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V. SELECTED ASPECTS OF MANAGING FORESTRY RESOURCES

A. Introduction

1. Properly managed, the Cambodia forest is capable of providing a sustainable source of government revenue and export proceeds. After the turbulence of the 1970s and 1980s, Cambodia entered the 1990s with a heritage of abundant forest resources that had largely been retained, while other countries in the region had already lost a large part of their productive forests. However, with the return of stability in the 1990s, logging proliferated, demand for Cambodia timber increased, and extraction rapidly reached unsustainable levels, exceeding the capacity of the government to regulate activity.

2. During 1994-98 the pace of logging activity far exceeded sustainable yield. It has been estimated that if logging activity had persisted at this level, economically viable forest resources could have been exhausted by 2003. Furthermore, the economic rent associated with this resource went largely to unsanctioned parties operating outside of the formal concession system.

3. In January 1999, the government embarked on a major effort to reform the sector and restore forestry as an economically sustainable resource capable of providing a revenue stream to the government, and meeting the needs of the local community, while maintaining environmental balance and biodiversity. Initial efforts consisted more of public announcements of intent (important in their own right) and were short on effective monitoring and enforcement. However, over the last eighteen months consistent efforts have been made on many fronts—with the support of technical assistance from the World Bank and AsDB,—including reducing the extent of illegal logging and taking initial steps to improve the concession management system. While much remains to be done, the reforms underway have the potential to establish a sustainable system.

B. History of the Forest Concession System

4. Historically, the limited forest harvesting that took place in a legal and controlled manner did so under a system of collection permits and log quotas that originated in colonial times. Early in the 1990s, the government made the decision to introduce private industrial forest concessions as the main instrument of commercial forest management. Government development funding and technical capacity were severely limited, and forest resources had the potential to attract significant foreign private investment capital. In principle, the system was based on a clear separation between regulation and management with the government setting standards and monitoring and enforcing performance, and the concessionaire responsible for planning, administration, harvesting operations, product processing and marketing.

5. The first concession was granted in 1994, and over the next three years, 33 concession areas totaling almost 7 million hectares were established. The awarding of concessions and negotiation of their terms was done without reliable resource assessment.

As a result, the period 1994–98 was one of significant uncontrolled and/or illegal logging activity, which substantially reduced the commercial value of many forest areas. The government failed to stop illegal felling and irregular activities of concessionaires and a wide array of others active in log extraction and marketing. Its power to do so was weakened by a combination of diffuse authority among government agencies and the various levels of government, by continuing security difficulties, and by a lack of political will.

6. It is impossible to know the true extent of all illegal logging activity at any point in time. However, it is clear that logging activity during 1994-98 far exceeded estimates of sustainable yield. Estimates made by Fund staff—taking into account available information—for the purposes of making balance of payments estimates were based on exports of logs and log equivalents amounting to as much as 2 million cubic meters per year (compared to an estimated sustainable yield of 500,000 cubic meters), and may have been even higher. The pace of logging activity was so extreme that it was estimated that the commercial value of the forests would have been eliminated by 2003 if the pace of 1996-98 had continued. Moreover, logging activity that did take place did not occur within the context of a proper system of forest management dealing further damage to the forest estate.

7. Despite this large scale abuse, Cambodia still has relatively abundant natural forests that cover, according to recent estimates, about 58 percent of the country's land area. These forests have a key role in the subsistence and livelihood of the largely rural population, can be a source of sustainable export and government revenue, and represent increasingly rare forest ecosystems. Under the government's reform program, it is clear that there has been a fundamental change in this situation during 1999 and 2000 with the scale of logging activity having been successfully lowered. Illegal logging activity outside of the concession system has been substantially reduced, while oversight and regulation of the concessions has been improving. Current estimates are that the level of logging activity declined below 300,000 cubic meters in both 1999 and 2000 giving much needed room for the forest estate to recover.

C. The Government Reform Program

Administrative measures

8. The 17 point declaration signed by the Prime Minister on January 25, 1999 is the fundamental starting point for forestry reform (see Box V.1). The declaration is an important statement of government policy and intent to implement fundamental reform of the system, and as such, has been the foundation of all reform efforts that have followed in the last 18 months. The challenge has been in monitoring and enforcing all of the clauses of the declaration.

