

Country Case Study 3

The Ecuadorian Outsourced National Forest Control System

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SUMMARY

To improve the public administration and control of timber production in its biodiversity-rich forests, in 2000 Ecuador implemented the development of an innovative scheme: the Outsourced National Forest Control System. The system was based on three components: (i) *Vigilancia Verde*, a government-civil society body responsible for policing the road transport of forest products; (ii) the *Regentes Forestales*, professional foresters with public responsibility for monitoring legality in the forest; and (iii) the outsourcing to a private company of administrative and verification services. The innovation and early achievements of this system attracted worldwide attention but, in 2002, the implementation of the third component engendered fierce opposition within the country. In October 2003, Ecuador's Constitutional Tribunal ruled against the component, leading to its suspension and the overall weakening of the system. This paper describes the contextual factors that led to the development of the Outsourced National Forest Control System, its specific legislation and architecture, and the main reasons for its fall.

1. Introduction

Ecuador has the highest deforestation rate in South America, fuelled in part by widespread illegal logging. To tackle this, Ecuador promoted an innovative scheme: the Outsourced National Forest Control System (abbreviated to SNTCF in Spanish¹). The SNTCF delegated responsibility for monitoring and public administration of forest operations to three different bodies with the following roles: policing the transport of forest and wildlife products; monitoring activities within the forest; and carrying out administrative and verification functions. The system attracted worldwide attention but soon became the target of fierce opposition inside the country, eventually leading to its partial suspension and overall weakening. With the aim of detailing valuable lessons for Ecuador and other countries, this case study analyses the development of this innovative scheme and its subsequent problems, applying a working hypothesis suggesting that effective systems of forest verification are a product of wider pressures and developments in the host society, and do not arise endogenously in the forestry sector.

The paper is in nine sections, including this introduction. Section 2 summarises a few central aspects of Ecuador's forestry sector. Section 3 reviews the historical and political origins of the SNTCF, and Section 4 describes its legal basis. Section 5 discusses the multiple dimensions of its structure and functioning, with Section 6 analysing some key aspects of the system. Section 7 describes SNTCF's legal problems and options for forest control in Ecuador. On the basis of the analysis carried out, Section 8 discusses the hypothesis. Section 9 summarises the main lessons that can be drawn from Ecuador's experience.

2. Context of the analysis

2.1 Forest resources

Ecuador's continental area consists of 246,876km², divided into three broad regions: (i) Coast, (ii) Highlands, and (iii) Amazon (IGM² data cited in FAO/CATIE, 2000). Information on forest cover is somewhat uncertain, with different studies reporting different data. Most studies, however, indicate that there are between 10.5 and 12.0 million hectares of forest cover,³ which corresponds to about



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42.5-48.6% of the country's continental area. About 60% of this forest cover is located in the Amazon region (Sierra *et al.*, 1999). The area covered by plantations, mainly *Pinus spp.* and *Eucalyptus spp.*, is estimated at 167,000 hectares (MAE, 2003).

Likewise, there are multiple estimates of Ecuador's deforestation rate, ranging from 100,000 to 340,000 hectares annually (Wunder, 2000). The officially reported deforestation data indicate an annual loss of 137,000 hectares of forest (1.2%) (FAO, 2000); as shown in Table 1, a recent study by CLIRSEN (2003) estimates that between 1991 and 2000 the annual deforestation rate was 198,000 hectares (1.47%). Both estimates make Ecuador the country with the highest deforestation rate in South America.

2.2 Forest tenure

Indigenous nationalities in the Amazon control about 6.0 million hectares of already legalised land (3.7 million hectares) and claimed territories (2.3 million hectares) (SIISE, 2003). In the north-western lowlands (Province of Esmeraldas), the Awá and Chachi indigenous groups hold about 230,000 hectares (*ibid*). Thiel (2004) estimates that almost 80% of these indigenous territories are covered by natural forests, totalling more than 4.9 million hectares.

State Forest Heritage⁴ is made up of 3.9 million hectares, including 1.9 million hectares declared in the 1980s and 2.0 million hectares of 'protected forest' on public land. Approximately 4.0 million hectares of forests included in 32 protected areas on the continental (excluding islands) must be added to these figures (CIAM, 2005),⁵ which makes a total of 7.9 million hectares theoretically owned by the Ecuadorian state.

