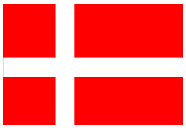
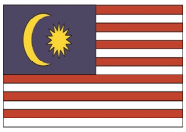
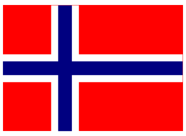
International workshop of experts on financing sustainable forest management

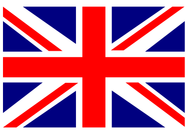
Oslo, Norway, 22 – 25 January 2001

A Government-Led Initiative in Support of the United Nations IPF/IFF/UNFF Processes









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An Overview of National Forest Funds: Current Approaches and Future Opportunities

by

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AN OVERVIEW OF NATIONAL FOREST FUNDS: CURRENT APPROACHES AND FUTURE OPPORTUNITIES[*]

Kenneth L. Rosenbaum and Jonathan M. Lindsay[**]

Executive summary

This paper presents an overview of the various approaches that developed and developing countries have used in designing national forest funds. It is based on a study of legislation in over forty countries and a review of some of the few empirical studies of forest fund performance. The overview may serve as checklist of issues and options for policymakers who are designing funds. It also may illuminate ongoing discussions about appropriate international roles in forest financing.

The paper presents some of the common arguments for and against the use of dedicated funds. Understanding these may help improve fund design.

Finally, this paper describes some likely future roles for funds to promote sustainable forest management.

What is a national forest fund?

As used here, the term "national forest fund" does not refer to a specific model, but instead describes a constellation of approaches. In their most basic form, forest funds are designed to set aside a portion of national revenues for forestry purposes. They exist for more than a single government budget cycle, segregating specific forestry-related revenues and earmarking them for investment in the forest sector. Starting from this basic model, there are many variations.

The range of variations

Forest funds vary with respect to their organisation, income sources, uses, and oversight.

Organisation. The simplest funds are little more than entries in the account books of the government, under control of the forest or finance ministry. More complex funds may have separate institutional structures, such as a separate agency to administer the fund or a separate advisory board. In some nations, the institution administering the fund is partially or fully independent, perhaps existing as a corporation or trust. Rather than co-ordinating spending on a national level, some funds are decentralised spending entities, holding money for local management units or communities.

Income Sources. Funds may draw income from general government revenues, sales from government forests, forest-related taxes, forest law enforcement, donations, fund-supported projects, loans, and innovative fees tied to forest environmental services. Some funds take income from a broad range of these sources while others specialise on a narrow range.

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[*] This paper was presented at the Oslo workshop as Document No.: Oslo /IV.2/FF

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Uses. Many funds support government activities in the forest sector. They may support general administration of the forest bureaucracy. They may support management of public lands, perhaps including land purchases. They may support government actions for the general benefit of the forest sector, such as market promotion, research, public education, insect and disease control, and fire fighting. They may support public participation in government forest policy activities.

Funds can also directly support private and community forestry. They can finance reforestation and afforestation, management planning, and plan implementation. Some funds make payments to promote non-commodity uses of forests, such as production of environmental services.

Funds can also support other private activity. Some funds promote forest-based manufacturing. Some support economic development of forest communities.

Oversight. Fund legislation may create mechanisms to protect the integrity of the fund. These may include requirements for transparency, advisory boards, record keeping and accounting, or regular auditing.

Main arguments for and against national forest funds

The common arguments in favour of forest funds include these:

Funds can help meet needs for long-term investment. Sustainable resource development requires long planning horizons. Funds can serve as a surrogate voice for the interests of future generations.

Funds can shield the forestry sector against the fluctuations and unpredictability of national budgets. They can insulate forest programmes from changing political winds and compensate for the traditional economic undervaluing of forests and the political weakness of forest constituencies.

Funds can help stimulate more effective forest management by government agencies. By creating a pool of money that will not be forfeit if unspent at the end of a budget cycle, they encourage more efficient spending. They can also be designed to free forest administration from rigid bureaucratic rules.

Funds can allow for greater oversight of forest spending. By isolating forest funding, setting up record keeping requirements, and requiring independent audits, a fund can make bureaucracies more accountable.

The common arguments against forest funds include these:

Funds can trap capital in the forest sector. In some nations, it would be better to invest forest income to develop other sectors.

Funds can prevent ideal allocation of government budgets. They exempt forests from competing fairly for scarce government funds.

Funds can transmit misleading economic signals to bureaucrats. For example, funds that generate income from commercial activities on government forests may lead managers to undervalue environmental services. Funds that guarantee a base income to forest agencies can weaken the incentive to spend that income wisely or can give government budget makers an excuse to cut support to forestry from general revenues.

Funds may invite corruption. Keeping money outside the normal budgeting process may increase opportunities for illegal diversion or mismanagement.

Future roles for national forest funds

Too little research has been done on the performance of funds to give definitive guidance on fund roles. However, some ideas embodied in existing fund legislation stand out as models for constructive use of funds.

Funds can be tools for decentralisation and devolution of forest management. National funds can channel assistance to sub-national governments and communities. Alternatively, multiple local-level funds can assure a stable base for local forest initiatives. Funds can also promote decentralisation by support of public participation in forest policy making or by support of community forestry.

Funds can encourage private sector initiatives. They can support industrial forestry or non-industrial forest landowners. They can tap economies of scale to provide goods or services that individuals acting alone would find difficult or expensive to acquire.

Funds can increase accountability and transparency. Funds can involve stakeholders outside the government in fund administration, require that forest spending follow public plans, and require regular independent auditing of that spending.

Funds can promote the production of environmental goods and services. Forests produce non-commodity goods like clean water and carbon sequestration. A fund can capture the value of these goods through taxes or fees on the beneficiaries, or in the case of carbon sequestration, through innovative systems of property rights. A fund can then return that value to forest owners. By effectively internalising economic externalities in the case of these non-commodity goods, funds can tap market forces to encourage more sustainable forest management.

Summary Table. List of Fund Legislation Reviewed[1]

Country	Fund	Thumbnail description
Albania	Fund of the Directory General of Forest and Pasture	Reserves a percentage of revenues from government forests to support forest-related activities.
Bolivia	National Fund for Forest Development (FONDOBOSQUE)	Reserves revenues from multiple sources for forest projects.
Brazil	reforestation fund	Uses income from a reforestation tax for reforestation projects.
	Carajás Forest Fund	Private regional fund that assesses fees on pig iron manufacturers (industrial charcoal users) to fund creation of plantations to sustainably produce charcoal.
Bulgaria	Concessions Cost Recovery Fund	Reserves a portion of the income from concessions to cover administration costs.
Burkina Faso	Fonds forestier	Holds donations and other income for use on forest, wildlife, and fishery projects.
Cameroon	Fonds Spécial de Développement Forestier	Formerly took money from multiple sources; now apparently takes money from annual budget allotment to use for forest purposes.
Canada	Forest Resource Improvement Association of Alberta	Quasi-public provincial entity that collects forest-related dues, levies, and fees and spends them on reforestation and forest management.
	Forest Renewal BC (British Columbia)	Quasi-public provincial entity that receives a portion of forest royalties from Crown lands and spends on environmental, economic, and social projects related to forests.
Congo (Brazzaville)	Fonds d'aménagement et des ressoures naturelles	Receives income from multiple sources; finances work in forestry, wildlife, and aquaculture.
Costa Rica	Forest Fund	Receives income from multiple sources; spends on forest administration and other activities promoting sustainable forest development.

[1] More complete descriptions of the funds reviewed appear in Appendix A.

Country	Fund	Thumbnail description
	National Forest Financing Fund (FONAFIFO)	Focusing on small and mid-sized landowners, the fund takes income from various sources including a hydrocarbon tax. Can reimburse forest owners for provision of environmental services.
Croatia	simple biological reproduction account	Collects a portion of income from timber sales plus the proceeds of a general tax on industry (representing value of environmental services) for financing reforestation.
Cuba	National Fund for Forest Development (FONADEF)	Promotes activities to conserve and develop forest resources, particularly inventories, management, protection, and research.
Cyprus	communal forest funds	Individual funds for each communal forest receive income from forest produce to finance forest management.
Dominican Republic	Special Fund	Receives income from multiple sources, including the sale of special postal stamps; spends on conservation of forest resources, reforestation and agroforestry, fire and disease prevention, and extension work.
	Forest Trust Fund	Receives income from donations and from compensation for environmental services; spends on sustainable forest development in priority areas.
France	Fonds Forestier National	Takes income from a tax on forest products and supports research, tree nurseries, forestry promotion, public education, public sector afforestation and forest protection, and private afforestation.
Gambia	National Forestry Fund	Receives income from multiple sources for protection, development, and sustainable use of forests and promotion of community forestry.
Guatemala	Special Forest Fund	With income from multiple sources, the fund is spent on forest development, industrial forestry, management of natural forests, agroforestry, watershed restoration, reforestation, research, agroforestry education, and other purposes.
Guinea	Fonds Forestier	A general forest development fund tapping several forest-related income sources.
Indonesia	Reforestation Fund	Gets income from a tax on logs, chips, and other raw materials; spends on reforestation, plantation development in non-productive forests, and rehabilitation of other lands.
Laos	Forest and Forest Resource Development Fund	Receives income from national budget and other sources; may be spent on a broad range of forest activities, including public education.
Lesotho	Forest Fund	Receives all fees collected under the Forest Act; may be spent on forest management and research, including assistance to private and community forests.
Lithuania	Forest Fund	Receives income from state forests plus forest-related fines and penalties; spends on state forest management and administration.
Madagascar	Fonds Forestier National	A special account under private management.
Malawi	Forest Development and Management Fund	Receives income from multiple sources; spends on forest management with emphasis on working with local communities.
Malaysia	Forest Development Funds	Individual funds created in each state. Receive income from various sources and spend on state forest management and administration.
Mauritania	Fonds National de Développement Forestier	Receives income from taxes and fees and spends on reforestation and forest protection.
Mozambique	Forest and Wildlife Development Fund	No specifics given in statute.
Nepal	user group funds	Participants in community forest programs keep funds that receive income from forest activities, donations, and government support; to be spent on forest management and community development.
Norway	Forest Trust Fund	Receives income from assessments on transfers of forest products. The money collected must be used to benefit the forest from which the forest products originated.
Philippines	Special Deposit Revolving Fund	Receives income from forest-related fees; spends on various forestry projects.
Senegal	Fonds forestier national	Receives income from sales of forest products from government forests, plus other sources; spends on government forest projects and on support to private and community forestry.

Country	Fund	Thumbnail description
Solomon Islands	Forest Trust	Receives income from multiple sources including forest-related fines, license fees, and levies; spends on tree planting and tending, reforestation, and other purposes.
South Africa	National Forest Recreation and Access Trust	Specialised fund dedicated to recreation; notable for public participation and transparency provisions.
Sri Lanka	Forest Department Fund	Specialised fund devoted to law enforcement activities such as paying rewards and compensating forest officers injured in the line of duty.
Tanzania	Tanzania Forest Fund	As proposed in draft law, the fund would be a semi-independent trust, getting income from various sources and spending on forest development, including education, research, and community forestry.
Tanzania (Zanzibar)	Forestry Development Fund	Income from various sources to be used for a broad range of forest projects; fund establishment requires approval of Finance Ministry.
Tunisia	[fund for sylvo-pastoral development]	Supports private and collective efforts to improve forests and pasture lands outside of the State's forest domain.
United States	Knutson-Vandenberg Fund	Takes receipts from timber sales on national forests and dedicates them to forest management and environmental projects in the forest generating the income.
	Reforestation Trust Fund	Takes income from tariffs on imported solid wood products to fund reforestation and stand improvement on public forests.
	Rural Fire Disaster Fund	Assists sub-national governments with forest fire fighting.
	Land and Water Conservation Fund	Takes income from offshore oil and gas royalties and supports purchase of public lands by national and sub-national governments.
	America the Beautiful Act	Example of establishment of urban tree-planting fund administered by independent NGO.
	Woodland Incentive Program fund (Maryland)	Taxes land transfers to support small landowner forest management.
	Chesapeake Bay Trust (Maryland)	Takes income from donations and sales of special automobile licence plates; supports reforestation to improve water quality.
	Forest Resource Trust (Oregon)	Supports private lands reforestation in return for share of any future forest income; also markets resulting carbon sequestration.
Uruguay	Forest Fund	Receives income from various sources; spends on loans to forest land owners and light industry, forest land purchase, and public forest management. Spending follows long-term plan.
Vanuatu	Forestry Fund	Receives forest-related government income, general revenues, and donations; spends on forest plantations, afforestation, and reforestation.
Vietnam	Forest Regeneration Fund	Receives income from a fee charged on all harvests; spends to plant new forests, restore damaged forests, and manage and protect existing forests.
Zambia	Forest Revenue Fund	Receives income from licences, fees, and concessions.
	Forest Development Fund	Promotes the wood processing industry and afforestation and reforestation programmes within the forest sector.
	Fund for Joint Forest Management	Supports local forest management efforts.

1. INTRODUCTION

The search for ways to improve the financing of sustainable forestry is taking place on several different fronts simultaneously. Much recent attention has focused on nascent or potential *global* mechanisms, including carbon funds and various international transfer mechanisms. At the same time, a variety of techniques are also being explored at *national* levels to increase the magnitude, and improve the effectiveness, of investments in sustainable forest management from both public and private sources (Richards, 1999 and Moura Costa *et al*., 1999).