9. The government has taken a number of specific steps over the last year: Eleven concessions were canceled in early 1999; there has been a reduction in illegal logging,

**Box V.1. Declaration of Measures to Ensure Forestry Management
And Eradication of Illegal Logging: 17-Point Order
(January 22, 1999)**

- Purchases, sales, and transportation of illegally cut logs should be ended immediately. The Department of Forestry should monitor this.
- Only forestry authorities at all levels are responsible for forestry management. Other officials and agencies should abstain from interfering in the forestry sector.
- No "transportation permits" should be granted.
- No "collection permits" for illegally cut logs should be given. Existing permits are canceled.
- No new concessions shall be granted.
- All concession contracts shall be reviewed; those that have not been implemented, as well as those that operate in violation of the contract or Cambodian law, will be canceled.
- Concessions complying with the contract shall be encouraged to equip themselves with machinery to increase the value added of their operations and products.
- The ban on exports of logs and sawn timber will be continued.
- There will be a crack down on poaching, hunting, and transporting wild life.
- Felling of trees to transform the land into private ownership is prohibited.
- Reforestation will be encouraged in degraded areas.
- Local authorities, military, and police shall cooperate with the Ministry of Agriculture, Forestry and Fishery (MAFF) to enforce the above measures. Military and police forces might be requested to intervene using all means.
- The practice of collecting unofficial fees should be entirely stopped.
- Disciplinary sanctions will be taken against any individual, unit, or agency that lends its support to illegal activities. Awards will be given to those who have cracked down on such activities.
- The Law on Forest Protection and Management should be adopted as soon as possible to provide a legal framework for forestry management and underpin the government's actions.
- The MAFF shall report regularly to the government on the implementation of this declaration.
- The Ministry of the Environment shall establish a monitoring system to follow the implementation of this declaration.

including seizure of equipment and illegally harvested logs, and the closure of hundreds of illegal sawmills; and policy and legal initiatives have been introduced. For example, a forest crime monitoring unit was established, and a comprehensive review of the concession system has been conducted. While, several important clauses of the January 1999 declaration have been broadly adhered to, several others are not yet being consistently enforced. For example, questions are still being raised as to whether concessionaires are being held responsible for violations committed on concession land.¹

Forest Crime Monitoring Unit

10. The idea of establishing a Forest Crime Monitoring Unit (FCMU) came out of the 1999 Consultative Group meeting, and the unit was formally established in October 1999. The FCMU consists of three components: (i) an office in the Department of Forestry and Wildlife (DFW) to monitor forest crimes in production forests; (ii) an office in the Ministry of Environment (MOE) to monitor forest crimes in protected areas; and (iii) an independent monitor (Global Witness) to report independently on forest crimes, as well as to monitor the performance of the above two agencies.

11. The two government agencies operate parallel information systems. They provide monthly reports to a focal point at the Council of Ministers that maintain information in a computerized case tracking system. At the same time, Global Witness continues to obtain information from its own sources while also monitoring the government's response to reported violations. Updates on the operation of the FCMU are made available to the public in the form of quarterly reports. An inception report was published in October 1999, and the first two full quarterly reports were published in January 2000 and May 2000; the next full report is expected to be published in September 2000.

12. Since its inception, the unit has suffered several problems related to less than effective coordination between different government agencies, a lack of timely release of donor funding for the operations of the unit, and some delays in allowing the independent monitor full access to all government documents. However, the unit has made substantial progress in addressing reported cases of forest crime, and represents a fundamental change from the past. Furthermore, the government's willingness to work with an internationally reputable independent monitor, and the transparency in reporting the operations of this unit, are models for other countries in similar circumstances. Despite the initial teething problems, the government remains committed to further improving the effectiveness of the unit.

Concession review

13. Not surprisingly, given the notorious past behavior in the forestry sector, the AsDB-sponsored concession review found that none of the existing concessions operated on the basis of a sustainable forest management plan. The report makes it clear that all concession areas were so degraded that completion of their initial 25 year contracts is not

¹ See Global Witness, May 2000.

possible owing to the reduced forest area. It is also clear that Cambodia's forest estate cannot sustain the number of concessions in existence. The report clearly indicates that without substantial restructuring, continued rapid depletion of commercially productive forests would lead to the irreplaceable loss of national assets of significant economic, social, and environmental value.