Finally, according to the National Agriculture Census⁶ carried out in the year 2000 (SICA, 2002), there are nearly 3.9 million hectares of forests in approximately 240,000 production units, owned by small, medium or large proprietors, often without legal land titles.

As shown in Table 2, the sum of these different ownership categories clearly exceeds the forest cover estimate discussed above. This owes partly to deforestation (significant areas of State Forest Heritage have lost their forest cover), but also points to wide overlaps in coverage, which have often generated harsh conflict among indigenous peoples, state authorities and individual holders.

2.3 Estimating rates of illegal logging in Ecuador

The information available on wood production and consumption varies greatly according to its source.

Table 1: Deforestation in continental Ecuador in the 1990s

| | Forest type | Forest cover | | Difference 1991-2000 (ha) | Mean annual deforestation (ha) | Deforestation rate (%) |
|---|-------------------------|--------------|------------|---------------------------|--------------------------------|------------------------|
| | | 1991 (ha) | 2000 (ha) | | | |
| 1 | Humid forests | 12,114,299 | 10,489,756 | 1,624,543 | 180,505 | 1.49 |
| 2 | Dry forests | 708,768 | 569,657 | 139,111 | 15,457 | 2.18 |
| 3 | Mangroves | 162,197 | 150,002 | 12,195 | 1,355 | 0.84 |
| 4 | Moretales* ¹ | 477,390 | 470,407 | 6,983 | 776 | 0.16 |
| | Total | 13,462,654 | 11,679,822 | 1,782,832 | 198,092 | 1.47 |

Source: CLIRSEN (2003).

* * Vegetation adapted to swamp areas dominated by palms, typical of the Amazon region.

Table 2: Comparing forest cover and forest ownership

| Categories | Areas (millions of ha) |
|--|------------------------|
| Forest areas owned/claimed by indigenous peoples | 4.9 |
| State forest areas | 7.9 |
| Forest areas in 'private' production units | 3.9 |
| Total legal/claimed forest ownership | 16.7 |
| Total forest cover | 10.5-12.0 |

Source: elaborated Elaborated from Schroeder (2005).

Consequently, estimates on illegal production and trade also show wide variation, and should be treated with caution and only as indicative. According to official data, between 1998 and 2001 Ecuador's Ministry of Environment (MoE) authorised an average annual extraction of 660,000 cubic metres of standing timber in natural forests, pasture lands and other areas with remaining trees (Table 3). This represents only 23.6% of the 2.8 million cubic metres of annual industry-driven timber consumption from natural forests reported by Echeverría (2004), which suggests that the remaining 75% is extracted illegally.⁷ On the other hand, Thiel (pers. comm.) estimates a yearly total production of one million cubic metres from natural forests and other not planted tree formations. In this case, illegal logging from such sources would be significantly less (about 44%). The range formed by these two estimates is consistent with the numbers put forward by other sources, which indicate that 50-70% of the timber sold in the country is illegally extracted (Álvaro, 2003; *The Economist*, 2003).

3. Historical and political origins of the SNTCF

The dramatic loss of Ecuador's forests spurred a nationwide debate in the 1990s, which eventually gave rise to a policy reform process. The first step was the

adoption in 1995 of Ecuador's Forest, Natural Areas and Wildlife Policy⁸ which, among other things, introduced the concept of delegating bureaucratic functions traditionally managed by the state to, or sharing them with, non-governmental organisations (NGOs) and economic operators (Echeverría, 2004).

The political changes and turbulence of 1996 and 1997 brought a halt to the reform process, but in 1999 there was a new and important step forward with the adoption of Ecuador's Strategy for Sustainable Forestry Development⁹ (Box 1), developed through a broad participatory process. Recognising the state's scarce resources and limited capacity in the field of forest control, the Forestry Strategy directed the MoE to delegate to civil society and the private sector all functions that were not strategic to the exercise of the public forest authority, and that could be performed more efficiently by specialised external actors. The state role was to be limited to policy formulation and legislative/sanctioning functions (Thiel, 2003; Echeverría, 2004).