One group of mechanisms that figure prominently in many current national strategies are specialised funds created specifically to support forest management, frequently referred to as "national forest funds."

National forest funds are not new — in one form or another, they have long been a feature of the institutional landscape in various parts of the world. The United States' Knutson-Vandenberg Fund dates to 1930 (Rosenbaum 1993), while Spain's *Patrimonio forestal del Estado* was established in 1939 (Fontaine 1961). France's *Fonds Forestier* was created in the mid-20th century as a direct response to the devastation of France's forest industries during World War II (Liagre 1997). By the late 1970's, FAO reported that provisions concerning forest funds were present in the legislation of at least ten Latin American countries (McGaughey and Gregersen 1988). In the last two decades, there has been a steady proliferation of national funds created by legislation in countries throughout Africa, Asia, the Pacific, Eastern Europe and the former Soviet Union.

This paper provides an overview of the various approaches that both developed and developing countries around the world have used in designing national forest funds. This overview has two inter-related purposes.

First, it is intended to serve as a detailed checklist of issues and options for policymakers engaged in the design or redesign of national funds, or of analogous forest financing mechanisms at all levels. Drawing primarily from a review of national forestry legislation, the paper describes the main structural and operational issues surrounding forest funds, and illustrates the variety of national responses to these issues.

Second, it is offered as a contribution to ongoing discussions about appropriate *international* responses to the financing predicament facing forestry in many parts of the world. There is increasing consensus that the quest for better international financing mechanisms is in large part a search for more effective national counterparts; that is, institutions at national level with the capacity to absorb, manage, utilise and build upon international investment effectively. An appreciation of national forest funds, with attention to some innovative features that have emerged in recent years, will be an important part of that search.

National forest funds are often the subject of controversy, and as Part IV of this paper reports, there are frequently cited policy and economic arguments both for and against the use of such funds. However, one of the messages of this study is that there is a dearth of detailed, systematic and empirical research into the actual operation and effectiveness of national forest funds. Existing literature on the concrete experiences of national funds is extremely thin, and with the exception of certain examples distinguished by their innovativeness or their notoriety — such as Costa Rica's FONAFIFO or Indonesia's Reforestation Fund — national forest funds seldom receive sustained international attention. Indeed, it may well be the case that some of the funds described in this paper exist in legislative form only, having never been funded or put into operation.

Given the current state of available information, therefore, it is beyond the scope of this study to offer detailed findings as to the actual functioning of national funds, their effectiveness in practice, or the quantum of financial resources they handle. Instead, this paper is intended in part to provide a starting point and conceptual framework for future research along these lines.

2. WHAT IS A NATIONAL FOREST FUND?

As used here, the term "national forest fund" does not refer to a specific model, but instead describes a constellation of approaches. As succeeding sections of this paper will illustrate, there is significant variety — and *increasing* variety — amongst national funds in terms of their objectives, structure and financing.

In their most basic forms, national forest funds generally share the following characteristics:

They are devices designed to ensure that some portion of national revenues is set aside for forestry purposes.
They are created to exist for more than a single government budget cycle — that is, they are more than just an item in a spending plan that might or might not be repeated in subsequent plans.
Their creation and replenishing usually entail the segregation of a specified percentage or category of forestry revenues (such as fees, taxes, royalties, etc.) from the general treasury and an earmarking of those revenues for reinvestment into the forestry sector. These resources may be supplemented by money from other specified sources, such as government appropriation or international donors.

This "basic" approach is one that is approximated by a number of the countries whose laws were reviewed for this study. The Forest Development and Management Fund created in Malawi's *Forestry Act* 1997 provides a typical example. The Fund consists of various categories of payments, including levies on wood felled or extracted by the Forestry Department; sale proceeds of seized forest produce; voluntary contributions; and sums appropriated by Parliament or donated by foreign governments or international agencies. The Fund is administered by the Minister responsible for forestry, and is to be used for "the conservation, augmentation and management of forest resources and forest lands in Malawi." According to one assessment, establishment of the Fund means that Malawi's Forestry Department now retains up to 80% of the taxes and fees it collects (Landell-Mills 1999).

But while this basic model may serve as a starting point for discussions, there are many national funds that diverge — often significantly — from this model with respect to several variables. These variables are explored in detail in Part III, below, but it is useful to introduce them here in summary form to help illustrate the breadth of the field with which we are concerned:

- ***National forest funds vary with respect to their <u>structure and governance</u>:*** At one end of this spectrum, a fund may be nothing more than a segregated account within a government's budget, required by law to be spent a certain way. At the other extreme, a fund may have an institutional life of its own, as a separate legal entity with an autonomous governing body and professional management (British Columbia's Forest Renewal BC).[2] In an increasing number of cases, fund-like mechanisms are created as part of the restructuring of public forestry institutions, and the spinning off of some management functions into autonomous or quasi-autonomous agencies that are expected to be at least partially self-financing (Landell-Mills and Ford 1999).

- ***National forest funds vary with respect to the range of <u>actors</u> they support:*** Some funds, such as Malawi's and Lithuania's, are primarily intended to support the activities of *public* forest agencies managing public forests. But in other instances, funds may be primarily focused on support to *private* forest owners (the Forest Trust Fund in Norway, or the Woodland Incentive Program Fund in Maryland, USA); may support a mix of public and private actors (France's

[2] Brief descriptions of all the funds referred to here and elsewhere in this paper may be found in Appendix A.

Fonds Forestier; Costa Rica's FONAFIFO); and, in at least one intriguing case, may be *funded by, supportive of* and *operated by* private actors (Brazil's Carajás Forest Fund). An interesting recent trend is the increasing use of funds for promoting *decentralised* actors in forest management, such as local governments and community-based organisations.

- ***National forest funds vary with respect to the range of activities they support:*** Forest fund objectives can range from the *simple* to the *sophisticated.* They may narrowly focus on a few activities, such as paying employee rewards and death benefits in Sri Lanka, or may provide a wide-range of financial services to both private and public actors, while also serving to facilitate international investment into national forestry, as in the case of Costa Rica's funds. Between these two points on the spectrum, there are many variations, as will be described below.

- ***National forest funds vary with respect to the sources of their funding:*** The "classic" sources of income for national forest funds are *forest revenues,* earmarked for reinvestment into forestry. However, one finds mentioned in different national laws a wide variety of other potential sources. There are recent examples of funds designed not so much on the principle of reinvesting revenues, but on the principle of "internalising externalities"; that is, capturing environmental values of forests through various "polluter pays" or "beneficiary pays" mechanisms.

One question that arises in attempting to define national forest funds is how they differ from other types of funds that have emerged in recent years, particularly a category of fund usually referred to as "environmental funds" or "conservation trust funds". It is possible to draw some distinctions based on various factors such as historical origins, sources of funding and emphasis.

For example, national forest funds *as an approach* are older in origin, have typically relied mainly on national revenues and are primarily concerned with channelling the investment of such revenues to ensure greater support for a range of forestry activities. By contrast, environmental funds, as that term is normally used, began to appear in the 1990's (though their numbers grew quickly -— by one count there were at least forty-six in existence world-wide by 1997, with many more in the pipeline) (Bayon, *et. al*. 1999). Their funding has been largely international in origin, with debt-for-nature swaps accounting for many of the funds created, and with GEF, the World Bank and other multi-lateral and bi-lateral donors also serving as important sources of capital. While environmental funds often rely to some extent on revenues generated by the activities they support (through user fees, taxes and the like) they are much more likely than typical forest funds to have core start-up funding, frequently in the form of an endowment that is used exclusively to earn interest to generate the fund's operating capital. The main focus of environmental funds has been on providing support for the conservation of protected areas, or on making grants to non-governmental organisations or civil society organisations for conservation and/or sustainable development projects (Bayon, *et. al*. 1999). They are therefore less likely than standard forest funds to provide basic support for the ongoing activities of government departments.

On the other hand, many environmental funds do address a number of forest-related issues. Although their emphasis is on forests as providers of environmental services or as biodiversity habitats, rather than on the full range of issues related to sustainable forest management, one could make a case for their inclusion in the extended family of "forest" funds broadly defined. Indeed, as one considers some recent innovations amongst forest funds, the distinction between the two types of funds becomes less clear, and it seems plausible that in the future the lessons emerging from environmental funds may be increasingly brought to bear on the design or redesign of forest funds. In particular, forest funds may increasingly look to environmental funds for lessons on (a) developing more accountable, more inclusive, and more professional governance structures; (b) accommodating the interests of a wider range of stakeholders in forest management, including non-governmental organisations and the private sector; (c) serving as more attractive conduits for international funding into the forestry sector; and (d) serving as focal points for experimentation with innovative financing mechanisms designed to "internalise the externalities" of forest management.

Environmental funds have been the subject of a much richer literature than exists for forest funds.[3] Hence, notwithstanding the occasional difficulties in drawing a clear line between the two types of funds, environmental funds will not be an explicit focus of this paper, though reference will be made to some of the lessons they hold for forest funds.

3. A CLOSER LOOK AT THE RANGE OF FOREST FUNDS

As noted above, national forest funds may vary significantly with respect to a number of key variables. The following discussion explores these distinctions in more detail, focusing specifically on the issues of:

- organisation,
- income sources,
- uses, and
- oversight.

This discussion draws primarily from a review of forest fund provisions in legislation from over forty countries, and where available, relevant secondary material.[4] Appendix A lists and individually describes these funds.

3.1 Organisation

A national forest fund may be nothing more than an accounting convention or it may be a complex legal entity subject to special rules that make it independent of the usual channels of government decision-making. In between these two extremes are many variations.

Funds as Accounting Devices

Many funds exist only as separate accounts in the budget of a government ministry or agency. Specific income streams flow into such an account, and laws limit the ways that the government may spend the account. The fund has no independent legal powers or standing and no special institutional structure behind it. The many "special accounts" of land management agencies in the United States are examples. Nearly a third of the United States Forest Service's budget flows through special accounts and trust funds (Gorte & Corn 1997). The Solomon Islands Forest Trust is a "Special Fund" under the national constitution, but otherwise does not appear to be a distinct agency. Similarly, the Indonesian Reforestation Fund as described in its organic legislation was designed simply as an account under the joint administration of the Forestry and Finance ministries.

In most cases, any unspent money in such an account just sits as a paper entry in the treasury's books. In some cases, the treasury pays the fund interest on unspent money, as if the treasury were a bank holding a deposit for a customer. Norway's Forest Trust Fund, for example, uses income on the Trust to fund its administration, while the principal goes directly for the benefit of the forests that contributed to the Trust.

3 See for example IUCN, et. al. (1994), GEF (1999), Bayon et al. (1999), Ninio (2000).

4 Because of the heavy reliance on legislative texts – occasioned largely by the dearth of reported research on the operation of most funds – the examples used here are presented primarily for their indicative and illustrative value, and are not intended as necessarily accurate descriptions of how specific funds are operating in practice. Some of the attributes of specific funds described below may exist on paper only, due to a failure to implement the legislation or operationalise the fund fully. Moreover, some of the legislation cited may have since been superseded.

In their simplest form, the law gives a particular ministry the authority to spend the fund. Usually this is the ministry most directly concerned with forests, but occasionally the law gives the Finance Ministry control, as with Cuba's National Fund for Forest Development (FONADEF) and Bulgaria's Concessions Cost Recovery Fund.

In a variation on this simple form, the law may create a special agency within a ministry whose sole task is to administer the fund. Bolivia's FONOBOSQUE appears to be set up this way, as a public entity under the Ministry of Sustainable Development and Environment.
The law may also create a board of stakeholders to advise the agency that administers the fund. The Gambia, for example, allows the establishment of a National Forestry Fund committee, with representatives of national and local government, forest communities, non-governmental organisations, and other stakeholders. The committee meets once a year to review planned spending.

In another variation, the law may split authority over the fund among more than one agency. The most common split of authority reflects divisions between financial and technical expertise. In Indonesia, the law appears to give joint control over fund use to the ministries of Forestry and Finance, and spending plans also require presidential approval. A more common arrangement is to give the lead in fund administration to the ministry most concerned with forests but to require approval from the finance ministry, perhaps as part of the approval of the ministry's overall budget. Gambia, for example, requires the Director of Forestry to annually submit estimates of fund income and expenditures to the Secretary of State responsible for Finance. In some countries, the law creating the fund does not mention a requirement for outside approval of spending, but the general budgetary laws of the country may require such approval in any case.

Independent and Quasi-Independent Funds

Some laws give the forest fund an independent or quasi-independent legal personality. Again, there are many variations on this theme.

Independence may be little more than a legal convenience. For example, the law may simply allow the fund to enter into contracts, make loans to forest projects, accept gifts, or place money in a private bank account.

Taking a step further, the law may organise the fund as a government-owned corporation. The government appoints the managers of the fund and supplies it with a stream of income, but the fund otherwise operates independently of the government. If the laws of the nation allow, the corporation might take a pre-existing charitable form, such as a trust or a foundation. The South African National Forest Recreation and Access Trust is one example. Because it has a single trustee — the Minister — it remains under control of the government. However, the trust form implies a certain flexibility and independence from bureaucratic requirements. In the United States, the state of Oregon's Forest Resource Trust offers another example of the trust format. The Tanzania Forest Fund is essentially organised as a trust. The trustees, appointed by the Minister, have the independence to deposit trust funds in a private bank account and prescribe procedures for making grants from the fund. The law reserves to the Minister the power to direct the trustees to act if the trustees are not acting "in a proper and reputable manner."