14. On the basis of these findings, the report recommended that the government should: (i) require all concessionaires to prepare and submit new forest management plans within a reasonable time period (three concessions were recommended for termination because of the severely depleted nature of their concessions); (ii) require all eligible concessionaires to re-negotiate and sign a new contract; (iii) establish a dialogue with concessionaires and develop and adopt a rationale for determining royalties that is based on cost, market, logistical, and risk factors; (iv) accelerate the procession of the draft Forest Law and prepare associated procedures and administrative measures; and (v) strengthen the crime monitoring capacity of the DFW and FCMU.

15. Following the completion of the concession review, the government has taken several actions toward establishing a sustainable forest concession system. First, three concessions that were no longer commercially viable were immediately canceled. For the other concessions, no cutting permits will be issued for 2000 unless required inventory information has been provided. Moreover, even for those concessions that supply the necessary information, and apply for a cutting permit after May 2000, a reduction in their annual allowable cut of 50-70 percent will be made until they have submitted proper management plans and signed new concession contracts. For the period ahead, DFW staff will closely monitor the operations of all concessions. The government has prepared a draft standard for new forest management plans and this has been made available to the concessionaires. Field work for the preparation of new management plans is expected to be carried out beginning by October 2000, and new management plans are expected to be supplied during the course of June-October 2001. Further concessions are expected to be canceled if they do not submit new management plans.

Legal framework

16. In February 2000, the government approved a sub-decree on concession management. Based on World Bank technical assistance, the subdecree lays the foundation for improved industry performance by establishing a competitive bidding process for future concessions, criteria for pre-qualification of bids, and fundamental requirements for concession management and planning. The application of the sub-decree to existing concessions will require re-negotiation of concession agreements.

17. The Department of Forestry and Wildlife (DFW) prepared a draft Forest Law in 1999, with technical assistance from the AsDB. The draft law is detailed and comprehensive and is intended to provide a legal framework for (i) establishing the role and power of government agencies in forestry administration and enforcement; (ii) forestland classification including the establishment of a permanent forest estate; (iii) the

rights and obligations of all parties involved in forest exploitation; (iv) forest revenue collection; (v) private and community forestry; (vi) conservation and protection of forests and wildlife; and (vii) forestry crimes and penalties. An initial draft of this law was released for public comment in May 2000. Further consultations will be needed before a final version of the law is presented to the National Assembly.

D. Issues in Forestry Taxation ²

Background

18. During 1995-98, it has been estimated that as much as 8 million cubic meters of forest resources were cleared from the land. Proper resource pricing and monitoring should have yielded government revenue on the order of 3-4 percent of GDP per annum (about 80 percent of total tax revenue collected during this period). However, government revenue during that time amounted to only a fraction of this amount (see table below), revealing the sharp deterioration in governance.

19. The size of the revenue loss during this period reflected inadequate institutional control and enforcement capacity that led to a volume of logging far in excess of sustainable levels, as well as a failure to collect the required royalties. Existing estimates, based on sustainable use and current international prices, indicate potential government revenue from forestry is not likely to exceed \$30 million per year (about 1 percent of GDP). While the narrow financial value of the resource can be quantified to some level of precision, there are other aspects of economic value that should also be taken into account in formulating government policy. These include: (i) the value of nontimber forest products; (ii) long-term value of ecological functions such as watershed protection and carbon storage; (iii) potential benefits from eco-tourism; and (iv) preservation value. While these are difficult by their nature to quantify, they have been identified as still having the potential to yield an economic return in Cambodia, and therefore, argue for establishing a system of sustainable forest management aiming to maintain the forest and biodiversity while producing a predictable flow of timber and non-timber products and services from the forest.

Table V.1: Revenue from Forestry 1/

	1994	1995	1996	1997	1998	1999	2000 (Proj.)
In millions of U.S. dollars	41.9	29.1	12.6	13.9	6.5	12.8	12.6
In percent of GDP	1.7	0.9	0.4	0.4	0.2	0.4	0.4

1/ Includes timber royalty, export tax on timber, and license fee from timber exports.

² Some of this information is derived from annex 7 of EBS/99/188.