These policy processes were followed by a comprehensive effort to modernise the institutional and legal framework of the forestry sector. The MoE has undergone a progressive devolution process in which the country was divided into 10 regional forestry districts, which have had operational and budgetary autonomy

Table 3: Official timber extraction in natural forest areas (excluding plantations)

| Approved wood extraction | 1998 (m ³) | 1999 (m ³) | 2000 (m ³) | 2001 (m ³) |
|---|------------------------|------------------------|------------------------|------------------------|
| Natural forests | 718,046 | 613,434 | 620,074 | 578,021 |
| Special permits for pasture lands, etc. | / | / | 64,927 | 43,069 |
| Total | 718,046 | 613,434 | 685,001 | 621,090 |

Source: MAE (2002).

Box 1: Key objectives of Ecuador's Strategy for Sustainable Forestry Development

- Stop the loss of natural forests, using mechanisms that favour sustainable management and which value environmental services, assuring a competitive land use system.
- Conserve and manage forests and other resources in protected areas, wetlands, mangroves and highland through the generation of alternative incomes, especially in the areas of tourism and biodiversity.
- Restore lands with forestry potential that are currently without forest cover, and incorporate them into economic and social development processes through a broad reforestation programme.
- Ensure the participation of the rural population as well as Afro-Ecuadorian and indigenous peoples in decision-making processes and the planning, execution and monitoring of forestry and conservation programmes.

To reach the four specific objectives, the following specific strategies will be pursued:

- Valuation of natural forests and plantations
- Support and financing for sustainable forest management (SFM)
- Strengthening of participation and incorporation of civil society
- Institutional and organisational modernisation
- Modernisation of the legal framework

since 2002 (Echeverría, 2004). Decentralisation of environmental competences to elected local authorities was also high on the agenda, but in practice this involved only a few mayoral municipalities and provinces (Schroeder, 2005).

In the late 1990s, attempts to prepare and approve a new forest law failed repeatedly, owing in large part to recurrent political crises. As a result, at the beginning of the current decade, the MoE opted to modernise the legal framework through a series of legislative and regulatory reforms, in line with new policies. In April 2000, Executive Decree No. 346 introduced important changes to the Regulations of the 1981 Forestry and Conservation Law, establishing five basic criteria for sustainable forest management.¹⁰ Subsequently, in 2002 a deeper reform of these Regulations was carried out, which led to the approval of the so-called *Legislación Ambiental Secundaria*¹¹ (Secondary Environmental Legislation). This norm is fundamental since it gives a solid legal basis to the already existing SNTCF,¹² with its three key elements: the establishment of the *Regencia Forestal* (Forest Steward Programme); the creation of a public-private control body involving civil society groups (*Vigilancia Verde* or 'Green Surveillance'); and the delegation of administrative and supervisory functions to the private sector. Several other legislative instruments (discussed in Section 4) had been approved in preceding years, which allowed partial implementation of the SNTCF before it was given official legal recognition as a comprehensive system at the end of 2002.

These overlapping legal changes underline one key feature of the SNTCF. Although it was designed upfront in the context of the Forestry Strategy, its development and implementation were gradual and adaptive processes, with the different parts of the system falling into place at different times. Implementation began in 2000 with *Vigilancia Verde* and the *Regencia Forestal*; the third and final component of the system – the outsourcing

of administrative and supervisory services to a private company – was only implemented two years later (in 2002/2003).

4. SNTCF's legal framework

The delegation of public duties to private entities is provided for in Ecuador's Political Constitution and in the 1993 State Modernization Law¹³ (Echeverría, 2004), but the legal foundation for the SNTCF is the 1981 Forestry and Conservation Law and its Regulations. However, the complexity of the system required the development of a specific legislative framework for its implementation.

A first key legal instrument was MoE Ministerial Decree No. 131, known as the Forestry Legislation,¹⁴ adopted in mid-2000 with the aim of implementing the reform of regulations introduced earlier that same year (Executive Decree 346). This norm introduced important new mechanisms for promoting forest management, 32 verifiable indicators for forest monitoring,¹⁵ and administrative procedures for forest harvesting. It defined the role, functions and responsibilities of the *Regentes Forestales* (forest stewards), thus establishing the first element of the outsourced control system.