Going one more step, the fund may be organised as an independent corporation. The law will specify how the managers of the corporate body are chosen, often with stakeholders assured a role in management. The British Columbia (Canada) quasi-public corporation Forest Renewal BC is an example. Its directors are appointed by the province's Lieutenant Governor, its income is from royalties from Crown forests, and some of its actions require the approval of the provincial government, but otherwise it functions as an independent corporation. The America the Beautiful Act of 1990 in the United States allowed the president to designate a wholly private foundation to accept up to $25 million from general government revenues to support tree planting and maintenance in communities and urban areas. The law imposed conditions on the gift regarding how it could be spent, the conduct of foundation officers, and transparency and auditing of foundation accounts. However, it did not give the government any control over selection of the foundation's directors or managers.

Decentralised Funds

Funds can be structured in such a way that they shift control of money from the central, federal bureaucracy to local branches of the same bureaucracy, to local government or to community-based organisations.

For example, a fund may reserve a fraction of income from local or regional forestry operations for the use of the local or regional office of the national forest bureaucracy. The Knutson-Vandenberg Fund of the United States keeps a portion of the income from timber sales on the national forests at the disposal of the management unit (the particular national forest) that generated the income. Malaysia's National Forestry Act creates a Forest Development Fund in each of the states to which the Act applies. Each Fund gets part of its income from forest activities in the state.

Some approaches involve the transfer of a portion of the national fund to sub-national or municipal governments. The Costa Rican Forest Fund,[5] for example, is structured to shift some of the money it receives from a tax on wood to municipal governments and regional environmental councils.

Finally, local funds are a common feature of legislation designed to encourage community-based forest management. Examples would include user group funds in Nepal's community forestry programme, or similar funds in India's Joint Forest Management programmes, into which participating local committees are required to place some or all of their share of revenues they are entitled to keep. Cyprus' forest law sets up a Communal Forest Fund for each communal forest, while Gambia's sets up local funds controlled by local forest committees.

3.2 Income Sources

Basic patterns: multiple vs. restricted number of sources

Funds almost always have some dedicated source of income or, more rarely, an endowment. In their income structure, most funds fall into one of two broad classes.

The first class of funds can accept money from multiple, diverse sources. The majority of national funds reviewed for this paper fall into this category. An example is Costa Rica's Forest Fund, which may receive money from a tax on wood, donations, issuance of forest bonds, fines and seizures, sales from forest nurseries, sales of forest seeds, charges for forest and protected area use, and other forest-related income. These multiple-source funds also tend to have multiple purposes.

The second class of funds take in money from a single source or small set of related sources. Usually, these funds spend the money on a use closely tied to the source of income. Local community forestry funds are good examples. The local funds in Gambia, for example, may take in money from activities related to the community forest or community-controlled state forest, including projects financed by the fund and donations specifically for advancement of the fund's work. The fund administrators must spend this money on the community forest or on general community development.

[5] See Appendix A for an explanation of the differences and relationship between Costa Rica's Forest Fund and FONAFIFO.

Under Indonesia's presidential decree of July 1990, the country collects an assessment on wood processed for timber or chips. This money is deposited into the Reforestation Fund, and is used for reforestation, development of plantations, and land rehabilitation.

Norway offers an example of an even narrower source of funding. It collects money as an assessment on forest products produced from a particular piece of land. The fund must spend that money on forestry projects benefiting that same land, or on projects benefiting another piece of land with the same owner.

Rarely, the law creates a fund to take money from a single source indirectly tied to forests and spend the money broadly on forest projects. One example is Costa Rica's fee charged to fossil fuel users to compensate forest owners for the environmental services that forests provide. The United States has a fund that takes income from a tariff on plywood and lumber and devotes it to reforestation. Though not strictly a forest fund, Colombia has a fund fed from royalties on mining and petroleum extraction that supports local environmental projects, including reforestation.

Within these two basic funding patterns, laws may grant funds income from any of several sources. The discussion below outlines some of the more common sources.

General Revenues

Laws creating funds will often reserve the option of placing money from the general treasury into the fund. This is rarely the primary source of money for a fund, particularly in developing countries. However, in some countries the law requires that all income to the country go into the general treasury. In that case, as a formality, all income for the fund may flow through the general treasury.

Though most forest funds are designed to channel an ongoing stream of income into forestry projects, funds can also be designed as endowments, foundations, trusts, or revolving funds. These take an initial sum and invest it either outside the forestry sector, spending the income on forestry projects, or inside the forestry sector, as direct support of forestry projects. Such a fund might begin with an initial lump sum from the general treasury, though other funding mechanisms are also possible. An example of an endowed revolving fund is the Oregon Forest Resource Trust. This makes investments in private reforestation efforts. In return, the private owner must pay back the investment or grant the Trust a share in income from forest produce of the reforested lands. The Trust may not force the owner to harvest timber. However, the Trust does have the right to sell the carbon sequestration potential of the forest.

Income from Government Forests

The "basic" model of a forest fund, of course, involves a re-investment of some portion of forest revenue into public forest management. One category of such revenue is the income from sales of forest products or admission fees to public forest lands. For example, Albania's fund receives 70 percent of the state forests' income from the sale of wood, grazing fees, sale of medicinal plants, and fees for hunting and other activities. Bulgaria's Concessions Cost Recovery Fund receives 15 percent of revenues from concessions, among other income. (See also sub-sections 4 and 5, below).

Less frequently, the income for the fund may come from the sale or transfer of government forest land. For example, the law can require that income from the transfer of "surplus" lands better suited to non-forest uses be reserved in a fund for the purchase of lands more suitable for forest management. In the United States, the Forest Service sometimes exchanges lands with state and local governments. If the land offered in exchange is not of sufficient value, the state or local government may be required to make a payment into a special Forest Service fund reserved for future land purchases.

The government may also grow tree seedlings or collect forest seeds and sell them to private landowners. The income from such sales may go into a general forest fund or into a special fund to support those nursery activities. In Costa Rica, for example, the income goes into the Forest Fund.

Forest-Related Taxes

Some funds receive income from forest-related taxes. These may include taxes on forest land, severance or yield taxes on forest harvest, or taxes on the sale or processing of forest products. The Indonesian Reforestation Fund legislation stipulates that the fund is to receives its income solely from a tax on production of lumber and chips. The Costa Rican Forest Fund enjoys income from a tax on wood, among other sources.

Sometimes the tax is more in the nature of a fee for service and the fund is a mechanism for assuring that the fee is spent for the promised service. For example, the government might levy a small property tax on forest land whose receipts go into a fund for combating fires, insects, or diseases, supporting forest research, or doing other tasks that benefit a broad class of forest owners. From an economic viewpoint, such a fund tends to internalise the external benefits of these activities.

The Norwegian Forest Fund returns service to the landowner in direct proportion to the income for the Fund produced by harvests on the owner's land. In fact, each parcel of land producing forest products has a legal claim on the Fund.

Fines, Penalties, and Seizures

Many laws creating general forest funds provide that amounts collected during forest-related law enforcement go into the forest fund. If the fund goes to further the work of the enforcing agency, this creates an institutional incentive for stronger enforcement.

Fines and penalties are the obvious source of such income, but there are others. The law can allow the government to seize and eventually sell illegally harvested forest products, with income from sales going into the fund. The law may also allow the government to seize forest products if the ownership is uncertain, as when logs lack registered brands or hammer marks. If the government cannot determine ownership, it may sell the forest products, and the law may direct that the proceeds go into a forest fund.

Some nations assess damages for injuries to forests. Uruguay law requires persons who damage the public forests in violation of protective laws to pay the state damages. These payments go into the Forest Fund. Similarly, the Dominican Republic includes in its fund damages resulting from violations of forest laws.

Donations and Grants

Donations and grants are commonly listed as potential sources of fund income. Channelling donations and grants through a fund may help assure the donor that the recipient will spend the money for the intended forest use. A fund may provide better accounting and oversight procedures than the general treasury would allow. Also, when the donation stands apart from general government funds, it may be easier to determine administrative costs and overhead and so to judge the effectiveness of the grant. The vast majority of funds reviewed in this study accept donations or grants.

Income from Fund-Supported Projects

Some funds are set up either as a pool of capital designed to support private forest management or as a mechanism for assuring that private participants in management of public or community lands share in the market benefits. In either case, the fund will typically earn income specifically from projects it supports.

The Oregon Forest Resource Trust, described above because its initial capital came from general revenue, also serves as an example of a fund dependent on money from projects. Some beneficiaries treat the Trust as a lender. The return to the Trust will be the interest and eventually the principal of the loan. Some beneficiaries allow the Trust to become something like a limited partner in the forest as a business. The beneficiaries agree to give the Trust a share of any income that the forest produces. Beneficiaries also give the trust a narrow but discrete ownership interest in the forest: the Trust assumes the right to sell any carbon sink credits generated by the project.

In the case of a fund supporting community involvement in forestry, the fund may get a set fraction of all income generated by the land that the community helps manage. The fund would use this income to support the community's management efforts. A related sort of fund, beyond the scope of this study, would channel some or all of this money to the community without requiring that it be spent on land management.

Bonds and Loans

The law may allow a fund to raise money by selling bonds to the public. Costa Rica offers an example. Typically, a fund would have to redeem these bonds with interest, usually using income from other fund sources. The law might also guarantee payment of the bonds through the general treasury if the fund fails to meet its obligations.

The Uruguay Forest Fund may accept the proceeds of lawful loans and financial instruments.

Fees and Taxes Not Tied to Forest Commodities

In some cases, forest funds get support from activities that are not tied to sale of forest commodities, but that try to capture some economic values of forests not captured through the private market. For example, a country might divert income from tourist entry fees or hunting permits. Costa Rican law allows the country to recoup the value of the environmental services that forests provide from those that take advantage of the services. The Dominican Republic's forest code also calls for its Forest Trust Fund to receive income as compensation for environmental services. Croatia's fund law calls for a small general income tax to recoup the value of general forest benefits.

In a similar vein, a country may tax a polluting industry and divert the proceeds into a forest or similar fund as a general sort of mitigation. For example, in the United States royalties from the leasing of offshore oil rights go into a fund for purchase of public lands.

3.3 Uses

The above discussion has touched on some possible uses of funds. Below is a more complete discussion of fund use.

Support to Government Activities

A common use of forest funds is to support activities of the government related to forests. The plainest of fund laws may not specify the uses of the fund any more precisely than that. For example, a single clause in the Mozambique Forest and Wildlife Act creates a forest and wildlife development fund without specifying its uses. In these cases, a subsequent decree, regulation, action of the parliament, or decision of the appropriate minister will ultimately determine the uses of the fund.

Most laws are more specific as to uses. The law may allow the government to use the fund in the ***administration*** of the forest bureaucracy. Costa Rican law sets aside fifteen percent of income from the tax on wood going into the Forest Fund for the general use of the State Forest Administration and smaller percentages for specific uses within the Administration. Bulgaria's Concessions Cost Recovery Fund is intended to cover the costs of granting and administering concessions. Norway allows interest on the fund to go towards internal fund administration.

Public land management is another common use of funds. The law may target funds to specific aspects of management. For example, a fund might reserve a portion of the income from government concessions for reforestation or other management activities that do not immediately generate income. The Lithuanian Forest Fund exists basically to fund public forest management. The law allows the government to use the fund for a variety of activities, from reforestation to road building and preparation of timber sales.

Public land purchase is another possible use. The fund is used to buy lands on the market or through eminent domain. Some of the United States funds noted above are limited to land purchases.

Funds may support government activities in aid of forest-based industries. Zambia has a forest development fund that promotes the wood processing industry. A fund can be used to ***promote markets*** for local forest products. That might include advertising, market research, or export assistance. The Costa Rican forest law recognises modernisation of forest industries and markets as a purpose of the Forest Fund.

Funds may also support forest ***research and public education*** efforts, including ***forest extension*** programs. The Forest Fund of Laos is noteworthy in this regard, as the law expressly allows it to be spent to educate the public about forest laws and policies as well as about technical matters. The Tanzania Forest Trust may be used to support general public education, forest research, and also public participation in forest policy debates and environmental impact assessment. The Senegal fund may be used for public education about protection and conservation of forests.

Governments can use funds to provide general services of benefit to private forest landowners. One of the most common uses of funds is to give general support for ***afforestation and reforestation,*** though it is often not clear from fund legislation whether the fund is to be used for government planting programs or for directly supporting private planting (see below). Vanuatu's fund is used for plantations and other afforestation and reforestation works. The Solomon Islands Forest Trust supports tree planting and reforestation. Mauritania's fund can spend on reforestation and regeneration. Government services to landowners may also include ***fire, insect and disease suppression***. The Senegal fund authorises spending on fire fighting, for example. For the convenience of landowners, governments may run forest ***nurseries*** or collect and distribute tree ***seeds***. Costa Rica again is an example.

National funds may also serve as conduits to distribute funds to sub-national governments. These would then be able to use the money for those forest-related activities allowed under the law establishing the fund. The Rural Fire Disaster Fund in the United States supplies state and local governments with emergency funds for forest fire fighting when their own funds are exhausted. In Costa Rica, ten percent of the income that the Forest Fund receives from the tax on wood is earmarked to support forest protection programs in municipalities.

