).

international demand for resin. Today, resin continues to be tapped in these remoter areas, including in Oddar Meanchey, where there are trees that are of sufficient size.

In most areas where people continue to tap resin, the resin is sold on the market. Large quantities of resin are exported from Cambodia, primarily via Vietnam. The ultimate destination has yet to be definitively determined, but resin is almost certainly processed and subsequently re-exported from Vietnam, perhaps for the essential oil the resin contains.[40]

For people who own large numbers of trees, resin tapping can provide a sizeable income. Resin sells for between 500 and 2000 *riel*s (USD 0.50) per litre (or kg). One person may earn hundreds of dollars a year from tapping, and there are examples in Kompong Thom of people who have bought motor bikes and built large houses with money from resin tapping.

In addition to liquid resin, people in Kompong Speu, Kompong Chhnang, and elsewhere also collected a resin called *mreak* - ម្រ័ក្សណ៍ (lacquer) on a smaller scale, from the *kroel* - ក្រឹល tree. The collection process is similar to that entailed in the tapping of a rubber tree. *Kroel* trees had owners: if someone tapped a tree, no one else could cut it. In Kompong Speu, people in Oral district didn't tap *kroel* trees, but people from Oudong district came to tap them. Since 2001, the trees accessed by these people have all been cut. An informant recalled in a September 2010 interview:

> "People collected *mreak* resin, but not very much. In some places, people would tap it when a government department needed (and ordered) it. In other places, people tapped it regularly. The tapper would collect the resin every five days. He made hatch marks on a tree, and attached a bamboo tube to collect the resin. This produced 2–3 spoonfuls of resin per tube. The current price of lacquer (*mreak* resin) is 4500 *riel*s per milk can, and some people still collect it [including two people in the village of one of the informants]; they sell it to a buyer in the market. The price is 250,000 *riel*s per metal ammunition box full of resin. The resin used to be used to paint bamboo baskets to make them water proof, and also to paint the bow of a boat. *Kroel* trees are privately owned. One person might own (and tap) a swath of trees – and no one else could tap them. If one stops tapping someone else could tap the trees. The owner could cut the tree but no one else could. The wood can be used for making a house".[41]

## Timber harvesting, foraging and opportunistic collection activities

A number of other products are collected for subsistence consumption or sale when need arises or opportunity presents itself. Timber and deadwood are used for housing, fencing, boat-building and fuel; and various plants, fruits, barks and so on are used for food or medicinal purposes. Yams and betel have, in the past, been important targets for forest foraging activities.

[40] Ankarfjärd and Kegl note in a mid-1990s study of resin tapping in Laos: "Twenty years ago the demand for *dipterocarp* oleoresins increased. It is the essential oil fraction, the *gurjun* balsam, that is of interest. It is extracted from the oleoresin by distillation. European perfume manufacturers started to use it as a fixative in perfumes and since then the demand has risen . . . .The adoption of *dipterocarp* oleoresin as a component in perfumes is an encouraging example of a long-used non-timber forest product that has found its way into new markets . . . ." Renée Ankarfjärd and Miran Kegl, "Tapping oleoresin from *Dipterocarpus alatus* (Dipterocarpaceae) in a Lao village," *Economic Botany* 52, no. 1 (1998): p. 7.

[41] Villager from Boribor District, Kompong Chhnang province, interviewed September 16, 2010.

*Kduech* - ក្តឹច is a yam that grows in various types of forest. Some are larger than coconuts. They were, and continue to be, an important food supply in times of food scarcity (especially during the rice transplanting season). They are poisonous but edible once the poison is leached out. In some places they have also been used to make sweets. In general, people could dig them up anywhere they wanted, except on private land. In Prey Veng, all forest land was privately owned and people dug them up on their own land. An informant in Prey Veng said that in 1973, during the war when no one planted rice, she used to buy *kduech*. People went individually, in small groups (3–4 people), or in groups of as many as 10–20 people to dig up *kduech*.