A second key legal instrument was MoE Ministerial Decree No. 86 approved in December 2000,¹⁶ which officially recognised the control function of *Vigilancia Verde* (established in February 2000 by an agreement signed by eight public and private institutions), and gave it authority to receive 50% of the sale value of illegally transported timber seized and auctioned.

The legal support for the third and final component of the system was established by Executive Decree No. 2609,¹⁷ which authorised the MoE to delegate administrative and supervisory responsibilities to a private company. This Decree allowed the MoE to issue Ministerial Decree No. 50,¹⁸ which defined the legal basis and administrative procedures for implementing

Box 2: AIMA and COMAFORS's legal arguments against the SGS contract

- Ecuador's Political Constitution and its State Modernisation Law allow the delegation of public services to the private sector, but not of government undelegable prerogatives, such as issuing public licences, carrying out control activities, and collecting and transferring state taxes.
- The contract between the MoE and SGS establishes a tariff to be paid to SGS for its administration and verification activities; however, according to Ecuador's Political Constitution and Tax Code taxes can only be collected by the state, not by a private entity, and can only be established by the National Congress, not by a contract between two entities.
- Ecuador's Law for Investment Promotion and Citizen Participation confirms that the state can establish taxes for administration services, control activities, etc., but only to recover the costs of such activities. However, the MoE-SGS contract clearly establishes that the contracted company will not only recover its costs, but also gain a profit.
- The contract between the MoE and SGS establishes a contractual obligation (the payment of a tariff) for third parties (private forest companies) that are not signatories of the contract, this contradicts the country's Civil Code according to which a contract only creates obligations for its signatory parts, not for non-signatory third parties.
- The contract establishes an automatic system for the adjustment of SGS's tariff according to the country's accumulated inflation (Consumer Price Index); however, such automatic adjustments are not allowed by Ecuador's Law of Economic Transformation.
- SGS's tariff represents for private forest companies their third payment for control activities, since they already pay the MoE (stumpage tax) and the *Regentes Forestales* for this same concept. This is forbidden by Ecuador's legal framework, which does not admit double or triple imposition for the same concept.

Source: AIMA and COMAFORS (2003).

the delegation process. In May 2000, the MoE published a public tender open to national and international companies. Four companies were interested in bidding, but in the event only one did so, the Ecuadorian branch of the Swiss company Société Générale de Surveillance (SGS); this company was awarded the contract.

As noted earlier, the Secondary Environmental Legislation, adopted in December 2002 and January 2003 (see Footnote 11), gave the final legal foundation to the entire SNTCF. The legal definition of the SNTCF, however, did not finish at this point. In June 2004, responsibilities and obligations of the Regentes Forestales were further defined by MoE Ministerial Decree No. 38,¹⁹ which also clarified the procedures for sanctioning those Regentes found responsible for irregularities. This Decree was approved together with another four related ones,²⁰ which further refined the norms and administrative procedures for forest management and harvesting in natural forests, plantations and agroforestry systems.

Despite these attempts to clarify the legal status of the system, two closely linked private sector organisations, AIMA²¹ and COMAFORS,²² raised numerous arguments challenging the constitutionality and validity of the contract between the MoE and SGS, and lobbied key Ecuadorian political figures (*The Economist*, 2003). Box 2 summarises their main arguments. However, in a letter to the MoE sent in May 2003, the State Attorney General declared the arguments against the contract to be ‘not transcendent’ (that is to say, not relevant), and urged the signatories to comply with it.