Private Land Management

Many funds directly pay for private land management. As mentioned above, some funds finance private ***reforestation*** or ***afforestation*** efforts. Funds may also pay for ***management planning***. Where capital is limited among the target landowners, the fund may help pay for ***plan implementation***. In the United States, the Maryland Woodland Incentive Program is an example of a reforestation fund. The Norway Forest Fund also goes for the benefit of management activities on private lands. Costa Rica's National Fund for Forest Finance (FONAFIFO) provides assistance to small and medium-sized landowners. Devoted to improvement of both forests and pasturelands, Tunisia's fund appears to focus on collective and private lands outside of the state forest domain.

Less common are funds that make direct payments to landowners for ***non-commodity uses***. Costa Rica, for example, pays landowners for non-commodity benefits from money raised through its environmental services taxes. These payments at present are tied to reforestation efforts. The Chesapeake Bay Trust (Maryland USA) makes payments to landowners for reforestation designed to improve water quality.

Other Private Activity

Besides payment to individual landowners, funds may assist other private bodies. Funds may go to promote ***forest-based manufacturing*** by providing capital for modernisation, marketing, or other private business activities.

In areas with social or communal forest landholdings, national funds may make direct payments to ***forest communities***. The Lesotho Forest Fund can make payments to community forest holders. The Senegal fund can provide subsidies to collectives and local organisations. Zambia has a Joint Forest Management Fund supporting local level activities. These kinds of funds may pay only for forest management or they may represent rewards for good past management by the community, which the community can spend as it sees fit.

Funds can also go to non-governmental organisations (NGOs) that support sustainable forest management. These typically would be earmarked for the benefit of particular projects with which the NGO is involved.

3.4 Oversight

Some fund legislation includes provisions to promote the integrity of the fund. Note that funds may also be subject to general government or corporate transparency, record-keeping, reporting, or auditing requirements. Here we take note only of special integrity provisions written as part of the legislation creating or governing the fund.

One institutional structure that promotes integrity is an independent advisory board that reviews fund plans and spending. Gambia's National Forestry Fund Committee, mentioned above, is an example. In the Solomon Islands, the Minister must consult with the national Forestry Board before approving spending from the Forest Trust.

Another is a requirement that fund administrators keep records and prepare an annual accounting of the fund's actions. For the Lesotho Forest Fund, for example, the Principal Secretary of the Ministry of Agriculture must keep accounts tracking the Fund's operations and submit an annual report to the country's Accountant General. In Burkina Faso, the fund must be administered according to the rules of public accountancy, and the fund accountant must submit an annual report to the chamber of accounts in the Supreme Court.

Some laws require annual audits for funds. Again, Gambia requires the Director of Forests to arrange annual audits of local community forest funds. Lesotho requires an annual audit of the national fund by the Auditor-General.

Promoting transparency and integrity of fund use is of obvious interest to outside donors. Because of this, the topic of fund integrity is discussed in greater depth in Part V below.

4. THE CASES FOR AND AGAINST NATIONAL FOREST FUNDS: TRACING THE MAIN ARGUMENTS

National forest funds have long been a subject of debate amongst economists, policy makers and foresters. The purpose of this section is briefly to sketch the outlines of this debate as a prelude to a discussion of various possible roles that national funds might play in future efforts to improve the financing of sustainable forestry (Part V).

4.1 Common arguments in favour of forest funds

Funds can help meet forestry's special needs for long-term investment

A starting point for many arguments in favour of forest funds is that investment in sustainable forestry is essentially a long-term proposition. As early as 1960 the FAO Regional Conference for Europe determined that "the formation of such a fund may be necessary since afforestation can only be a long-term investment, requiring continuity of plan..." (Fontaine 1961). As a more contemporary statement of the rationale behind national forest funds puts it: "The essential logic behind Forestry Funds is to provide a secure, sufficient and long-term source of finance...In a sector where the main product is by its very nature a long-term investment, short planning horizons can undermine the [forestry] authority's ability to implement its mandate." (Landell-Mills 1999)

Sustainable resource use requires actions today that will not limit the use of the resource in the future. However, market forces most strongly represent people and demands of the present. A fund can, in this sense, serve as a surrogate economic voice for expected demands of future generations. For example, a particular forest may need years or decades to respond to new demands for forest products. This delay can lead to oscillations in the market as supply lags well behind changing demands for forest goods. Steady investment can reduce these oscillations. In many countries, the forest sector also needs long-term investments in roads, equipment, training, and other sorts of physical and human infrastructure. When public and private investment capital is limited in a country, a dedicated fund, fed by both earmarked forest revenues and outside income, may be a practical way to meet this need. Even some developed countries have seen forest funds as a useful tool for these purposes.

Funds can shield the forestry sector against the fluctuations and unpredictability of national budgets

The problem, say forest fund advocates, is that national budgetary processes are both *by design* and *in practice* poorly equipped to accommodate the long-term investment needs of forestry. Forest cycles are longer than political cycles. Budgets are typically annual or biennial efforts. Parliamentary majorities may last for five or ten years. Forest plans must cover decades. To supply goods from the forest over the long run requires a steady source of funding that does not have to justify and re-justify itself in the near term and that is protected from fickle political winds. Even stable democracies like Canada, France, Norway, and the United States have seen the benefit of insulating parts of forest funding from political whim through permanent funds (see Appendix A).

Ideally, budgeting allocates money to programmes of merit; but whatever the theory, in practice, the budgetary process in many developing countries is a highly dysfunctional, and cannot be relied upon to allocate funds to forestry that are commensurate with its needs and that reflect its importance to the country. Forests are typically undervalued economically and have weak political constituencies — forested areas tend to have fewer people, lower per capita incomes, and lower education levels compared to the cities and agricultural areas. Governments may view forested regions almost as colonies, to be exploited for their resources without suitable investments. Funds, proponents argue, can help counter this treatment.

Funds can help stimulate more effective management by government forest agencies

Forest funds, it is argued, can also help reduce a perverse incentive inherent in annual government budgeting. In most countries, if a bureaucrat is thrifty and efficient, the bureaucrat is punished by having to return unspent money to the general treasury and having his next annual budget reduced. With a fund, the efficient administrator is rewarded because unspent money remains in the fund for future use.

Funds can also help side-step rigid bureaucratic rules. In a rule-bound government, creating an autonomous fund can avoid entrenched government structures and increase flexibility in forest management.

Funds may allow for greater oversight of forest spending

By isolating forest funding from other funds, setting up record keeping requirements, and requiring independent audits, a fund can make forest bureaucracies more accountable. In a government susceptible to corruption, an autonomous or semi-autonomous fund may make donors more comfortable with contributing capital. Legally earmarked and separately-managed funds provide some comfort that donor money will not be "siphoned off" into the general treasury and used for non-forestry purposes (Landell-Mills 1999). Likewise, where fund management is structured to include a wide-range of stakeholders, rather than being supervised entirely by government foresters, donors may have some assurance that targeted grants or loans are not "siphoned off" for general support of the forestry administration. Given that the current study is based on fund legislation as written, not as implemented, it is difficult to declare that any particular fund has outstanding oversight in practice. However, several funds have good oversight methods on paper which, while not a *sufficient* condition is likely to be a *necessary* one. These are discussed below, in Part V.

4.2 Common arguments against forest funds

Funds may trap capital in the forest sector

Some developing countries suffer from too much capital tied up in natural resources, not too little. Arguably, they would benefit from harvesting trees and investing the resulting income more for industrial development than for reforestation. Yet dedicated funds prevent them from making this kind of choice. As one analysis puts it:

Pressure to disburse [earmarked] funds to the appointed purpose may result in their being invested in projects of low economic and social value; and there usually is no obvious linkage between the level of funds collected (which is most often based on a proportion of full log value, and which can therefore vary significantly with market shifts) and the investments that might be justified in plantations and other designated purposes, given existing technical capacity and demand factors. (Douglas and McGrath 1996)

This argument has particular resonance for countries with large areas of forest, such as Indonesia. It has emerged in a broader form in the debates over joint implementation of the Kyoto Protocol under the United Nations Framework Convention on Climate Change. In this case, some developed nations have proposed investing in forestry in developing nations as a means of offsetting greenhouse gas emissions. The developing nations would rather see the offsets come from investments increasing the efficiency of the developing nations' industrial sectors.

Funds may prevent ideal allocation of government budgets

Budgeting is a process of allocating scarce government resources. In this process, many deserving programs compete against each other. The ideal way to allocate government funds is to consider each program according to its relative merits and budget accordingly. No single program, such as forestry, should be isolated from this process. As a general principle "the criteria by which resources are allocated to forestry should be the same as for all other sectors and should aim to maximise the achievement of the government's overall fiscal objectives." (Douglas and McGrath 1996)

As noted, linking sectoral spending to sectoral income is problematic. No one would expect a nation's police to earn its own budget. Why should a forest department be different? Government agencies should not be expected to turn a profit. Government monies should be given to agencies on the basis of need and utility, not on the basis of income. Some combine this argument with an economic one and go one step further. If forestry can survive on its own income, why should it be a government-run enterprise at all?

It may also be argued that the vaunted "steadiness" of a fund against the vagaries of the budgetary process is itself illusory. As one study of Côte d'Ivoire and Cameroon suggests, a fund that relies on forest income may be exposing itself to fluctuations that are even more violent and unpredictable than those occasioned by annual budget making. When international markets change, or regulatory measures are put in place such as bans on log exporting, a fund's income base may collapse (Gabus 2000).

Funds may transmit misleading economic signals to bureaucrats

If a fund draws on income from the sale of wood, it gives the bureaucracy an incentive to promote such sales. Without a similar incentive to produce other valuable goods from the forest, such as flood control, clean water, biodiversity, carbon sequestration, or aesthetics, the fund will steer the forest manager towards a less-than-ideal management program.

Environmental economists have made this argument in the United States, where a portion of the Forest Service's budget comes from income from timber sales off the national forests. (Thoreau Institute 2000). They argue that this fund makes managers too eager to offer timber concessions.

Funds may promote government inefficiency. If an agency does not have to compete annually with other agencies for funds, it loses an incentive to spend every bit of its budget wisely. If it knows it can expect a base amount of money from a special fund, it has no incentive to trim its budget below that base amount.

Alternatively, there may be a tendency in some cases for Governments to conclude that because the forestry sector now has a special fund, it is justified in reducing budgetary support to the sector, potentially leaving the total level of financial support more or less unchanged.[6]

[6] As discussed in Appendix A, at least one country, the Dominican Republic, has language in its fund legislation that seems designed to counter this tendency. The language requires the national budget to include contributions to the fund to cover basic forest infrastructure needs.

Funds may invite corruption

In a government with low pay for government workers, poor accounting practices, or a culture that tolerates corruption, any concentration of money becomes a target for illegal diversion. Keeping money outside the normal oversight inherent in the government budgeting process may increase the opportunities for corruption.

Funds may also put financial issues in the hands of people ill-trained to handle them. An understaffed forest department may lack experts in budgeting and finance to administer the fund. Even if a fund has an advisory board of stakeholders, these people may lack the skills to oversee a large financial operation. These kinds of skills more likely can be found in the finance or planning ministry.

Concerns such as these, coupled with disdain for earmarked funds as a deviation from the principles of unitary budgeting, as described above, has led to attacks on the autonomy of several funds. Indonesia (Gautam, *et.al* 2000) and Cameroon (Gabus 2000) have both in recent years seen increasing responsibility for fund management vested in their finance ministries, with a concomitant reduction of the power of forestry officials to make spending decisions. The Indonesian Reforestation Fund, before the present government, was also widely seen as channelling too little of its money into forests and too much into other areas, and has been subjected to international auditing and restructuring as part of Indonesia's agreement with the International Monetary Fund in 1998.[7]

5. ENVISIONING FUTURE ROLES FOR NATIONAL FOREST FUNDS

Defining appropriate future roles for national forest funds requires understanding the arguments above, both for and against. In our opinion, the "point-counterpoint" reported in Part IV is inconclusive, not because none of the arguments are persuasive on their own terms, but because (as noted several times already) too little is known about the actual functioning of national funds — of different types and in different circumstances — to draw definitive conclusions. It is important to bear in mind that whether a particular argument is compelling will depend on the variety of fund at issue, and on the context of the particular country, including the state of its forests, economy and institutions. Like trees, a fund that does well in one country may do poorly if planted out of provenance.

Nevertheless, despite the current state of knowledge, the arguments above can provide important guidance for those engaged in the design of national forest funds, as well as for those preoccupied with the question of what role they can or should play in future efforts to promote sustainable forest management. The arguments for forest funds have value as signposts to opportunities, just as the arguments against funds can serve as warnings of pitfalls.

But bearing in mind these opportunities and pitfalls, what can be said about the future relevance of national forest funds to the international discourse on financing sustainable forestry?

In our opinion, that relevance will depend in large part on the extent to which funds can, in their design and operation, both respond to and contribute to innovative strategies that are currently at the forefront of thinking regarding forest financing, management and governance.[8]

[7] On the investigations into alleged mismanagement of the Indonesian Reforestation Fund, see Jakarta Post, 1999; Jakarta Post, 1998; Gautam, et.al., 2000.