There is a common practice associated with collection of these yams. After digging them up, people cut off the tops and planted them in the area where they had found them. They also planted *kduech* in places where none grew naturally. This was not done with the intention of going back to the specific plants and digging them up the next year, and people did not try to hide the places where they collected them. This practice was apparently very widespread, and people from different provinces reported having done it. People we interviewed from Kompong Speu, Kompong Chhnang and Prey Veng all recalled that this practice was followed in the period before the war. However we are not aware of anywhere where people continue do this. In Kompong Speu, an informant said that people no longer dig up *kdeuch* because they have enough to eat.

Kompong Speu residents also reported of the pre-civil war period that varieties of eaglewood (*chan krisna* - ចន្ទន៍ក្រឹស្ណា), a fragrant resinous heartwood found in certain trees of the Aquilaria species, were the target of foraging activities. Collectors would walk through the forest between Kompong Speu and Pursat Province, collecting the fragrant wood along the way, and sell it in Pursat to traders. A group might spend a month in the forest. Collectors travelled in groups of 10–30 people guarded and guided physically and metaphysically whilst they remained in the forest. This resonated with pre-colonial Cham practice. Collins, in his study of the Cham noted:

> "The search for this exotic forest produce was conducted by a Cham dignitary called the "Lord of Eaglewood", who would accompany a troop of highlanders adept at hunting this product by its smell . . . . On their expedition, the eaglewood hunters could only use a sacred language composed of vivid metaphors and circumlocutions. Villagers not on the hunt were under strict taboos lest the hunters come to peril".[42]

In the more recent Khmer case, a key attribute of the leader was knowing how to ask spirits to *baoek prey* - បើកព្រៃ ("open the forest") so the collectors could move through the commonly dense foliage. Multiple varieties of fragrant wood are endemic to Cambodia's south western forests and continue to be targeted as the process of extraction has become more commercially organised. This is driving the Aquilaria species that contain this resinous heart-wood to the brink of extinction.[43]

[42] William A. Collins, "The Chams of Cambodia," (Interdisciplinary Research on Ethnic Groups, Centre for Advanced Studies, Phnom Penh1996), pp. 30–33. See also, Adrien Fillastre, "Bois d'aigle et bois d'aloès", *Review Indochinoise* 1(1905).

[43] On this dynamic, for other Southeast Asian varieties, see Angela Barden *et al.*, "Heart of the matter: agarwood use and trade and CITES implementation for *Aquilaria Malaccensis*", (Cambridge, TRAFFIC, 2000).

## Traditional systems and dynamics of change

The traditional systems we examined all have the potential to advance aspirations for preserving, if in some cases significantly modifying, forests. Swiddens may be sustainable under conditions of low population pressure in a non-cash economy. Respect for spirits can leave certain areas of forest or certain trees untouched, and also reduce the intensity of logging. Resin collection provides a direct incentive for retaining mature *dipterocarp* trees. Resin tapping, in particular, causes little if any diminution in the value of trees, and resin tappers often actively help to defend the forest areas where they operate from encroachment by outsiders. Likewise, the traditional harvesting of yams is inherently sustainable, though it may not seem significant in the larger context of forest management in Cambodia.

Though they may still play a significant role, these systems rarely embed a conscious intention to further forest preservation. Partly for this reason, they may not be resilient in the face of sweeping socio-economic changes and government policies that undermine the systems' material and normative foundations.

In relation to the dramatic socio-economic changes that have occurred in the post-UNTAC period, informants in Kompong Speu told us that in the past people lacked the means to cut large trees, but also didn't feel motivated to become rich. They primarily cut wood to make their own houses, and cut only large trees as the wood from these trees was shown through experience to be more durable than that from younger trees. People would only cut 2–3 trees in a month. The informants said that around 1993 outsiders started moving into their villages and tried to cut as much timber as they could. Since then local people have begun to cut timber on a larger scale as well.