5. Background of SNTCF

5.1 Organisational structure of the system

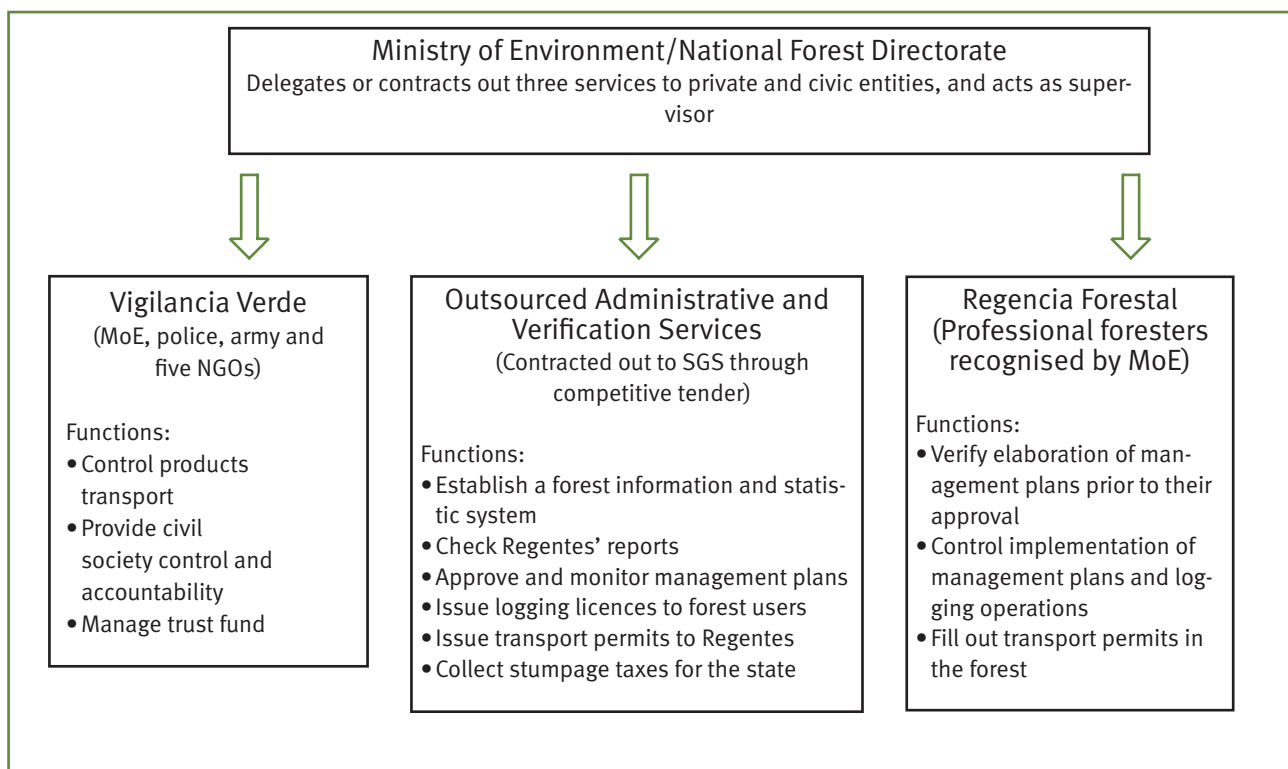
The SNTCF embodies an integral approach to forest law enforcement, aimed at improving transparency,

reducing bureaucracy, and tackling corrupt and illegal practices. Figure 1 shows the basic structure of the system, with the MoE outsourcing the responsibility for forest monitoring and administration to three different entities: the first policing the transport of forest and wildlife products (Vigilancia Verde); the second (Regencia Forestal) monitoring activities within the forest; and the third (outsourced administrative and verification services) carrying out these stated tasks.

Responsibility for controlling road transport was given to **Vigilancia Verde**, a public/private body set up in early 2000 by the MoE, the National Police, the National Defence Ministry and five local environmental NGOs.²³ At its peak, Vigilancia Verde operated 12 road checkpoints and six mobile patrols, each one comprising a representative of the forest authority, one from civil society, one from the police and one from the army. These teams operate on a 24-hour basis and their members are reassigned to different control points every 15 days. The scheme is funded by a trust, which receives 50% of the sale value of timber seized and auctioned, plus grants from donor agencies and the private sector.

The second key component is the Regencia Forestal. The **Regentes Forestales** are professional foresters, officially recognised by the MoE and with public responsibilities, who have the duty to monitor legality in the forest, ensuring that management plans are correctly designed and harvesting operations follow the provisions of standards and logging permits. They are also responsible for filling out the transport permits (guías de circulación) which they receive from the forest authority,²⁴ in order to provide the necessary legal backing for the transport of wood and wood products. Although qualification for the Regentes Forestales is

Figure 1: Basic structure of the SNTCF



awarded by the MoE, they are not civil servants and do not receive a public salary: their compensation is paid by the clients (e.g. forest owners and timber intermediaries) who contract their services.