[8] Gabus (2000) makes a similar point, arguing that national forest funds have failed to reflect the overall evolution of forest policy in the direction of vesting greater responsibility for forest management in local populations and the private sector, and that a potential "new beginning" for funds lies in recognising a broader field of fund stakeholders.

In this Part, we examine the potential role of forest funds in four strategic areas:

- decentralisation and devolution of forest management;
- encouraging private sector initiatives;
- improving accountability and transparency; and
- promoting the production of environmental goods and services (or "internalising the externalities" of forest management).

5.1 Decentralisation and devolution

Decentralisation and devolution of forest management are on the agenda — at least on paper — of many if not most developing countries in the world. The term refers to a host of measures designed to promote greater local participation in forest management and decision-making. These may include:

vesting greater responsibility and power in local government units for carrying out public sector forestry activities,
empowering local community-based groups, households and individuals to control and benefit from the management of local forests, through the recognition and confirmation of land rights or through co-management agreements, and
encouraging the involvement of local people and interest groups in the formation of *national* policy.

Most national forest funds have traditionally been highly centralised in terms of administration and orientation. In the coming years, there is likely to be increasing pressure on forest funds both to reflect better the underlying principles of the decentralisation and devolution agenda in their structure and governance, and to promote more effectively that agenda through their funding activities.

This can happen, and in some cases is happening, in a number of ways. Some countries are using funds to promote *local management* with either of two approaches. One is through a single national fund that channels assistance to sub-national and municipal governments or to community groups. That assistance may be general financial aid, technical expertise, materials, or financial support for specific projects. For example, the language creating the Lesotho Forestry Fund allows it to be used for both general assistance to community forests and direct payments to community representatives.

The other way is through multiple local funds. For example, the law of Gambia establishes a local fund for each Community Forest Management Agreement that the government approves. The local fund receives income from activities on the community forest. The local forest committee appoints three community members to administer the fund, which the community can use for both forestry activities and general economic development. Cyprus law creates a similar set of local funds.

One can envision any number of additional strategic roles that forest funds could play in support of local forest management. In theory, for example, funds could have a role in improving the enabling environment for local forest management, by supporting efforts to clarify and confirm land tenure rights, by facilitating the negotiation of co-management agreements, and by providing support for dispute resolution mechanisms. They could focus generally on enhancing local technical capacities.

Funds can also empower existing private owners of forest land through various forms of assistance. This sort of support is discussed in more detail in section B, below.

With respect to national policy formulation, local groups may not be effectively involved for lack of opportunity or lack of knowledge. While funds do not offer a full solution to either problem, they can help. Funds can provide opportunity *directly*, by creating roles in national fund management for local interests. Some national funds have taken steps in this direction through creation of advisory boards filled with stakeholders. This can be a small step or a large step depending on the power of the board. Where the board meets infrequently and its role is purely to give advice, the amount of power that local groups gain is small. Where the board meets frequently and its consent is required for spending, the power gained is greater. Forest Renewal BC (Canada) offers an example worthy of scrutiny, with both a board of directors and several advisory committees representing the interests of a broad array of stakeholders, including local interests.

Funds can also provide opportunity *indirectly* by facilitating local involvement under general forestry or environmental planning laws. For example, a fund could help defray the cost of local participation in environmental impact assessment. Or, a fund could supply grants to local communities that wish to formally organise so that they can be eligible to participate in a community forestry program. The provisions in Tanzania's draft forest law creating a Tanzanian National Forest Fund would allow spending on these sorts of activities.

Funds can also educate local groups in ways that help them participate in national policymaking. This appears to be an uncommon goal of fund legislation, but an example exists in the law creating the Forest and Forest Resource Development Fund of Laos. The legislation expressly allows the fund to be used for training on forest policy, laws and regulations.

5.2 Encouraging private sector initiatives

A number of existing forest funds have been shaped to encourage private forestry, and one would expect this trend to accelerate in the future given the increasing centrality of private investment in national and international strategies to improve forest financing. Governments may seek to assist forest owners economically, to encourage forest owners to adopt sustainable practices, or to do both.[9]

Some funds support industrial forestry. For example, the purposes of Costa Rica's Forest Fund include modernising forest industries and markets. In Canada, Forest Renewal BC spends some of its income promoting development of value-added industries in the forest sector. Some funds focus on landowners. FONAFIFO in Costa Rica benefits mostly owners with small to medium-sized holdings. Norway's fund serves private landowners exclusively.

The challenge in designing support to private landowners is to address points that actually make a difference in the way private owners will behave. Again, understanding the context of the country is essential to create a useful fund. What factors are controlling landowners' behaviour? Some funds target lack of technical knowledge. Some target lack of capital, particularly for long-term investments like reforestation. Some target risk.

Funds can also tap economies of scale. Funds can supply goods or services in bulk to small landowners that they otherwise would find difficult or expensive to acquire. For example, a fund could serve as a marketing tool, promoting demand for products from small ownerships. Or, a fund could supply small landowners with equipment or technical expertise they could not acquire alone.

The Oregon (USA) Forest Resource Trust offers an example of using a fund as an innovative co-operative marketing mechanism (Cathcart, 2000). The fund acquires ownership of the carbon

9 Crossley, et. al. (1996), contend that an emphasis on investments from the private sector is warranted "for two primary reasons: (i) the private sector is increasingly involved in forest extraction and management worldwide and; (ii) private sector finance will be the probable source of funds to make up for the current and probable future shortfall of public assistance and public finance in the forestry sector in coming years."

sequestration potential of the forests it assists. The fund can market this potential much more effectively than individual owners can. First, the fund can pool the potential from several ownerships to offer buyers large single transactions. Second, acting as broker for multiple ownerships, the fund can hold some sequestration potential in reserve. This reserve allows the fund to cover the risk that fire, insects, disease, or other disaster will halt sequestration on any particular ownership, making the sequestration potential it offers more attractive to buyers than sequestration potential of an individual stand.

Funds that spend part of their money on promoting markets generally, as Costa Rica's Forest Fund can, similarly provide services that individuals working alone could not afford.

5.3 Increasing accountability and transparency

Corruption and other forms of illegality in the forest sector are matters of growing concern. Much of the work of promoting forest development depends of the rule of law. That is true whether the concern is assuring sustainable use of government forests or protecting the property interests of private forest owners.

As noted above in the discussion of arguments for and against funds, funds do not inherently work against illegality. In fact concentrations of capital in funds can offer new opportunities for illegal diversion of forest money. However, policymakers can structure funds to make spending more transparent and diversion of funds more difficult. In doing so, they will at the same time be promoting the overall goal of greater accountability and transparency within the forestry sector as a whole.

Three general ways of increasing accountability and transparency are (1) involving stakeholders outside the government in fund administration, (2) requiring annual plans from fund managers before funds can be spent, and (3) requiring regular independent audits of the fund.

One method of stakeholder involvement was discussed above: stakeholder membership on boards and committees. Besides involving stakeholders in decision making, it should give the stakeholders access to internal information about the fund that is necessary to make wise decisions. This access to information is usually implicit. However, it can be explicit, and it can involve more than just stakeholders with formal roles in fund management. For example, the legislation creating the Forest Resources Improvement Association of Alberta (Canada) makes its records subject to the provincial Freedom of Information Act.

Some countries with common law legal systems structure their funds as trusts. This implies that the ownership of the fund is split between the legal owner (the trustee) and the people due to benefit from the fund (the beneficiaries). The beneficiaries of any trust may ask a court to order independent review of trust administration. They may ask a court to enforce the terms of the trust, to stop illegal uses of the trust, and to stop trustee actions that fail to protect the beneficiary's interests in the trust.

An annual spending plan, with outside approval, is a common requirement of forest fund legislation. In Gambia, the Director of Forests must submit for approval to the Secretary of State responsible for Finance annual estimates of fund income and expenditure. The Guatemala Special Forest Fund must have an annual plan approved by the board of directors of the national forest institute. The accounting officer of South Africa's National Forest Recreation and Access Trust must submit an annual budget to the appropriate minister for approval. The trustees of the proposed Tanzanian Forest Fund must prepare and follow annual estimates of income and expenditure. Uruguay's Forest Fund must be used according to an approved annual plan.

Auditing is also a fairly common fund requirement. Funds that are simply independent accounts within a government agency may rely on general provisions governing review of government activities. However, funds with annual plan requirements often have linked auditing requirements. Gambia, for example, requires annual audits of its national fund by the Auditor General. Funds that are set up as independent or quasi-independent entities are almost certain to have separate accounting provisions written into their enabling legislation. Gambia requires the Director of Forests to annually audit local community forest funds, and allows the Auditor General to also audit them.

To facilitate audits, the law may require fund administrators to keep records and make annual reports. South Africa requires its Trust's accounting officer to keep records of assets, liabilities, and financial transactions and prepare annual financial statements. Tanzania's legislation requires its fund's trustees to publish an annual report including a set of audited accounts.

What constitutes a good auditing program depends greatly on local context. A nation with an effective independent auditing system may need no additional auditing provisions for its fund. A nation with no effective auditing may gain little from simply writing normal auditing requirements into legislation.

5.4 Promoting the production of environmental goods and services ('internalising externalities')

Some of the most promising uses of funds involve promoting environmental goods and services that are poorly served by existing markets. These are not yet common uses of forest funds, but given the increasing prominence of "internalising externalities" arguments in the search for innovative forest financing mechanisms (Richards 1999), it is likely that forest funds will increasingly move in this direction as well (as indeed many of their cousins, *environmental* funds, have already done.)

Forests produce public goods that bring the owners little economic benefit. These may include scenic value, watershed enhancement, protection of biodiversity, and carbon (greenhouse gas) sequestration.

The lack of economic incentive is a market failure, and the economic boost from a fund is a logical remedy. Sometimes a fund can act as a means to capture the value of the public goods and to return some of this value to the forest owner. Sometimes a fund can provide a mechanism for turning public goods into marketable goods. And sometimes it can encourage co-ordination of management to achieve higher production of these public goods.

A forerunner of the use of funds to capture the value of environmental services was the use of funds as mitigation. The fund would take a tax on some environmentally damaging activity as income and put it to use on an environmentally beneficial activity, such as forest management. The damage caused by the bad activity and the benefit caused by the good activity might be otherwise unrelated. For example, the United States has long diverted a portion of royalties from offshore oil and gas leases into a fund for purchase of public lands. This fund requires legislative approval for expenditures, and for many years has spent much less than it has acquired. A new law will send a large part of the fund to sub-national and municipal governments for land acquisition. Environmental funds provide additional examples. The Colombia National Royalties Fund, for instance, channels royalties from non-renewable resources into environmental projects. It is not unusual to find mechanisms that recapture scenic value of parks and protected natural areas by allowing the managing agency to collect and keep entrance fees from tourists.

As described earlier, Costa Rica is aiming to recapture the value of environmental services and return it to forest owners through FONAFIFO. On paper, the law recognises a broad range of environmental services for which forest owners ought to be rewarded. The only tax that the law directly ties to payments for environmental services is one on fossil fuels. However, Costa Rica is also marketing carbon sequestration from its forests and channelling the resulting income back to forests through FONAFIFO. Also, the country is negotiating with private hydropower companies to pay FONAFIFO for watershed-related environmental services. (de Camino *et al*. 2000). One criticism of the program has been that its payments are not necessarily in proportion to the environmental services that projects provide. It has favoured reforestation and afforestation and perhaps slighted ongoing forest management (Heindrichs 1997). However, the programme holds promise.

Funds can also help turn environmental services into marketable commodities. The Oregon (USA) Forest Resource Trust offers an example. The trust by law acquires a property interest in the carbon sequestration potential of the forest lands it assists. The trust markets the potential and uses the resulting income to assist other landowners.

Where the ownership of forest land is split among many owners, management for environmental values often becomes complex. Funds can become tools to encourage co-ordinated management.

At its simplest, this means creating incentives for behaviours that create environmental benefit, with no need for varying the management scheme to fit individual circumstances. For example, the Maryland (USA) Chesapeake Bay Trust aims to improve water quality by assisting landowners that want to reforest areas near surface water.

A more sophisticated fund could come up with individual management prescriptions for individual stands to achieve environmental goals. For example, a fund could co-ordinate management on adjacent stands to create suitable habitat for endangered species where no single stand alone was large enough to provide such habitat.

Though no such fund may now exist, the key tool for such co-ordination does exist. Some existing funds require private forests to have approved management plans before they receive assistance. It is a logical step for fund managers to consider how plans for different ownerships interact and to motivate adjoining ownerships to work in concert to achieve greater environmental benefits.

6. CONCLUSION

Passive reservoirs of earmarked revenues are unlikely to be the tools of choice for financial reform in the forest sector, and are unlikely in themselves to attract the positive attention of international partners. But national forest funds can be much more than passive reservoirs. Carefully designed funds, tailored to the problems at hand and strategically targeted on appropriate points of intervention, may have the potential to:

- ensure greater stability for forest financing, commensurate with forestry's need for a long-term investment perspective.
- promote wider and more effective participation in forest management and decision-making. Funds can help shift power, in the form of money, information, and authority, to previously underrepresented groups, such as local forest communities.
- tap leverage points. By internalising externalities, funds can attract more private capital to sustainable forest management. Properly designed, a fund may attract more money to forestry than the fund itself directly controls.
- strengthen government forest institutions, by making them more accountable and by increasing incentives to carry out their mandates effectively and efficiently.
- harmonise the work of multiple donors. A fund whose objectives reflect the consensus goal of sustainable forest development can be an attractive vehicle in which diverse donors can pool their assistance efforts.