Current revenue system

20. The absence of an appropriate concession management system results in extensive tax evasion and a low rate of forest revenue collection, especially through false declarations of the measured volume of timber harvested. The current forestry revenue system in Cambodia consists of three elements set administratively, with predominant reliance on the timber royalty.

(i) **Timber royalty:** Official rates of timber royalty, as well as the FOB reference prices, were determined in Decision No. 100 of February 27, 1995. In 1999, the government increased the royalty rate from an average of US\$14/m³ to US\$54/m³ (for grade 2 category). Royalties are also set for grade 1 and grade 2 timber, but the large majority of timber harvested in Cambodia is grade 2.

(ii) **Export tax and license fee:** Set at 10 percent of the FOB reference prices, and 1 percent of the FOB reference prices respectively. Since log exports are currently prohibited, these taxes apply only to timber products.

(iii) **Reforestation tax:** Reforestation tax has been imposed on all concessionaires since 1994. The rates are set separately for each concessionaire (a range of US\$2 to US\$2.6 per cubic meter).

21. The objectives of the current forest revenue system are not clear, and the system provides neither appropriate government revenue nor effectively contributes to the management of forestry resources. There has also been a lack of transparency in setting the level of forest charges, as concessionaires have often negotiated bilaterally with the government. The adjustment in royalties in 1999 was seen by the industry as arbitrary and not consistent with current international prices. Finally, to carry on business smoothly, concessionaires have often been obliged to pay facilitation fees or other forms of unofficial taxation to local authorities, police, and the military.

Reforming the revenue system

22. It is impossible to control the volume of harvesting with a tax, given the state of Cambodia's institutional capacity. Fiscal instruments alone cannot substitute for traditional regulatory approaches or establish sustainable forest management.³

23. The government is currently reviewing the existing royalty structure, and is prepared to receive input from an industry sponsored study before making further changes to the revenue system. Any changes in the revenue system would likely need to take into account the following factors:

³ See for example Leruth, Paris, and Ruzicka.

- Any changes should be consistent with administrative capacity in Cambodia (to the extent possible) and should be implemented in the context of the restructuring of concession agreements.
- A combination of an area-based fee and royalty is one alternative with the possibility that an “area-based fee” could be assessed in the form of a minimum royalty. A minimum royalty assessed on a per hectare basis could yield significant and predictable revenue for the government. Actual logging would be monitored with royalty assessments offset until minimum royalty payments are surpassed.
- Any new royalty system should ideally be structured in way that is seen by concessionaires as being more fair and predictable (e.g. to more closely reflect international price trends).

E. Conclusion

24. Reforms already undertaken in the forestry sector are substantial and meaningful. However, despite the progress that has been made, an effective system for managing forest resources has yet to be established. This is essential for establishing the sustainable use of the forest estate and remains the principle challenge for the period ahead. A problem remaining from the past that confronts the FCMU and government officials in general is that much illegal activity is still in the hands of powerful interests that can not easily be controlled. However, with determined and consistent implementation of existing plans and commitments, by the end of 2001 remaining concessions should include only those areas that can support long-term forest production (without conflict with local communities), managed by companies with demonstrated capacity, using plans of an acceptable standard, and monitored by a strengthened DFW that is supported by a clear mandate and legal framework.

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Box V.2. Types of Forest Charges

A forestry revenue system needs to balance the objectives of providing appropriate government revenue and effectively managing forestry resources. In particular, the level of forest charges affects the rate of harvesting and the type of species or grade of trees to be harvested.

The types of forest charges can be classified by the charge-base upon which they are levied (area, volume, etc.) and evaluated in terms of the above considerations.

(i) Charges on concessions

- License fees set to fully reflect the value of the concessions. This system is easy to administer and the risk of evasions is low, but the right value of concessions and of fees is difficult to determine.
- Annual ground rental based on the area of the concession. Compared to license fees, this system can more easily accommodate the value of concessions, and therefore, this system is expected to collect a more certain amount of revenue. If the level of the charge is based simply on the total ground area, this system can be easy to administer, and the risk of evasion is low.
- Fees based on standing timber volume and the annual allowable cut. If these fees corresponded closely to the value of the concessions, this alternative system could capture a greater share of the value of concessions. However, these patterns can be difficult to measure and can be abused through manipulation of inventory figures or allowable cut estimates. This system is also likely to negatively effect forest management, since it tends to encourage rapid cutting of timber.