Informants in Kompong Chhnang and Pursat said that in the past, people didn't cut small trees –what were termed "immature" trees.[44] They said that before 1970, residents of their area were only involved in low-level, secretive logging facilitated by payments to the local forest wardens to allow them to cut in the state forest. No one bought timber, so no one cut trees to sell. When people did want timber, they wanted only good quality wood that was used, for example, in boat construction. The informants thought that had buyers existed, people might well have cut trees on a larger scale. After 1979, people were still not heavily involved in the sale of wood. However they said that Vietnamese military units and local government officials were involved in logging, and over time villagers too joined in. An informant in Kompong Chhnang observed:

> "Now there are lots of things to buy – so people want to have more money. There are more choices now. People want to make money – and that drives logging. People used to be ignorant but honest: '*Manuh pi daem lngong*'. '*Lngong knong kar trong*' - មនុស្សពីដើមល្ងង់ ល្ងង់ក្នុងការត្រង់".[45]

Such thoughts mirror those of a villager living in the Central Cardamom Protected Forest in Koh Kong. Commenting on illegal logging targeting rosewood in the area,

[44] *Chhoe min krup ayu'* – ឈើមិនគ្រប់អាយុ (wood that is not yet fully aged).

[45] Literally, "In former times people were ignorant: ignorant but straight-hearted". Villager from Boribor district, Kompong Chhnang province, interviewed September 16, 2010.

he noted: "Residents used to be farmers, but now they've become loggers because of money".[46]

Informants also described changes in forest policies. A Pursat resident recalled:

> "In the old days, logging was done systematically. There were coupes on state land, with rights sold to a businessman – in practice this was Mr Sen Thay, who lived in Krakor. Forestry officials put tags on trees, and then he [Mr Thay] could cut them down. He could cut resin trees on commune land only with the permission of the tree owner, and only after forestry officials put tags on the trees. During the Sihanouk regime, forestry officials were based in the forest; now they are based along the highway. They had guard posts on the top of trees, where foresters watched for smoke in case there was a fire . . . .In the past, people respected the law. Foresters forbade logging in the state forest and people didn't dare log; people could only log if they got permission. Today, if the authorities actually managed the forest, the forest could regrow. Cambodia has laws; if the people who oversee the law followed the law, people would obey the law. But the laws aren't implemented. Foresters used to do their jobs".[47]

The informant's frustrations are unsurprising given the reality of forest governance in Cambodia. In the post-UNTAC period, a central ambition of the Cambodian state's forestry apparatus was to capture rents generated from logging operations. Forest concessions were granted, in part, as a tool for achieving this goal. More recently, the Forest Administration has worked to support the conversion of forests into plantation schemes.

## Connections to community forestry

The forestry law states that the Forest Administration shall demarcate community forestry areas. Internationally, and in Cambodia, community forestry is seen as a way of involving local people in the management of forests. But few informants expressed an active desire to be involved in protective activities if the state would adequately fulfill this role. A resident of Pursat noted:

> "We have relied on the Forest Administration to protect the forest, but it hasn't worked. If we rely on them, the forest will disappear. If they could protect it, let them protect it – we wouldn't need to protect it. If things were like in the old days, it would be better, easier".[48]

It is likely that people would prefer to enjoy the use of the forests, and spend their time on activities other than its direct defense. But their choices remain problematic many components of the bureaucratic apparatus in the post-1993 Cambodian state operate as vehicles for extraction. Forestry institutions are organised and financed on this basis and connect with other state actors, primarily the military, to arrange, benefit and shield logging operations. Of rosewood (a high value timber) extraction in the Cardamom mountains, a conservation researcher noted: "It's like a gold rush – the value of rosewood is so high, it's irresistible for cutters and middlemen . . . .It's all relatively organised, how much the loggers

[46]David Boyle, Yi Somphose, and Cheang Sokha, "Logging in the wild west," *Phnom Penh Post*, 21 December 2011.

[47]Community leader from Krakor district, Pursat province, interviewed 16 September, 2010.