Yet it would be misleading to characterise the above list of potential benefits as concrete *conclusions* that emerge from the survey presented in this study. More appropriately they should be considered as *hypotheses*, in urgent need of further empirical research and testing. As has been stressed at several points already, the overall state of knowledge of national forest funds is poor. A synthetic analysis of the legislative foundations of funds provides valuable insights, but it has its obvious limitations — we know enough about forestry institutions in general, and forest funds in particular, to know that they routinely fail in practice to reflect the promise they show on paper.

What is needed now is a fuller and more detailed picture of how funds actually operate (or fail to operate), and a clearer understanding of the constraints different types of funds encounter under different conditions. Increased knowledge may well lead to a scaling-back of expectations in many settings, based on recognition that the potential contribution of a forest fund will vary greatly depending on the context. In countries where corruption is endemic in the forestry sector, for instance, there may be little reason to believe that creation of a forest fund alone will contribute much towards greater accountability, or that operation of that fund will be free of the same ailment, however well drafted the procedural safeguards. Similarly, professional fund management and sophisticated strategies designed to leverage private investment may be achievable in some countries, but in many others these may simply be out of reach for the near future.

A number of overarching questions also remain, several of which are implicit in the brief review of arguments and counter-arguments presented in Part IV. In what circumstances, for example, might the potential benefits of establishing a fund be considered to outweigh concerns about undermining a unified approach to national budgeting? And on what bases can we conclude that creating a fund is the best strategy — or even *among* the best strategies — for achieving certain ends? To argue that a properly designed fund *can* promote accountability, participation, private sector investment, etc., in a sense begs a larger question: how can we determine the relative effectiveness of this tool in promoting these objectives vs. other available institutional mechanisms? What are the costs and benefits involved?

It is unlikely that full consensus can be reached on these and similar questions, given the different theoretical vantage points from which different disciplines view the question of national forest funds. However, it is certain that more systematic research on funds can help immensely in clarifying the debate, and in developing a better methodological framework for countries to use in designing and testing funds that are tailored to their specific needs.

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APPENDIX A. SUMMARY OF SELECTED FOREST FUND LEGISLATION[10]

Albania

Albanian law earmarks income from state forests and pastures that is generated from wood material sale, grazing fees, medicinal plants, hunting and other activities. Seventy percent of this income is managed by the Directory General of Forest and Pasture (DGFP) (the remaining 30 percent goes to Government). These managed funds are dedicated to forest work (forest improvement, forestation, seedling production); the protection of fauna and forest and pasture biodiversity; building, repairing and managing forest roads; prevention of forest diseases, pests, and fires; management of forest and pasture; forest scientific research; providing facilities for tourism and recreation activities.

Legal authority: Law No. 8302 for the Management of Revenues Generated from the State Forest and Pastures. 12 March 1998.

Bolivia

Bolivia has a National Fund for Forest Development, also called FONDOBOSQUE, dedicated to promoting sustainable use and conservation of forests and forest lands. The fund may receive money from five listed sources:

1. a percentage from forest patents, as well as an amount from fines and sales;
2. funds from the general treasury;
3. donations and bequests;
4. resources held in trust from multilateral bank loans, official development aid, or international organisations; and
5. financial transfers under the Convention on Biological Diversity and the Framework Convention on Climate Change.

The fund may be used only for management projects by institutions approved by the Forest Superintendency.

Legal authority: *Ley Forestal* (*Ley No. 1700*, 12 July 1996), Articles 19 and 23.

Brazil

A number of forest-related funds exist in Brazil, including a reforestation fund replenished by the levying of a reforestation tax (Landell-Mills and Ford, 1999; legislation creating this fund was not available for review by the authors during the preparation of this study).

One particularly interesting fund in Brazil is noteworthy for being entirely private in terms of its management, its source of income and the activities it supports. This fund is the Carajás Forest Fund, recently created by the Associação das Siderúrgicas de Carajás or "ASICA", an association of pig iron mills that use iron ore from Carajás. According to ASICA, the Fund is designed to provide financial support for an afforestation program with both native and exotic species "in order to ensure the needed biomass for their permanent sustained production." ASICA members will contribute as much as US$ 3.00 per exported ton of pig iron. The predicted annual sales of 1.7

[10] These funds were selected for review based upon availability to the authors of legislation or studies describing the funds. The collection is therefore not comprehensive, although the authors believe it to be a sufficiently large sample to offer a picture of the variety of funds world-wide. At the same time, they welcome input from readers as to funds that have been overlooked and that might usefully be included in any subsequent expanded study.

million tons of pig iron will generate approximately 5 million dollars per year. Over 10 years, the Fund is expected to collect some 50 million dollars to finance its afforestation program.

ASICA stresses that the Fund will also have important environmental benefits for the Amazon region. Through the establishment of fast growing forests within a radius of 150 kilometres from the mills, the Fund will ensure the sustainability of pig iron production. Charcoal production from forest plantations will preserve threatened native species. ASICA also adds that the establishment of forest plantations with resources from the Fund will generate approximately US$ 200 million dollars in proceeds to the country; create 50,000 direct and indirect jobs, most of them suitable for unskilled workers, thus dramatically reducing migration to urban centres; and bring to the region about US$ 170 millions annually in wages, social obligations, taxes and through the purchase of local raw materials and service. The Fund will promote the development of new afforestation techniques, including refinement of management and forest planting and good use of wood. These objectives will be reached through the integration of existing education and research institutions with the private sector.

The Banco da Amazônia — BASA has been designated as the Fund's financial manager, which ASICA claims reinforces its role as "a Financial Agent of Regional Development in Amazonia and creates a relation of additional partnership to attract international resources destined to the preservation of Amazonia in a productive and environmentally correct manner."

Source: http://www.asica.com.br/

Bulgaria

A Concessions Cost Recovery Fund, set up with the Ministry of Finance, is to receive 15 percent of the cash revenues from the granting and execution of concessions, along with interest and unspecified other revenue. Fund resources are to be used to cover the costs of awarding concessions and other costs related to the implementation and control over concessions. The surplus of revenues over expenses at year's end represents a floating balance to be used during the following year. The Minister of Finance must prepare a draft statement of the revenues and expenses of the Concessions Cost Recovery Fund on an annual basis. The Council of Ministers must adopt annually the revenues and expenses of the Concessions Cost Recovery Fund in compliance with a full budget classification.

Legal authority: 1995 Concessions Act, Articles 25-28.

Burkina Faso

The *Fonds forestier* is created to finance activities related to maintenance, regeneration and conservation of forest, wildlife and fish resources. It consists of money donated by the state, grants from bilateral and multilateral institutions, the gifts of legal or physical people, and other money defined by the law on finance. Details are to be spelled out in decree.

Legal authority: Loi nº 006/97/ADP portant Code forestier au Burkina Faso — Art. 8 et. seq.

Cameroon

Cameroon established its *Fonds Spécial de Développement Forestier* in 1994. It is intended to finance forest management activities carried out on behalf of the Minister responsible for forests by a public body. According to the law, the fund's income is largely derived from various taxes, fees and receipts of sales which are to be shared between the fund and the public treasury as specified by decree. This decree, issued in 1996, was not available to the authors. It apparently also contains further specifics concerning the functioning of the Fund. According to Gabus (2000), a further decree in 1999 has substantially altered the method by which the Fund receives its income, stipulating that the Fund is now to be replenished according to an annual budgetary allotment rather than through the automatic receipt of the aforementioned taxes, fees and receipts.

Legal authority: Loi N°94/01 du 20 janvier 1994 portant régime des forêts, de la faune et de la pêche; Décret n° 96/237 du 10 avril 1996 fixant les modalités de fonctionnement des fonds spéciaux; Décret n° 99/711 PM du 11 août 1999 (the latter two as described in Gabus, 2000).

Canada

In Canada, forest management is federalised. The provinces own the majority of the public forests and have regulatory authority over most aspects of forest management. Some provinces have dedicated forest funds.

For example, the province of Alberta has the Forest Resource Improvement Association of Alberta. This is quasi-public entity, privately incorporated but endowed by regulation with governmental powers and duties. It has authority to collect dues on timber harvested, reforestation levies, and fees for services. It can also accept donations and earn interest on its assets. It may spend its money on reforestation and projects promoting forest management. The Association and its key personnel are subject to record-keeping and reporting requirements designed to assure transparency.

The province of British Columbia's Forest Renewal Act 1994 created a quasi-public corporation called Forest Renewal BC. In 1993 the province increased the stumpage royalty on Crown timber by 30 percent, and that increase goes to fund the corporation. It spends the money on environmental, economic, and social projects related to forests. About 70 percent of its money goes towards reforestation of degraded lands and stream and habitat restoration. About 30 percent goes towards economic and social projects intended to make the forest sector more sustainable, profitable, and stable. Some of its activities, such as making loans and grants, require specific approval from the Lieutenant Governor in Council. Forest Renewal BC is governed by a board of directors appointed by the Lieutenant Governor and has several additional advisory committees, which provide opportunities for stakeholders to participate in the management of the corporation. The Act puts in place several planning and record-keeping requirements to promote transparency.

Legal authorities: Alberta Regulation 152/97, Environmental Protection and Enhancement Act and Forests Act, Forest Resources Improvement Regulation. British Columbia, The Forest Renewal Act 1994.

Congo (Brazzaville)

Legislation provides for "*Fonds d'aménagement et des ressoures naturelles*." (1975: Note that there is a new law just passed, which the authors did not have an opportunity to review.)

In the *Decret*, Article 1 says the *Fonds* is designed to assure the financing of work and studies directed at protecting, managing and developing forest, wildlife and aquaculture. In forestry, Article 2 says that the *Fonds* may be used in particular for inventory of resources, management and silviculture in dense forests, and the constitution of a permanent forest domain.

The *Fonds* is to be managed by the Ministry of Rural Economy, who can delegate authority to the Director of Forestry. A budget is prepared by the Director and submitted annually to the Ministry of Rural Economy and the Ministry of Finance.

Receipts include:

- management taxes created by the 1974 law.
- any contributions from the state budget.
- loans, subsidies, advances, interest.
- products of the activities of the forest service.
- carrying over of funds associated with a closed activity.

Disbursements include:

- expenses relating to the execution of the annual programme of work.
- the reimbursement of advances.
- miscellaneous and unforeseen expenses.
- interest on loans.
- financial charges.

Fund administration must be conducted according to the rules of public accountancy. An accountant is appointed to keep the books and make and annual report to the chamber of accounts in the Supreme Court. An accounting for the preceding year is done at the beginning of each year.

It appears that funds are made available on a trimesterly basis on instruction from the Ministry of Rural Economy in conformity with the annual work programme.

Legal authority: Loi No. 004/74 du 4 Janvier 1974 Portant Code Forestier, Art. 30; Décret n° 76/398 fixant les modalités de gestion du Fonds d'Aménagement des Ressources naturelles.

Costa Rica

Costa Rica is noteworthy for having more than one fund and particularly for its innovative approach to capturing the value of non-commodity environmental services that forests provide.

Article 38 of the current Forest Law creates a Forest Fund. This fund appears to focus on industrial forestry and support of governmental forest administration. Its purposes include promoting products from forest plantations; reforestation; agroforestry; fire and disease prevention; industry and market modernisation; research; soil, air, and water conservation; and other activities of the nation's forest administration that advance the purposes of the Forest Law. The fund may receive income from a number of sources. These include a tax on wood, donations of various sorts, proceeds from the issuance of forest bonds, fines and seizures related to the forests, income from publicly owned forests and forest nurseries, sale of seeds, income from legal publications and documents, fees for the use of protected areas, and other forest income.

For income from the tax on wood, the law specifies by percentages how to divide the income among nine programs. Forty percent is earmarked for administration of a second fund, the National Forest Financing Fund.

The National Forest Financing Fund (FONAFIFO) focuses on financing small and medium-sized operations, through credit and other mechanisms. Besides the wood tax, it also may get income from several sources, including donations and the general national budget. The fund is governed by five directors — one representing small and medium-sized producers, one representing the forest industrial sector, one named by the Minister of Environment and Energy, one by the Minister of Agriculture and Ranching, and one by the National Banking System.

One of the most innovative functions of FONAFIFO is to pay forest owners for environmental services that their forests provide. Under art. 22 of the law, FONAFIFO may issue certificates for forest conservation, representing payment for environmental services from forests. Forest owners can use these to pay taxes and other fees owed to the government.

A separate provision of the *Ley Forestal*, art. 69, reserves a third of a national tax on hydrocarbons to be spent for the benefit of forest conservation and management. Enabling regulations give charge of this money to FONAFIFO. Most of this money has reportedly gone to support reforestation rather than ongoing forest conservation. (de Camino et al, 2000).

Legal authority: *Ley No. 7575, Ley Forestal, arts. 22, 38-50, 69.; Decreto No. 25.721-MINAE que aprueba el Regalamento a la Ley Forestal, arts. 37-71.*

Croatia

Croatian law sets up a special "simple biological reproduction account" of the Forestry Enterprise, into which a minimum percentage of the sales of timber and timber for own use is paid (20% for single-season forest; 15% for multi-season forest; 15% for karst forest). This account shall be used for biological reproduction purposes as envisaged in the forest management area plan. Other enterprises and legal entities operating in the Republic of Croatia are to pay into the account a 0.07% income tax in quarterly instalments for the "generally beneficial functions of forests."