The Regentes Forestales are personally responsible for their reports. If they act unprofessionally they stand to lose their accreditation.²⁵ Currently, there are about sixty Regentes in the country, of whom only 35 are active (Thiel, pers. comm.).

The third component (outsourced administrative and supervisory services) was outsourced to a private company, SGS, through an open competitive bidding process as earlier described. The work entailed the establishment and operation of a forest information and statistics system (for all records of administrative and supervisory activities, permanently accessible online by the forest authority and Vigilancia Verde) as a database providing multiple services on behalf of the MoE, such as checking elaboration and implementation of forest management plans, issuing logging licences and transport permits, and collecting stumpage taxes for the state. The company was also responsible for supervising the work of the Regentes Forestales and loggers in the forest, controlling the use of transport permits in collaboration with Vigilancia Verde, and establishing a webpage for the wider public with information derived from the above system. To finance its work, SGS was authorised to collect a fee of US\$2.50 directly from the forest user or logger for every cubic metre of timber licensed in natural forests²⁶ (in addition to the stumpage tax of US\$3 per cubic metre for the MoE); and a fee of US\$0.10 per cubic metre cut in forest plantations (exempt from stumpage tax).

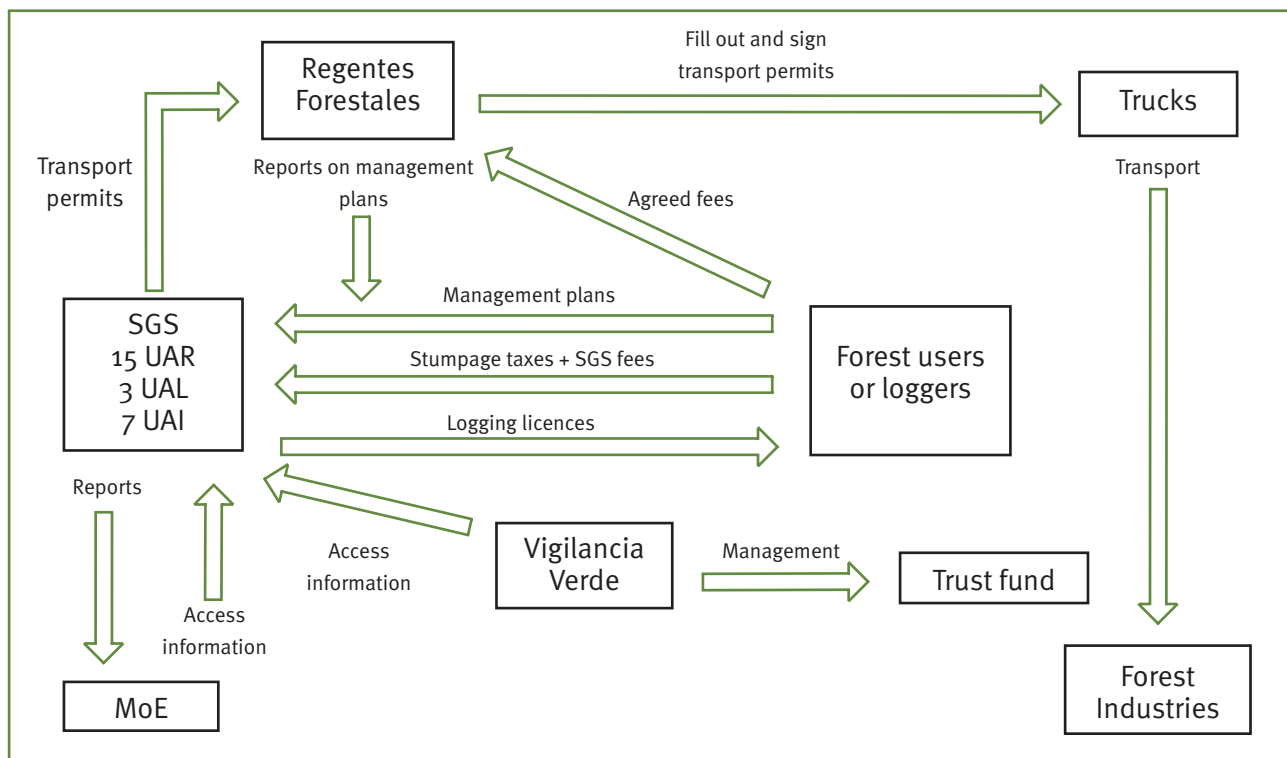
5.2 Administration services

The core aim of the SNTCF was to provide two complementary functions: (i) efficient administration services in order to reduce the transaction costs of bureaucracy and provide incentives for legality; and (ii) effective verification services in order to increase detection and punishment of illegal activities and therefore disincentivise illegality.