[48]Community leader from Krakor district, Pursat province, interviewed 16 September, 2010.

and middlemen have to pay, and to whom. They know which check points they have to go through. It has apparently reached the stage where most young men in Tatai Leu commune [Thma Bang district, Koh Kong Province] have been absorbed into the rosewood extraction".[49]

While community forestry is promoted as a way to involve local communities in forest management, there is little connection, in a normative or material sense, between community forestry as supported by contemporary Cambodian government policy and traditional Khmer forest management systems. State agencies have shown little willingness to investigate and experiment with how to bolster and incorporate these traditional systems within formalised community forestry. Resin tapping, for instance, has yet to be harnessed as an instrument for preservation – particularly in high value *dipterocarp* forests eagerly targeted for conversion by plantation developers. Rather, resin tapping is viewed as a sunset activity to replaced by employment in plantation schemes. The short term gains from forest clearance and logging luxury timber have overwhelmed the remaining, residual interest, within the institutions of government to enforce forestry laws in a manner that would build upon traditional forest systems. For instance, Chhun Chorn, Kompong Thom provincial governor, defended the granting of a rubber concession to the CRCK company in Sandan District, noting that the people have used the forest for hundreds of years but are still poor and will find a better living by working for rubber plantations and factories.[50]

Forests where local residents tap resin trees are, in fact, traditional "community forests" – *prei sahakum-* ព្រៃសហគមន៍. They are areas where proximate residents at a family level help to protect zones of forest where their resin trees are located. Through established social norms, extensive areas of forest, particularly in the north of the country, have been traditionally conserved in this way. Delineation of community forests, however, has not corresponded with the boundaries of resin forests. In areas of Kompong Thom where resin tapping is especially important, areas where there are few resin trees have often been delineated by the Forest Administration for the establishment of formalised community forestry. Similar dynamics exist in relation to spirit forest areas.[51] Efforts at a deeper understanding and documentation of these areas could provide a basis for harnessing this type of traditional system to further forest preservation.

## Conclusion

The imperative to support the rights of forest dwelling social groups in Cambodia formed a prominent part of the forest policy reform agenda from around 2001 onwards. Often this imperative was expressed in terms of the need to promote "community forestry" in the formal sense of delineating specific, usually small areas of forest within which communities could have a set of designated rights. This was the approach adopted by a number of prominent

[49]Boyle, Yi Somphose, and Cheang Sokha, "Logging in the wild west".

[50]Governor Chhun Chhorn noted of the company: "It is their right, awarded by the government, to clear that land to plant rubber. They are not acting illegally" Meas Sokchea, "Cancel Prey Lang grants: SRP", *Phnom Penh Post*, 31 May 2011.

[51]For the impact of rubber on the spirit forests of the Bunong minority in Mondulkiri, see Paul and Leandri "Cambodia Land Cleared for Rubber Rights Bulldozed: The impact of rubber plantations by Socfin-KCD on indigenous communities in Bousra, Mondulkiri", pp. 43–44.

non-governmental organisations including Concern Worldwide and the Bangkok-based Regional Community Forestry Training Centre (RECOFT). The model emphasised that a "community forest" is a limited privilege granted by the government, not an inherent cultural and economic right. Also implicit within the notion of formalised "community forestry" are two ideas that have proved to be corrosive to traditional systems of forest management. The first is the protracted process required of resident communities for their requests to establish community forests to be approved. This had tended to wear down the energy of communities eager to continue long-standing traditional management practices. The result has in many cases been a change in how these proximate communities view their rights and interests in relation to the broader forested landscape. One informant in Kompong Chhnang expressed frustration with this niggardly approach to rights, "They don't give us rights. If they gave us rights, that would be good, we could protect what we need".[52]

Grants of small areas of forest to communities for their management under the community forestry provisions of Cambodia's forestry regulations have been used instead to legitimise government ambitions to allocate far larger areas as logging concessions or for conversion into plantations. But traditional forest management systems require extensive areas and will likely be rendered physically and normatively redundant if only small islands of forest are legally retained for use by what are likely to be the more socially and economically marginal members of a given community.