Legal authority: Law on Forests, 1991, Articles 67-70.

Cuba

Cuban law creates a National Fund for Forest Development (FONADEF), to promote sustainable development of forest resources. The main objective of the Fund is the promotion and financing of projects and activities to conserve and develop forest resources, particularly inventories, management, protection, and research.

Rules for the Fund's establishment and operation come from the Ministry of Finance and Prices acting with the Ministry of Economy and Planning, and with advice from the Ministry of Agriculture and other interested bodies.

Legal authority: Ley Forestal (Ley No. 85, 21 July 1998), Articles 12 & 13; Resolution Conjunta No. 1/2000, Minesterio de Economía y Planificación y Minesterio de Finanzas y Precios, 28 abril 2000.

Cyprus

Regulations under the Forest Law, 1967 as amended through 1991, require the establishment in respect of every Communal Forest of a Communal Forest Fund under the control of the Village Commission or Commissions who are responsible for that forest. The fund will receive the fees for the taking of forest produce and any other revenue derived from the forest. The Commission(s) may, with the approval of the Director, use the fund to defray expenses of management, development and protection of the Communal Forest. The Commission(s) are required to keep accounts, which may be audited by the Director.

Legal authority: regulations under the Forest Law 1967, as amended, Section 13.

Dominican Republic

The Dominican Republic's Forest Fund has two parts: a Special Fund and a Forest Trust Fund. The Special Fund receives income from the general treasury, the profits from administration of the state forests, fines, damages, taxes on wood, seizures, and donations. It also receives income from the sale of special postage stamps. The Forest Trust Fund receives income from donations and compensation for environmental services. In addition, the Forest Fund may accept money given for particular projects as part of international co-operation.

The National Institute of Forest Resources (INAREF) is to use the Forest Fund for conservation and management of forest resources, reforestation and agroforestry, prevention of fire and diseases, and extension work. Also, the law requires INAREF to spend at least 15 percent of fund income on research to promote sustainable forest use. The Forest Trust Fund, managed by INAREF's Directing Council, is for financing sustainable forest activities, particularly in the country's mountains, high basins, and other priority areas.

A provision in the law requires the country's executive to give INAREF the annual budget resources it needs to address basic forest infrastructure needs of priority areas. It is not clear to the authors how this provision of law is enforced if the executive fails to comply. However, this provision seems to be intended to avoid the problem of the forest fund serving as an excuse not to fund basic agency functions through the national budget.

Legal authority: Codigo Forestal, Ley 118-99 (23 dec. 1999) Cap.. VI, Arts. 35-40.

France

The France's *Fonds Forestier National* was created in 1946 in reaction to the severe crisis facing the French forestry sector in the aftermath of World War II. Its purposes are to support forestry production in order to meet national wood product demand, to increase the value of forests, to conserve wooded lands, and to promote better utilisation of forest products. The *Fonds* is, in structure, an independent account of the treasury. It is managed by the Minister of Agriculture. Its oversight consists of two different committees. The first is the *comité de contrôle,* which is given various duties and powers with respect to examining the accounts of the fund. This committee consists of two members of the legislative assembly; one member of the senate; the director of the treasury; the director of local government; the director general of industrial strategies; and various other representatives from a variety of sectors. The *comité d'orientation,* is made up of people nominated by the Minister from a range of different public and private sector disciplines, and is tasked with advising the Minister on matters that he or she might submit to it.

The *Fonds'* replenishment previously depended on a tax on wood products. This was changed to a tax on French forest industry products consumed in France in 1991 due to European Union regulations. The *Fonds* focuses primarily on financing (i) research and development work in forest sector, (ii) public investments on tree nurseries, promotion, information, (iii) grants for public sector afforestation and forest protection, and (iv) subsidised credit and in-kind subsidies for private sector afforestation.

Over the past 50 years, the *Fonds* has financed a large expansion of French forests. The average annual financing has been some 600 million FFR enabling the afforestation or reforestation of more than 2.2 million ha of forests, and the financing of many other activities in private and public forestry. The *Fonds* has been highly successful in promoting and financing the forest sector development in France. However, it has been criticised for causing price distortions reducing the competitiveness of French forest industry in French markets.

Legal authority: *Code Forestier,* L. 531-1 – L. 532-4; R. 531-1 – R. 532-25. The above summary also draws upon Liagre (1997) and especially Salmi et. al. (1999).

Gambia

Gambia's National Forestry Fund is dedicated to the protection, development, and sustainable use of forests and to the promotion of community forestry. It receives income from sale of forest products from forest parks, from community forestry, from forest fees and royalties, from fund-financed projects, from general revenues, and from donations. The Director of Forestry in the Forest Department controls the use of the fund, with the advice of a National Forestry Fund committee and the consent of the cabinet ministers responsible for forestry and finance. The forestry minister may also make rules concerning fund income and expenditures.

Eighty five percent of income from community forests, joined by other community-related forest income, goes into a local fund. The local forest committee appoints administrators for the fund and may approve spending for forest use or general community development. The committee must place the body of the fund in a local bank until the money is spent.

Gambia has provisions for auditing both the National Forest Fund and local funds.

Legal authority: Forest Act 1998, Part V (sections 30-38).

Guatemala

Guatemala has a Special Forest Fund. Its income comes from multiple sources, including payments under the Forest Law, donations, loans and contributions from international organisations, and interest on the fund itself. The National Institute of Forests (INAB) administers the fund. The law directs INAB to use the fund for forest development, advancement of industrial forestry, management of natural forests, agroforestry, watershed restoration, reforestation, research, agroforestry education, and other purposes. INAB must prepare an annual plan, approved by its board of directors. The law directs INAB to spend 70 percent of the fund on its own programs and 30 percent on three programs strengthening agroforestry education. The regulations provide for INAB´s internal auditors to review fund spending.

Legal Authority: Ley Forestal, Decreto No. 101-96, title VI, ch. III, arts. 84-86; Regalomento del Fondo Forestal Privativo, Acuerdo Guebernativo No. 561-99 (6 junio 1999).

Guinea

There is a new law as of 1999, which simply states that the *Fonds Forestier* is to be under the Ministry of Forests and fed with money according to the law of finance.

The old law, 1989, was more detailed. It says the *Fonds* is to be a special account, endowed with accounting and budgetary autonomy. Its annual budget is to be annexed to the annual budget of the State. The fund is not to function as a separate entity. Employees necessary to run it are supplied by the civil service, and remuneration is the same. The fund is made up of the following receipts:

- products of the exploitation of state forests
- taxes and fees from application of the forest laws
- fines and penalties
- sale of confiscated items
- net profits of public wood processing enterprises
- the fees paid to the forest service for services rendered
- loans or donations from the State or international organisations

The resources of the fund are intended for the development of the forest domain and to put into effect the national forest policy.

The Decret of 1993 is still in effect, pending the issuance of new decrees under the 1999 Law. The Decret establishes a management committee for the fund, consisting of representatives from many ministries. The committee is supposed to approve internal rules, the annual budget of the Fund, authorise the entering into of contracts, etc. There are rules about how often it meets, powers of the officers, voting, etc. The issuing of rules governing the Fund is the joint responsibility of the Minister of Forests and the Minister of Finance. A special committee supervises the expenditure of funds from international sources, with representatives of the donor and the management committee on this special committee.

Legal authority: Décret nº 227/PRG/SGG/89 portant application du Code forestier.

Indonesia

The Indonesian Reforestation Fund gets income from a tax on logs, chips, and other raw materials collected through timber processors, including saw mills and chip mills. The Minister of Forestry may spend the fund on reforestation outside of concession areas (where reforestation is the responsibility of the concession holder), plantation development in non-productive forests, and rehabilitation of other lands.

Legal authority: Presidential Decree re: Reforestation Fund (No. 29 of 1990), Warta Cafi, 32nd year, No. 100 (Aug. 23, 1990).

Laos

The Forestry Law of 1996 provides for a Forest and Forest Resource Development Fund. The statute sets out only the broadest outline of the Fund, declaring that it may get income from the state budget and contributions from other entities, and that it can be used only for forest activities. The statute gives examples of forest activities that stress conservation and protection of forests rather than commodity extraction, but leaves open the possibility of all forest-related uses of the Fund. The statute also specifically says the Fund may be used for education related to forests, forest laws, and conservation. Regulations may exist that specify more details about Fund use, but the authors of this report did not have access to them.

Legal authority: Forestry Law (Effective Nov. 2, 1996), Art. 48.

Lesotho

The Forest Fund, under the control of the Principal Secretary of the Ministry of Agriculture, receives voluntary contributions plus all fees, monies, and fines collected under the Forest Act. The Government may use the Fund for forest management and research. Among other uses, the Fund may make payments to the holders of a community forest, may assist private, co-operative, or community forest owners, may pay for reforestation not otherwise required by law, and may provide materials or assistance to afforestation efforts.

The Forest Act requires proper accounting of the Fund and annual audits by the Ministry of Finance.

Legal authority: Forestry Act 1998 (Act 17 of 1998), sec. 7.

Lithuania

The Lithuanian Forest Fund receives income generated off the state forests plus fines, forfeits, and other payments related to the administration of the forest laws. The Forestry Law allows the government to spend the Fund on a broad variety of forest management activities, but the Fund in practice apparently focuses on support of state enterprises rather than subsidising private forestry.

Details of the Fund appear in Rules on Forming and Using the Forest Fund (1995), which was not available to the authors of this report.

Legal authority: Forestry Law (No. I-671 of 1994), (amended by 23 December 1999 No. VIII-1498), art. 8.

Madagascar

The *Fonds Forestier National* is a special account, under private management, directed by a management council with representatives of the State, local government, NGOs and operators. Nothing else is said in the law itself; the details of the fund are set out in decrees not available to the authors. According to an IMF report, in September 1999 following a March 1999 audit, the nation revised the decree governing the Fund to help decentralise its regional operations while keeping its financing an integral part of the budget.

Legal authority: Loi nº 97-017 portant révision de la législation forestière — Titre VI.

Malawi

The Forest Development and Management Fund draws income from various categories of payments, including levies on wood felled or extracted by the Forestry Department; sale proceeds of seized forest produce; voluntary contributions; and sums appropriated by Parliament or donated by foreign governments or international agencies. In addition, if in any year the income of the Fund, along with any surplus income brought forward from previous years is insufficient to meet the "actual or estimated liabilities" of the Fund, the Minister responsible for finance may make advances to cover the shortfall. The Fund is administered by the Minister responsible for forestry, and is to be used for "the conservation, augmentation and management of forest resources and forest lands in Malawi." More specifically, the Fund may be applied to:

a. the inculcation of the twin concepts of multiple purpose management and sustainability in forestry into local communities;
b. the provision of an enabling environment for the participation of the local communities in forest management;
c. maintenance of equipment and records;
d. the cost of any scheme that the Minister considers to be in the interest of the management of forest reserves;
e. meeting any expenses arising from the establishment and maintenance of the fund; and
f. any purpose which the Minister considers to be in the interest of the objects of the Fund.

The Minister is required to cause proper books to be kept and to prepare an annual report. Auditing is the responsibility of the Auditor General. All sums are to be deposited into the Fund's bank account. Any Fund not immediately required for the purposes of the Fund may be invested in such manner as the Minister may determine, after consulting with Minister responsible for finance and upon recommendation of a multi-sectoral Forestry Management Board also established by the Act.

Legal authority: Forestry Act 1997, sections 55-62.

Malaysia

The National Forestry Act 1984 stipulates that a Forest Development Fund shall be created in each of the States to which the Act applies. It is to be administered by a committee consisting of the State Secretary, the State Financial Officer and the Director of Forestry. Money paid into the fund includes (a) annual appropriations; (b) forest development cess (see below); (c) loans or grants from Government; and (d) fees paid to the Forestry Authority to compensate it for the cost of undertaking reforestation that a licensee had failed to carry out. The Fund is to be used for (a) preparation of State forest management plans; (b) preparation and implementation of reforestation plans; (c) reviewing of State forest management plans and reforestation plans; (d) preparation and implementation of programmes relating to amenity forests; (e) expenses incurred in carrying out reforestation where licensee has failed to do so. There are provisions concerning keeping of accounts by the Committee and an annual audit by the Auditor General, and a laying of the Audit before the State Legislature.

The forest development cess is charged for timber, poles, fire wood and some other specified forest produce removed from any permanent reserved forest, State Land, reserved land, mining land or alienated land.

Legal authority: National Forestry Act 1984, sections 56-60.

Mauritania

Mauritania has a *fonds national de développement forestier*, consisting primarily of taxes and fees, as well as adjudications and transactions carried out by the State. The mission of the *fonds* is reforestation and regeneration of forests, and to provide incentives to safeguard the forest. Details are to be set forth in regulations.

Legal authority: Loi nº 97-007 (1997) abrogeant et remplaçant l'ordonnance nº 82-171 portant Code forestier du 15 décembre 1982 — Art. 85.

Mozambique

The Forest and Wildlife Act creates a forest and wildlife development fund, but gives no specifics on its sources of income or its use. Regulations have not yet been finalised.

Legal authority: Forest and Wildlife Act, 1999, art. 36(e).

