



2.5 Sustainable cottage industries and the Rattan Association of Cambodia

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Introduction

Rattan, a climbing palm, is one of the most valuable non-timber forest products, or NTFPs (Dransfield and Manokaran 1994). In Cambodia, rattan is present in various habitats, from near sea level up to montane evergreen forests (Lic and Khou 2006; Khou 2008; Peters and Henderson 2014). Five species are exploited commercially.

The national rattan industry contributes considerably to GDP in Cambodia, providing an annual income of around US\$1.5 million to local livelihoods. Moreover, it has increasingly been recognized worldwide for its economic and social uses, including food, shelter and furniture products (Davies and Mould 2010; WWF 2010; Hirschberger 2011). In remote areas, many local people are highly dependent on rattan resources to supplement their income; they sell rattan products in villages to traders and for domestic use (Peters and Henderson 2014).

Rattan needs forests to grow. Cambodia is experiencing rapid economic development that to some extent is detrimental to the sustainable management of forest ecosystems. Conversion to agriculture and plantations, infrastructure development and illegal logging have all negatively affected forest quality.

A lack of market information and inappropriate national forest management policies regarding NTFPs have hampered the development of a sustainable rattan industry. Local communities are among the main participants in the rattan supply chain, and sustainability has to start with them. In order to maintain production, though, all participants in the supply chain have to be involved.



PUBLIC-PRIVATE PARTNERSHIPS ARE A WAY TO SAFEGUARD ECOSYSTEM PROCESSES, BIODIVERSITY AND LIVELIHOODS THAT ARE LINKED TO RATTAN.

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Within this context, the World Wide Fund for Nature (WWF) has provided support to help people switch from unsustainable practices to sustainable rattan production. This support addresses the full supply chain, from seed to shelf. The successful establishment of a community-based business model has enabled participants in the rattan supply chain to make stronger links between sustainable harvesting and forest resource management, and identified market opportunities for rattan products with added value.

Community-based forest enterprises can improve responsible resource management and decision-making at the community level to ensure greater benefits and sustainability (Butler et al. 2014). The benefit to communities from sustainably harvesting rattan is long-term livelihood security for local people. This encourages sustainable forest management, and thus makes local people effective stewards and guardians of their forest lands.

In Cambodia, WWF is working with various key stakeholders, such as the private sector, the Rattan Association of Cambodia, civil society and local government agencies, including the Forestry Administration, the Ministry of Environment and the Ministry of Commerce. Their initiative proposes alternatives and tools to improve the long-term development of forest management and ensure that it is addressed in public and private policies. The approach engages everyone, including villagers, small traders, enterprises and the end-users who drive the demand.

The Rattan Association of Cambodia

The Rattan Association of Cambodia (RAC) was established in 2009 as an independent, non-political organization. It has a membership of eight small and medium-sized rattan enterprises. The RAC was established at the request of rattan producers, so they could join forces to improve the supply of raw materials, increase production, and gain access to regional and international markets. It has four aims:

- to encourage rattan producers to work with communities in a way that benefits both parties;
- to apply improved management techniques and reduce rattan waste along the supply chain;
- to strengthen the voice of rattan enterprises in policy discussions; and
- to improve communication and market linkages to gain better access to domestic, regional and international markets.



The association facilitates links between private companies and local communities. RAC staff members contribute their skills at the village level in developing sustainable supply chains and in maximizing benefits to villagers while minimizing impacts on the forest ecosystem.