The normative underpinning of these systems remains an important anchor of life in rural Cambodia. Access to forest is perhaps still felt by many rural residents to be an innate right comparable to the opportunity to be able to cultivate plots of land in order to grow rice and other produce. Traditional forest management systems constitute a normative and material claim of a different order than that recognised in contemporary government policy.

## Appendix: Other traditional Khmer forest collection/management practices

| | |
|---|---|
| Wild betel (*mlu prei-* ម្លូព្រៃ) collection | Used in various ceremonial practices including spirit ceremonies held in the forest. |
| Forest fruit collection | Fruits collected include:<br>*se moan* – សេមាន់<br>*kuy* – គុយ<br>*rumduol* – រំដួល<br>*pnheav* – ស្នៀវ<br>*srakum* – ស្រគំ<br>*pring* – ព្រីង<br>*treal* – ទ្រាល<br>*puoch* – ពួច<br>*yuk* – យុក<br>*sramo* – ស្រម៉ោ<br>*kantuot* - រំដួល |

[52]Interview with Kompong Chhnang resident, September 2010.

https://doi.org/10.1017/S135618631400039X Published online by Cambridge University Press

| | |
|---|---|
| Tuber collection | Tubers collected for consumption/sale included:<br>*damlong chrouk* - ដំឡូងជ្រូក<br>*damlong teuk* - ដំឡូងទឹក<br>*damlong tian* - ដំឡូងទៀន |
| Sapling harvesting | Used in the preparation of fish traps. |
| Hard resin (*chor chong* - ជ័រចុង) | Used for medicinal purposes, allegedly including the covering of wounds. More commonly known by its Malay name, *dammar*. |
| Aeglewood | People in some areas of Southwest Cambodia travelled in groups in the forest over extended periods, seeking out fragrant eaglewood for sale to Middle Eastern markets, often via Thai and Cham traders. |
| Bark collection | Bark was deployed in various medicinal potions and in the making of incense (*reach pouv* - រាជ្បូរ). Associated with this practice was a concern, held by some collectors, that removing bark caused pain for a tree and was a sin. In response, collectors might cover a wound with dirt. |
| Private ownership of forest | Informants in Prey Veng and Pursat described private ownership of forests in the 1960s. Other people could not cut trees on this land. This was probably the case throughout Cambodia as there would always be trees growing on private land. Informants recounted residents of Oddar Meanchey and Preah Vihear claiming trees on their "riceland" which was still forested. |
| Buddhist beliefs | Informants from Prey Veng claimed that people had religious beliefs about trees. As trees were considered to have life, the cutting of a tree was considered somewhat similar to the killing of a person. |
| Forests within pagodas | Forests within pagoda grounds have traditionally been protected from cutting and some types of collection practices. This prohibition remains in force. |
| Prohibition on collecting bamboo shoots | In an area of Kampot, where peoples' livelihoods depended on the cutting of wild bamboo to make baskets, the collection and consumption of bamboo shoots was forbidden.[53] |
| Going into the forest in groups | People who went deep into the forest would go in groups. Informants recounted that in some cases there was a group member or leader who knew magic and could "open the forest" and "close the forest". |
| Trapping elephants | Informants told of people from certain areas engaging in trapping wild elephants with the help of domesticated elephants. Beliefs and associated rules informed the conduct of this practice. |
| Hunting | Some community members were held in high esteem for their hunting skills. When wildlife was killed, it was shared amongst the members of a community. |

## References

Renée Ankarfjärd and Miran Kegl, "Tapping Oleoresin from *Dipterocarpus Alatus* (Dipterocarpaceae) in a Lao Village" *Economic Botany* 52, no. 1 (1998).

Ian G. Baird, "Private, Small Groups, or Communal: *Dipterocarpus* Wood Resin Tree Tenure and Management in Teun Commune, Kon Mum District, Ratanakiri Province, Northeastern Cambodia." *Society and Natural Resources* 23 (2010), pp. 1–16.