Nepal

The 1993 Forest Act is notable for its provisions on community forestry, which provide for the "turning over" of portions of national forest land to user groups. These user groups are, among other things, each required to keep separate funds. They shall comprise (a) government grants; (b) grants or donations from others; (c) amounts received from the sale and distribution of forest products; (d) amounts collected through fines; (e) amounts from any other sources. The funds are to be used for meeting the expenses of the group in connection with the development of community forests. Thereafter, the balance is to be used for "other public welfare activities." (Sec. 45).

Legal authority: Forest Act 1993, sec. 45.

Norway

Norway's Forest Trust Fund receives income from assessments on sales and transfers of forest products. The money collected must be used to benefit the forest from which forest products originated or to benefit another forest owned by the same owner. Each forest property in effect has its own claim upon the Fund, and this claim runs with ownership of the land. The Ministry of Agriculture may exempt forest owners from the obligation to pay into the Fund or may allow a forest owner to carry out reforestation and forest improvement work in lieu of contributing to the Fund.

Legal authority: Act of 21 May 1965 Relating to Forestry and Forest Protection (The Forestry Act) as amended, Chapter VIII, secs. 41-49.

Philippines

Sections 65-66 of the Revised Forestry Code authorise the Department Head, upon recommendation of the Director and in consultation with representatives of the industries affected, to impose fees for forest protection, management, reforestation, and development. The collection of the charges and fees is the responsibility of the Director or his authorised representative. The Director remits his monthly collection to the Treasurer of the Philippines, who puts the proceeds, along with special deposits required of forest licensees, into a special account in the Philippine National Bank. The Budget Commissioner and the National Treasurer can make quarterly releases of the collected fees and charges upon request of the Director. Expenditures must be outlined in an annual budget and work program approved by the Department Head and the President. In the case of the special deposits, the Department Head may release them for expenditures outlined in an annual budget prepared by the Director and restricted to specific purposes listed in the law.

Legal authority: Revised Forestry Code, secs. 65-66.

Senegal

The *Fonds* consists of fees and auction money, receipts from sales of coupes or other forestry products realised by the State, a tenth of sales and auctions realised by local governments, loans, gifts, and other income. The *Fonds* executes or encourages actions for the protection and conservation of forestry, wildlife and fish resources, reforestation, and restoration of denuded earth in danger of erosion. Under the *Decret*, spending may go towards: (i) actions for protection and conservation of forests, including fire fighting, management of hunting, fishing and exploitation, delimitation and surveillance of the forest domain, education, information, "sensibilisation" of the population; (ii) actions for management, restoration of forest resources, conservation of soils; (iii) infrastructure and equipment for the Service; (iv) remuneration of temporary personnel, costs of displacement, uniforms, etc.

The *Fonds* can provide subsidies for collectivities and local organisations, public and private establishments, as well as for physical persons to help them undertake conservation actions, reforestation, etc. These are given by decision of the Minister, on the advice of the Director, upon submission of a document justifying the granting.

Legal authority: Loi nº 98-03 portant le code forestier (1998) — Art. 5-6; Décret nº 98-164 portant Code forestier - partie réglementair — Section 4.

Solomon Islands

The Forests Act establishes a Forest Trust. Besides government appropriations and outside donations, the Trust receives half the proceeds from fines and license fees under the Act and revenue from forest development levies and sale of forfeited property. The Trust supports tree planting and tending, reforestation, and other purposes set out in regulations.

Legal authority: Forests Act 1999 (No. 3 of 1999), sec. 9.

South Africa

To promote access to and the use of forests for recreation, education, culture or spiritual fulfilment, the National Forests Act creates a National Forest Recreation and Access Trust. The Trust may receive donations or government funding. It may also enter into contracts and charge fees for any services or goods it provides. The National Forests Act outlines clear procedures for keeping and auditing the Trusts accounts.

Legal authority: National Forests Act (No. 84 of 1998), Chapter 5, part II, secs. 41-44.

Sri Lanka

Regulations under the Forest Ordinance established a Forest Department Fund in 1979. The Conservator of Forests is to be responsible for its administration. Sources of money paid into the fund include: an amount not exceeding half of any money received by the CF through the compounding of an offence. It also appears that the Fund will be a conduit for money available through court order to reward informers. Otherwise, no sources of Fund money are specified. The Fund is to be used to reward informers; reward forest officers and others; to reimburse the expenses of witnesses; to compensate forest officers and others for bodily injury incurred in the performance of duties; to pay death benefits.

Legal authority: Forest Regulations No. 5 of 1979, relating to the Forest Department Fund.

Tanzania

A draft law currently being considered would create the Tanzania Forest Fund. The Fund would draw on a small percentage of forest fees and royalties, plus contributions, government appropriations, income from sale of confiscated forest produce, and income from Fund-financed projects.

A board of trustees would manage the Fund. The President would appoint the board chairman and the minister whose portfolio includes forests would appoint the remaining members.

The trustees could spend the Fund on education; community forestry projects; research; participation in international conservation initiatives in Tanzania; public participation in forest management or implementation of the Forest Act; and similar activities that will advance the purposes of the Forest Act.

The draft Act directs the trustees to keep the Fund's assets in a reputable bank and to run the Fund in a business-like fashion. The draft would require annual, independent audits of the Fund.

Legal authority: A Bill for a Forest Act, 2000 (third draft, Jan. 12, 2000), secs. 86-89.

Tanzania (Zanzibar)

In Zanzibar, the Forest Conservation and Management Act 1996 provides for the future creation of a Forestry Development Fund by the Minister responsible for forests upon the agreement of the Minister responsible for finance. It is to be used for: (a) expenses related to reforestation; (b) extension and research; (c) loans and grants to persons or groups desiring to plant trees or manage forests; (d) administration and operations of the Forest Authority; and (e) any other activities directly related to the fulfilment of the purposes of the Act. The Forestry Development Fund would receive: (a) any sums contributed by private individuals, foundations, corporations and international organisations; (b) any sums appropriated to the Fund by the Government; (c) all or some of the amounts collected as penalties, fees or royalties under the Act (including sums obtained through the sale of confiscated materials, but excluding sums collected by managing communities under a community forest management agreement), as may be specified in regulations; and (d) other funds designated in regulations. The Fund is to be administered by the Minister, and the Act provides for an annual report and audit.

During the drafting of this Law, there was strong support within the forestry sector for the establishment of a Fund within the Law itself, rather than in regulations. However, the idea of a fund was vigorously opposed by the Ministry of Finance, so the compromise position was to include language in the Act that would enable creation of a fund in the event the agreement of the Ministry of Finance could be secured at some point in the future (Lindsay, 1996).

Legal authority: Forest Resources Management and Conservation Act 1997, sections 81-83.

Tunisia

Tunisia has a *fonds* for sylvo-pastoral development, designed to encourage the participation of people, collectivities and entities in the production of wood and forage, and the amelioration of economic and social conditions of forest populations. Farmers outside the forest domain of the State may benefit from the help of this *fonds* for their support of the national effort to improve forestry and forage. The Decree setting forth the details of the *fonds* was not available to the authors.

Legal authority: Loi nº 20 portant Code Forestier (1988).

United States

By one count, the United States Forest Service has 23 trust funds and special accounts (Gorte & Corn 1997). In addition, at least 47 special accounts lie under the jurisdiction of other federal land management agencies (the Bureau of Land Management, the National Park Service, and the Fish and Wildlife Service), and some of these may go to forested land management (Gorte et al. 1999). Typical funding sources include agency receipts, excise taxes and licensing fees, import duties, and donations. A few funds receive money from the general treasury. Most of these funds are for agency activities, such as reforestation or other land management.

A major Forest Service fund is the Knutson-Vandenberg or K-V Fund (created in 1930 and named after two legislators with a history of interest in forest management). It allows the Forest Service to reserve up to 100 percent of the receipts from a sale of timber for use in reforestation or timber stand improvement. In 1976 Congress amended the law to allow the Forest Service to also spend the K-V Fund on management of non-timber resources. The money must be spent on the management unit (national forest) that generated the income. This has two notable effects: it creates an incentive for local forest officers to make timber sales, and it decentralises forest management by giving local forest officers a source of funding independent of agency headquarters.

Another example, the Reforestation Trust Fund, is of interest because of its funding structure. It channels income from tariffs on imported solid wood products to fund reforestation and stand improvement on public forests.

Some federal funds make direct payments to sub-national governments. A few compensate sub-national governments for the lack of property tax revenue from federal lands. Some make grants to sub-national governments for forestry projects. (For example, the relatively small Rural Fire Disaster Fund supplies emergency funds for forest fire fighting. The relatively large Land and Water Conservation Fund supplies money for public land acquisition for both federal and state governments. Its income comes largely form royalties from offshore oil and gas leases.) The law may require the grants to be distributed among sub-national governments according to a pre-set formula, or it may allow the agencies to award money on a competitive basis, based on the merits of individual project proposals.

One relatively minor federal funding effort was mentioned in the main text of this paper because of its unusual reliance on a private organisation to distribute funds. This was the America the Beautiful Act, which allowed the president to designate a private foundation to receive a one-time grant of up to $25 million for use on community and urban tree planting and related projects.

The United States has some sub-national funds that are of interest as well.[11] The state of Maryland taxes property transfers of agricultural and forest lands. The resulting Woodland Incentive Program fund will pay half the costs of reforestation and stand improvement for private landowners holding 10 to 500 acres (approximately 4 to 202 hectares).

Also in Maryland, a state-created Chesapeake Bay Trust makes small grants for tree planting and educational projects that help enhance water quality in the Chesapeake Bay watershed. Income for the trust comes from donations, which citizens can make voluntarily as an addition to their annual income tax. Citizens can also contribute by buying special decorative automobile license plates instead of the normal state plates.

The state of Oregon created a Forest Resource Trust that pays for up to 100 percent of the costs of reforestation on qualifying private lands. In return, the landowner must have a management plan and must agree to either pay back the costs with interest or share future net revenues from the forest with the Trust. The owner must also give the Trust any carbon (greenhouse gas) offsets created

[11] (The funds described here were selected from a discussion of U.S. sub-national funds Environmental Law Institute (2000).

through the reforestation. Once it is created, the revenue-sharing obligation applies to whoever owns the land for the next 200 years.

Legal authority: K-V Fund, Act of June 6, 1930, ch. 416, codified as 16 United States Code sec. 576. Reforestation Trust Fund, Public Law 96-451, sec. 303, codified as 16 United States Code sec. 1606a. Rural Fire Disaster Fund, Public Law 95-313, sec. 7(f), codified as 16 United States Code sec. 2106(f). Land and Water Conservation Fund, Public Law 88-578 as amended, codified at 16 United States Code secs. 4601-4 to 4601-11. American the Beautiful Act, Public Law 101-624, secs. 1261-1266, codified as note following 16 United States Code sec. 2101. Maryland Woodland Incentive Program, Maryland Code Annotated, Natural Resources, secs. 5-301 to –307. Chesapeake Bay Trust, Maryland Code Annotated, Natural Resources, secs. 8-1901 to –1909. Oregon Forest Resource Trust, Oregon Revised Statutes secs. 526.700 to .775 and Oregon Administrative Rules, secs. 629-0220-0400 to –0700.

Uruguay

The Forest Fund of Uruguay collects income from government payments, income from government forests, fines, indemnities assessed for failure to meet forest norms, returns of interest and principal from loans made by the fund, donations, and the proceeds of loans or other financial arrangements made to the Fund. The Fund is kept in a special account in the Bank of the Republic. It can be used for loans to forest land owners and light industry, forest land purchase, and public forest management. The resources of the Fund must be put to use under a plan for long-term forest development.

Legal authority: Ley N° 13.723, title VI, arts. 54-56.

Vanuatu

The Forest Act 1982 establishes a Forestry Fund, to be kept by the Treasury. Each year there is to be paid into the fund (a) a sum equivalent to what the Minister receives in repayments under plantation agreements, reforestation charges and penalties; (b) such other moneys Parliament may appropriate to the Fund; and (c) such moneys granted to the Government of Vanuatu for such purpose. The Fund is to be used for (a) establishment and maintenance of forest plantations under the plantation agreements; and (b) other afforestation and reforestation works. The “reforestation” charge referred to in (a) is on all timber cut during the course of utilisation operations, and shall be a percentage of the market value at stump of timber cut, sold or utilised, to be assessed by the Minister.

Legal Authority: Forest Act 1982, sections 27-28.

Vietnam

Vietnam has a Forest Regeneration Fund, created by the Council of Ministers and modelled generally on France’s *Fonds Forestier National*. The government collects a forest regeneration fee on the harvests of all forest products, both from natural and planted forests. The Ministry of Forestry uses the Forest Regeneration Fund to plant new forests, restore damaged forests, and manage and protect existing forests.

Legal authority: Council of Ministers, Decision 88-HDBT (1981), Decision 116-HDBT (1988), as summarised in Salmi, et. al, 1999.

Zambia

The Forests Act 1999 contemplates the establishment of several different funds by the Forestry Commission: (a) a Forest Revenue Fund comprising of moneys obtained from licences and permits issued, concessions granted and services rendered in connection with forest produce; (b) a forest development fund for the promotion and support of wood processing industry, afforestation and reforestation programmes within the forest sector; (c) fund for Joint Forest Management at local levels.

Legal authority: Forests Act 1999.