Figure 2 illustrates the flow of administrative services, in which the database of the information and statistic system was the pivotal element. The system was to work as a network, permanently connecting all administrative units at regional and local level, as well as Vigilancia Verde's road checkpoints.

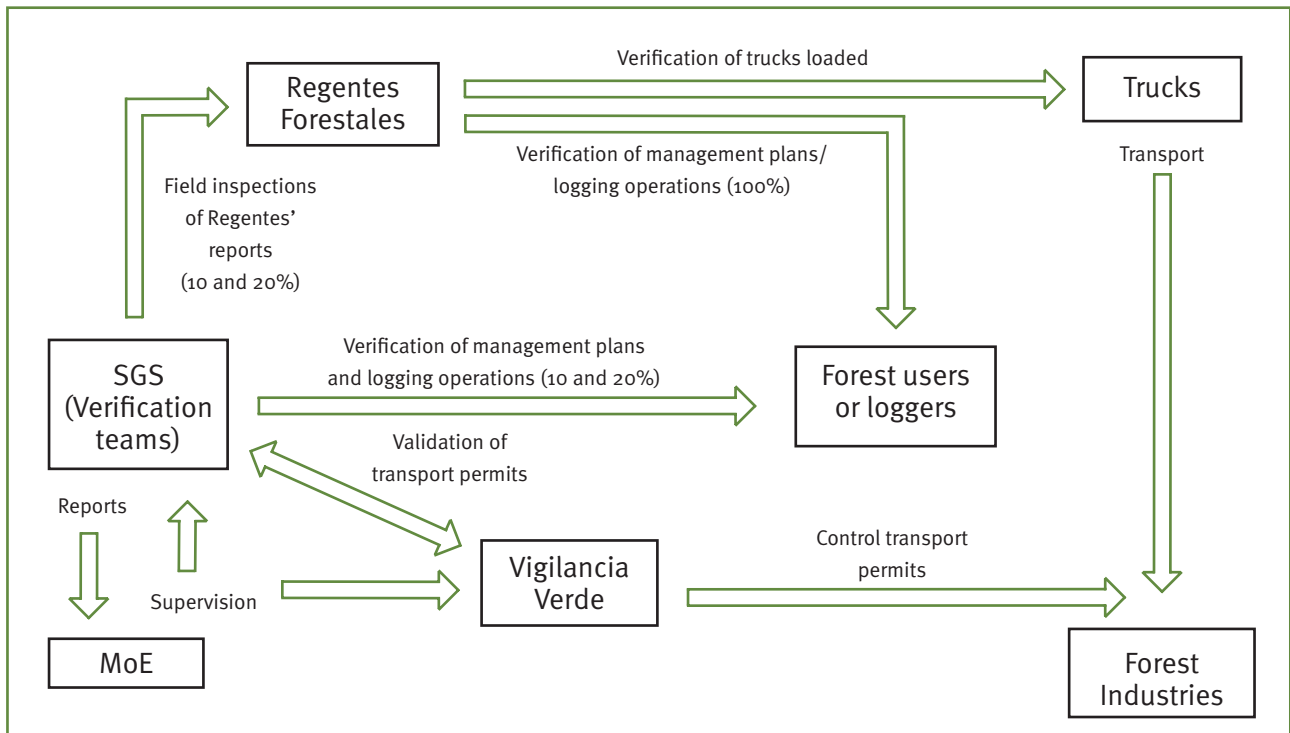
The system allowed the immediate processing of administrative matters. In fact, SGS's contract with the MoE established that the company had a maximum of eight hours to approve (or disapprove) a management plan and issue (if approved) the relevant logging licence and transport permits on behalf of the MoE (to the user/logger and to the Regente Forestal). To carry out these services, SGS's contract included the establishment of fifteen Regional Administrative Units (*Unidades Administrativas Regionales*, UAR), three Local Administrative Units (*Unidades Administrativas Locales*, UAL), plus seven Itinerant Administrative Units (*Unidades Administrativas Itinerantes*, UAI).²⁷ The latter were to facilitate access to legality for small forest producers by bringing administrative services directly to their communities. The combination of these features (limiting time for paperwork, and deconcentration and peripatetic units) represented an innovative approach to reducing bureaucratic barriers to legality in forest management.