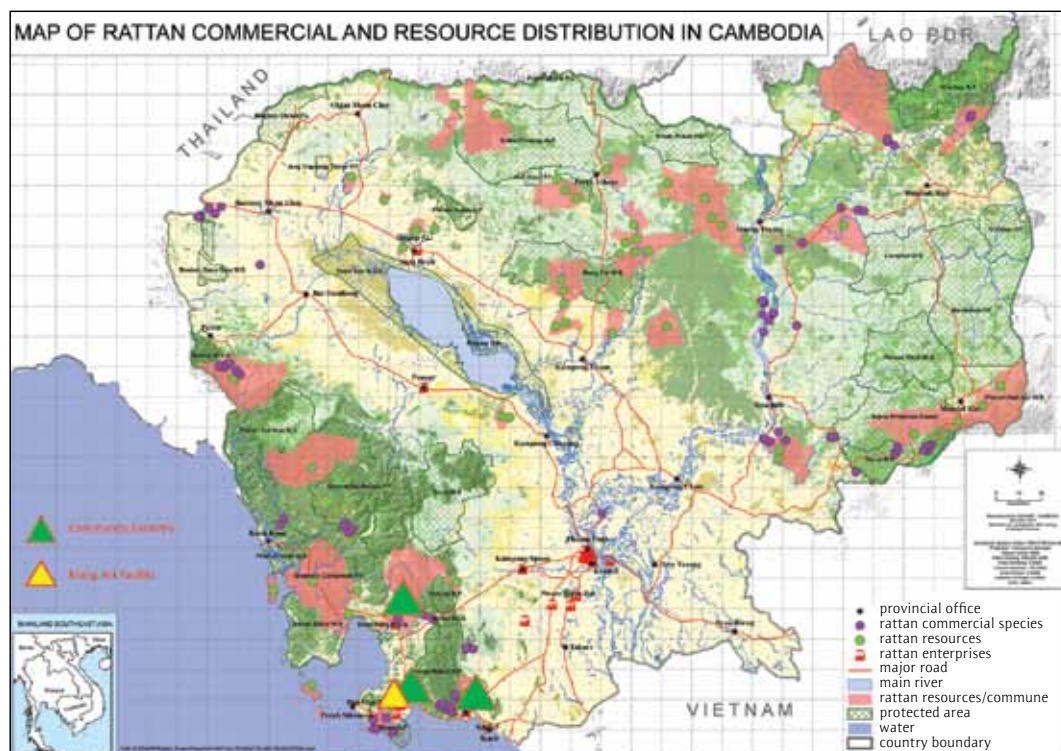
The association includes a chairman, a vice chairman, three council members and a secretary. Currently, it depends mainly on financial support from WWF Cambodia and on membership fees. It holds monthly members' meetings, and the recommendations that arise at these meetings are presented at workshops and government forums.

Members buy raw rattan and semi-processed materials from communities, traders and village producer groups, who harvest rattan from 8,300 hectares (ha) of forest under sustainable management. This has increased employment opportunities for all members of the rattan supply chain and has improved the management of rattan resources.

The Krang Art community

Krang Art village is a part of the Thmar Rong Community Forest, which was established in 2007 (Figure 1). The community forest covers an area of 682 ha and is located in Kampong Seila and O'Bak Roteah communes in Kampong Seila District in Preah Sihanouk province. It was recognized by the Ministry of Agriculture, Forestry and Fisheries in 2012 (Forestry Administration 2013). It has a registered membership of 253 families from Krang Art and Prey Praseith villages, and is an excellent example of what can be achieved when a national umbrella organization supports a community-level initiative.

Figure 1. Rattan distribution in Cambodia



Source: WWF Cambodia

The Krang Art villagers produce rattan products at the family level. In combination with harvesters and small traders they create a village-level supply chain. WWF support has built the capacity of the community to undertake rattan inventories, develop a sustainable harvesting plan, carry out business management, including product design,

and use sustainable harvesting techniques. The communities are responsible for forest management and harvesting rattan in compliance with a harvesting plan that is approved by the authorities. The community also conducts patrols to identify and stop unsustainable harvesting and wildlife poaching in their forest.

Association + community = facility

Association members recognize the importance of doing business with communities in a way that benefits both sides. They provide technical training to communities who sustainably manage their resources, and add value to the same resources by promoting handicrafts and weaving and purchasing the community's rattan products through business contracts. The partnership between Krang Art village and the association led to the formation of the Krang Art Facility.