[53]Meng Monyrak, Kim Sarin, and Pech Bunnat, "A scoping report on the ethnobotany of Bokor and Ream National Parks," (Plant Resources Assessment and Training Project (Cambodia), Phnom Penh, October 1999).

Angela Barden, Noorainie Awang Anak, Teresa Mulliken, and Michael Song. "Heart of the Matter: Agarwood Use and Trade and Cites Implementation for *Aquilaria Malaccensis*." (Cambridge: TRAFFIC, 2000).

Fredrik Barth, *Ethnic Groups and Boundaries : The Social Organization of Culture Difference* (London, 1969).

David Boyle, Yi Somphose, and Cheang Sokha, "Logging in the Wild West" *Phnom Penh Post*, 21 December 2011.

David P. Chandler, *Brother Number One : A Political Biography of Pol Pot*. Revised edition (Boulder, Colorado, 1999).

———. "Songs at the Edge of the Forest: Perceptions of Order in Three Cambodian Texts." In *Moral Order and the Question of Change: Essays on Southeast Asian Thought*, edited by D.K. Wyatt and A. Woodside (New Haven, 1982).

Chrann Chamroeun. "Mondulkiri Activists Subject to Restrictions, Threats: NGOs." *Phnom Penh Post,* 23 June 2009.

N. Mark Collins, Jeffrey A. Sayer, and Timothy C. Whitmore, "Cambodia." In *The Conservation Atlas of Tropical Forests: Asia and the Pacific*, edited by N. Mark Collins, Jeffrey A. Sayer and Timothy C. Whitmore. (New York, Simon and Schuster in association with the International Union for Conservation of Nature and Natural Resources, 1991).

William A. Collins, "The Chams of Cambodia" Interdisciplinary Research on Ethnic Groups, Centre for Advanced Studies (Phnom Penh, 1996).

Jean Delvert, *Le Paysan Cambodgien*, Recherches Asiatiques, (Paris, 1994).

May Mayko Ebihara, "Interrelations between Buddhism and Social Systems in Cambodian Peasant Culture", *Anthropological Studies in Theravada Buddhism*, edited by M. Nash (New Haven, 1966), pp. 175–196.

Penny Edwards, "Between a Song and a *Prei*: Tracking Cambodian History and Cosmology through the Forest", *At the Edge of the Forest: Essays on Cambodia, History, and Narrative in Honor of David Chandler*, edited by Anne Ruth Hansen and Judy Ledgerwood (Ithaca, 2008).

Adrien Fillastre, "Bois D'aigle Et Bois D'aloès", *Review Indochinoise* 1 (1905), pp. 248–262, 310–325.

Global Witness. "Forest Crime Report, Sandan District, Kampong Thom." (Phnom Penh: Submitted 30 July, 2000).

———. "The Rubber Barons: How Vietnamese Companies and International Financiers Are Driving a Land Grabbing Crisis in Cambodia and Laos" (London, Global Witness, 2013).

Kem Sokha [President of the Senate Commission on Human Rights and Reception of Complaints]. "Attention to Excellency Minister of Agriculture, Forestry and Fisheries Regarding to Colexim, Mien Ly Heng, Gat, and Pheapimex [Logging Concession] Company That Are Violating the Resin Trees of People, Number 022 K.Sor.B.P., 31 January 2001", (Phnom Penh, Cambodia, 2001).

Khoun Narim, and Paul Vrieze. "Prey Long Campaigners Say Police Harassment Continues", *The Cambodia Daily*, 14 November 2011.

Khuon Narim, "Villagers in Pursat Ask Spirits to Curse Pheapimex Company", *The Cambodia Weekly*, 7–13 April 2012, p. 13.

Kingdom of Cambodia. "Law on Forestry" (Phnom Penh: NS/RKM/0802/016, 15 August 2002).