(ii) Charges on timber harvested (per-tree or volume based)

- Per-tree charges based on the number of trees harvested, with the charge rates varying by species group. Administratively, this system is very simple, but if charges are constant irrespective of tree diameter, they can discourage the full utilization of trees because this system will encourage the cutting of larger trees.
- Volume-based charges levied on the measured volume of timber harvested, as is now applied in Cambodia. Various types of volume-based charges are possible, from uniform to complex charges including such variables as species, log grade, market prices. To derive satisfactory fiscal revenues, volume-based charges should reflect the stumpage value of timber harvested, while keeping the system administratively simple and practical. However, if the rate is set too low, more timber will be cut, including less valuable species, lower quality logs, and smaller diameter trees, while forest revenues will be low. On the other hand, if the uniform rate is too high, this could discourage the cutting of some species, sizes and qualities of trees. Moreover, if charges are too high, they may encourage illegal activity.

(iii) **Charges on timber products**, at a uniform rate per cubic meter (or ad valorem) or variable with species and grade. These charges are practical where administration of volume-based charges is difficult, and where the measurement of timber products can be relatively easy. However, these charges are regarded as second best. Since timber harvested is not taxed directly, it is difficult to fully capture stumpage value by this system. In addition, this system tends to encourage inefficient processing.

(iv) **Combined charges.** If charges on timber harvested and on timber products are applied together, the system can better capture the stumpage value of timber. In addition, this system can reduce the risk of under-reporting or evasions through cross-checking.

Table V.2 Cambodia: Current Status of Forest Concessions

I. Concessions Operating in 1999¹

Company	Approved AAC in 1999 (m ²)	Reported Harvest (m ³)
1. GAT International Co. Ltd.	55,011	3,732
Koh Kong		
Kampong Thom	52,440	14,715
2. Colexim Enterprise	41,027	41,193
3. Casotim Co. Ltd.	18,500	4,845
4. SL International Ltd.		
Kratie/Mondolkiri	129,949	77,060
Koh Kong	88,620	6,810
5. Mieng Ly Heng Investment Co. Ltd.	50,112	18,712
6. Long Day Machinery Industry Co. Ltd.	34,708	1,732
7. Pheapimex Fuchan Cambodia Co. Ltd.		
K. Thom/Kratie	141,075	50,830
Stung Treng	69,439	12,306
S. Treng/Ratanakiri	0	0
8. Lansong International Co. Ltd.	33,204	4,743
9. Hero Taiwan Company	18,450	2,494
10. Kingwood Industry Pte Ltd.	86,453	20,178
11. Cam. Chemdar Plywood Mfg. Co. Ltd.	37,025	11,080
12. Sam Rong Wood Industry Pte Ltd.	0	0
13. Everbright CIG Wood Co. Ltd.	48,110	11,639
14. Super Wood IPEP Ltd.	30,009	8,802
15. Timas Resources Ltd.	0	0
16. Silveroad Wood Products Ltd.		
Koh Kong/Pursat	31,250	0
Koh Kong	0	0
17. You Rysaco Company	0	0
18. TPP Cambodia Timber Product	0	0
19. Voot Tee Peanich Import Export	0	0
20. Cambodia Timber Product Pty Ltd.	0	0
TOTAL	965,382	290,871

¹ This list excludes 11 concessions covering 3.4 million hectares that were cancelled in January 1999.

II. Concessions Permitted to Harvest in 2000 (as of July 30, 2000)

Company	Approved AAC in 2000 (m ²)	Reported Harvest (m ³)
1. GAT International	35,762	17,432
2. Youry Saco	29,378	2,778
3. Colexim	27,315	28,297
4. Mieng Ly Heng	27,565	5,610
5. Pheapimex Fuchan Kratiel	28,602	11,086
Strungtreng	15,170	2,733
6. Cambodia Chemdar Plywood	36,318	-
7. Everbright CIG Wood	31,459	8,273
8. Hero Taiwan	3,498	-
9. Samrong Wood	10,735	-
10. Silveroad Wood Products Ltd.	10,535	-
11. King Wood	13,148	-
TOTAL	269,485	76,209