Previously, community members made only low-quality products; these brought small profits. Most harvested rattan was sold unprocessed to traders for informal export. This led to an inconsistent supply from harvesters to the village producers, which slowed production in the village and reduced the income from rattan processing. The solution suggested by the Rattan Association of Cambodia and the community was to establish a rattan-processing workshop at the community level. This was the foundation of the Krang Art Facility.

The funds to build the facility came from a member of the association, Khmer Rajana Rattan Handicraft. The company had already set up a rattan factory on the outskirts of Phnom Penh and a shop in the city to sell finished products to customers and other traders. The company has a long-term business vision to ensure the sustainability of its supply chain and to improve business partnerships with villages. Its strategy is to broaden its business and increase income generation for the villagers, with an expectation of also reducing transaction costs.

The company initially invested US\$36,200, with a contribution of US\$3,800 by WWF as start-up support to cover development costs. The community provided labour and assisted with legal registration with the local authority. Initially, one of the communes leased a parcel of land to the company for five years to build the workshop on. However, the company considered that the site was not ideally located and thought that five years was too short for such a long-term investment, so it bought a piece of land along the main road. The 225-sq.-metre processing facility now employs 10 community members at the site; an additional 19 people work at home, producing semi-finished rattan products.

The facility is equipped with machines for splitting, bending, nailing and sanding, along with many other processing tools and machines. Improved processing equipment and techniques are now available to villagers and have greatly increased production efficiency and quality. For example, it used to take the villagers a few days to manually sand the rattan canes before splitting; this can be done by machine in a few hours.

Benefits and challenges

Economic community benefits

About 160 families in five communities in Koh Kong and Preah Sihanouk provinces — including harvesters, traders, processors and service providers — work with the facility. They harvest 4,491 ha of sustainable forest management areas.

The facility produces semi-finished and finished rattan products for sale in shops in Phnom Penh and cities in Preah Sihanouk. Villagers are employed to provide weaving and sanding services. The facility buys around 10,500 rattan canes per month from the community, with a value of US\$2,380. According to a member of the community committee, the price offered by the facility is more fair and stable than that paid by external and non regular traders, and “the harvesters can now sell their rattans the whole year round due to stable demand” (Sovanna Rith, pers. comm.).

The facility generates 29 jobs in the community, mainly for women, who earn around US\$52 per month. Salaries will increase as the experience and processing skills of villagers improve. Khmer Rajana Rattan Handicraft expects them to rise to US\$82 by 2016. In addition, the facility is starting to manufacture high-quality products such as rattan sofas, which generate more income at the community level. Currently, the villagers generate a total value of US\$2,380 from selling rattan canes and US\$1,500 per month from employment (Table 1).

Table 1. Income generation for local people who work with the Krang Art facility

Jobs	No. of employees	Income/day (US\$)	Income per month (US\$)*
Sanding (7 days per month)	20	3	420
Peeling string	1	5	150
Weaving	6	3.5	630
Framing	2	5	300
Total	29	—	1,500

*Note: based on 30 days per month

Building capacity

The facility is responsible for building the capacity of local processors in order to increase product quality. After training, community workers are able to use the processing machines. During six months in 2014 and 2015, villagers produced 120 woven chairs. The facility produces mid-range to high-quality products that sell for an average of US\$13.54 per unit; the low-end products previously produced by the villagers sold for US\$7.90 per unit. The difference in price comes from the higher quality of the products and from changes in design. The aim is to train more villagers in these new processing techniques. This would help increase their income and use resources more efficiently.

Table 2. Average monthly production of rattan furniture from the Krang Art Facility

Products	No. of units	Unit cost (US\$)	Total (US\$)
Chairs (small)	50	8.5	425
Chairs (small+)	50	9.5	475
Chairs (medium)	156	11	1,716
Chairs (large)	51	19	969
Sofa	8	85	680
Total	315	13.54*	4,265

*Note: average; also, approximately 20% of semi-finished products are sold to other rattan factories.