Lewitz, S., and B. Rollet. "Lexique Des Noms D'arbres Et D'arbustes Du Cambodge." *Bulletin de l'École Française d'Extrême-Orient (BEFEO)* 60 (1973), pp. 117–162.

Ian W. Mabbett and David Chandler, *The Khmers*, (Oxford, 1995).

Gabrielle Martel, *Lovea, Village Des Environs D'angkor: Aspects Démographiques, Économiques et Sociologiques Du Monde Rural Cambodgien Dans La Province De Siem-Réap* (Paris, 1975).

Marie Alexandrine Martin, *Les Khmers Daeum, "Khmers De L'origine" : Société montagnarde et exploitation de la forêt. De l'écologie à l'histoire* (Paris, 1997).

Meas Sokchea, "Cancel Prey Lang Grants: SRP", *Phnom Penh Post*, 31 May 2011.

Meng Monyrak, Kim Sarin, and Pech Bunnat, "A Scoping Report on the Ethnobotany of Bokor and Ream National Parks", Plant Resources Assessment and Training Project (Cambodia) (Phnom Penh, October, 1999).

Ministry of Agriculture Forestry and Fisheries [Department of Forestry and Wildlife], "Forestry Sector Law, *Kret Chbab* - ក្រឹត្យច្បាប់ [Decree Law] Number 35, 25 June 1988", (Phnom Penh, 1988).

Keiko Miura, "Social Anthropological Research on 'the People of Angkor: Living with a World Heritage Site'" *Siksācakr*, no. 2 (2000).

Stephen O'Connell and Bou Saroeun, "Ethnic Oiltappers Feel Logging Company Heat", *Phnom Penh Post*, 12–25 May 2000.

Jan Ovesen and Ing-Britt Trankell, "Foreigners and Honorary Khmers: Ethnic Minorities in Cambodia", *Civilizing the Margins: Southeast Asian Government Policies for the Development of Minorities*, edited by Christopher R. Duncan, (Ithaca, 2004), pp. 241–269.

Geneviève Paul and Noam Leandri, "Cambodia Land Cleared for Rubber Rights Bulldozed: The Impact of Rubber Plantations by Socfin-Kcd on Indigenous Communities in Bousra, Mondulkiri" (Paris: International Federation for Human Rights (FIDH), October, 2011).

Phorn Bopha, "Magical Log to Get Shelter as Crowds Persist", *The Cambodia Weekly*, 28 July - 3 August 2012, 10.

Eveline Porée-Maspéro, *Études Sur Les Rites Agraires Des Cambodgiens* (Paris and The Hague, 1962–1969).

James C. Scott, *The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia* (New Haven, 2009).

Margaret Slocomb, "The K5 Gamble: National Defence and Nation Building under the People's Republic of Kampuchea." *Journal of Southeast Asian Studies* 32, no. 2 (2001), pp. 195–210.

"Transcript of Trial Proceedings Public Case File No 002/19-09-2007-ECCC-TC" Extraordinary Chambers in the Courts of Cambodia, Kingdom of Cambodia, Phnom Penh, Trial Day 83, 24 July 2012.

Van Roeun, "Preah Vihear Hill Tribe Asks for Logging Halt", *The Cambodia Daily*, 18 May 2000.

VNA, , "Rubber Group Speeds up Rubber Planting in Cambodia", *Vietnam News Agency Bulletin*, 20 June 2010.

World Bank (Inspection Panel), "Report and Recommendation. Cambodia: Forest Concession Management and Control Pilot Project (Credit No. 3365-Kh and Trust Fund. 26419-Jpn)" Washington, D.C.: The Inspection Panel, March 30, 2005.

Xinhua, , "Cambodia to Strengthen Management of Forest", *Xinhua News Agency*, 22 October 1998.

Alan D. Ziegler, Jefferson M. Fox, and Jianchu Xu. "The Rubber Juggernaut." *Science* (2009).

arcock@gmail.com

Peter Swift
*University of Wisconsin-Madison*
Andrew Cock
*University of Tokyo*