The goal of the Rattan Association of Cambodia is to improve people's skills in order to improve product quality and make the products more competitive. This new approach also gives the association more opportunities to work closely with the natural resource base and be responsible in forest management. This model has a strong chance to be replicated if it sustains its success in the long run and reduces exports of unsustainably produced rattan, such as the low-value rattan canes exported from Cambodia to Vietnam reported by Hirschberger (2011).

Implementing sustainable forest management

Krang Art facility is part of a strategic intervention of WWF to integrate the private sector in natural resource management. To ensure its long-term operations, the company requires a stable supply of raw materials, and this can be achieved only when sustainable harvesting practices are broadly applied and standing forests are well protected.

The project also helps to develop a strong business partnership between the villagers and the company. This is a key driver in promoting and strengthening the communities' long-term investments in sustainable forest management, which can also include a rattan nursery, enrichment planting and forest protection.

Challenges

Gap in capacity

The company's management capacity was relatively weak at the outset, with a poor processing and management system, and little engagement with local communities. Changing the ways that the company worked with local communities took more time than expected.

Community engagement, from harvesters to entrepreneurs

At the beginning, most village processors were not willing to upgrade to higher quality production to increase profits. This was due to the extra time required to learn new skills, and because lower quality products were still being ordered by their existing buyers. In

addition, most villagers were required by their loan contract to deposit cash daily to the bank, so they had to keep production stable to ensure a regular income. Therefore, it will take time before new products are adopted.

Poorly adapted legal frameworks and policies

The facility faces challenges regarding the legality of its products. Paperwork, taxes and informal transaction costs make this legal supply chain more complicated than their previous practices. Communities and enterprises have to spend a lot of time filling out forms and so the process is also more costly. In terms of policy, WWF is assisting the association, communities and local government to review gaps and propose ways forward.

Lack of capital investment

Association members and communities cannot obtain capital for investment, due to a lack of collateral, high interest rates and a lack of investment policy on forest products. With support from NGOs, the association is raising this issue in national forums and with development partners.

Financial sustainability

The association is not yet financially sustainable. Revenue from members varies, and membership fees, which are kept low, cannot cover all management costs. With support from WWF, the association is now revising its business plans and developing a marketing strategy.

Conclusions

This project has provided access for communities to five types of livelihood capital — human, social, natural, financial and economic — by implementing a sustainable rattan enterprise. As highlighted in this article, with the leadership of the Rattan Association of Cambodia and support from its members, the Krang Art facility directly contributes an average of US\$2,380 from selling rattan canes and US\$1,500 per month to the local community from employment, and provides additional increases in income through higher production efficiency. Better still, salaries are projected to increase by more than 50% by 2016 due to people gaining more skills.



Some villagers have already adopted the new processing techniques introduced by the facility. Although the community is changing to a higher production standard very slowly, community members are now aware of the higher profits that can be generated from producing higher quality products, and the demand for them is increasing, especially among association members. These factors are expected to encourage other villagers to increase the quality of their production.

Despite the challenges, the production capacity of villagers has improved, and high-quality production at the village level — which is linked directly to enterprises and avoids intermediaries — has helped reduce transaction costs. Association members accept that they must be patient while working with the community, and they now see the community as part of their business. The model is a way to introduce villagers to the manufacture of high-quality finished products for national and international markets, while promoting local responsibility in natural resource management. It is a mutually beneficial strategy that also reduces the transportation and production costs of raw materials from villages to factories to the market. The association has learned from this process, and is now considering scaling up to other communities. Members are more confident in engaging with government, and are proposing changes, even though there is still much to do.

The communities themselves are gaining more confidence, seeing themselves more as stewards in the protection and sustainable use of forests, and in doing so, are also conserving forest ecosystem services.

This business model is a success story with potential for replication. It requires sufficient time, effective collaboration and commitment from relevant stakeholders — such as local communities, the private sector, government agencies and development organizations — to ensure its viability in the long run.

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