Figure 2: Flow of administrative services



Source: Modified from Thiel (2005).

Figure 3: Flow of verification services



Source: Modified from Thiel (2005).

5.3 Verification services

These services also were shared out among the three different entities of the outsourced system (Figure 3). SGS had defined obligations for the supervision of loggers and Regentes Forestales. The contract stipulated that SGS had to inspect 10% of management plans in the field to verify their correctness, and supervise implementation in 20% of cases. The combination of these inspections implied a random and risk-profile driven verification of at least 30% of natural forest harvesting operations.²⁸ This also implied the inspection of 10% of the Regentes' preliminary reports and of 20% of the intermediate and final reports.²⁹

The Regentes Forestales are responsible for (at least) three supervisory inspections of all licensed harvesting sites: a preliminary inspection to check the correctness and accuracy of the forest management plan to be presented for approval; a second inspection during harvesting operations; and a final one when operations are concluded. For each one of these inspections they have to produce a report and, in the event that they detect any violation or irregularity, they have to present an indictment report, in order that the MoE can take all the necessary steps to enforce the law. They are also responsible for verifying volume loaded, species and other relevant information for each truck ready to leave the forest.

As discussed, Vigilancia Verde controls the transportation of all forest and wildlife products – through a network of road checkpoints and mobile patrols. The MoE, in turn, must verify that the confiscation of any product by Vigilancia Verde is carried out according to the norm. The MoE was to supervise and audit SGS on a permanent basis and sanction any contractual violation.

This involvement of multiple controls and actors significantly increased the detection of forest-related

irregularities and crimes (see Section 6.4). However, there also loopholes in the system:

- Despite the lack of a clear statement in the legal framework, an incompatibility principle was initially applied in the implementation of the Regencia Forestal: the Regente who had been responsible for the preparation of a management plan could not be the same Regente charged with preliminary inspection of the plan. The preliminary inspection of the Regente Forestal was specifically aimed at verifying the correctness of the document. However, Ministerial Decree No. 38, adopted in 2004, changed this and allowed the Regentes Forestales to perform both of the above roles. This action can be understood as it reduces the costs of legality, but it nullifies the importance of the first preliminary report by a Regente Forestal, since he/she is just evaluating his/her own work.
- The above-mentioned weakness was exacerbated by another contradiction. As indicated, according to its contract, SGS should have approved or rejected a management plan in eight hours; at the same time, the company had to verify in the field the elaboration of 10% of the management plans together with their relevant preliminary inspection reports presented by the Regentes Forestales. Owing to a lack of infrastructure and the remoteness of most forests, it is almost impossible to inspect a forest site in Ecuador within an eight-hour period. This meant that SGS could verify the validity of these documents only after the approval of the management plan and therefore when logging operations were already ongoing. The impact was that logging operations could hide any inconsistency or irregularity in a forest management plan or Regente report, reducing the soundness of these field inspections by SGS.³⁰

- The control of timber processing industries (small as well as large) is usually considered vital in tackling illegal logging, since these represent the destination of most of the wood extracted illegally (Jiménez, 2000).³¹ This responsibility was not included in the verification services outsourced to the three components and remained in the hands of the MoE, in spite of its questionable capacity and political will.
- Finally, a common criticism of the SNTCF, from the Ecuadorian forest private sector in particular, has been that its verification services are biased towards those who are seeking to operate legally and disregard deforestation and illegal extraction carried out in a totally clandestine way (without even attempting to obtain a logging licence or pay stumpage tax, for example). There is some truth in this criticism: in effect, SGS and the Regentes Forestales only inspect authorised logging sites; only Vigilancia Verde has a broader mandate and controls all transport of all forest and wildlife products (independently from their authorisation); again, though, this is only on the road. The SNTCF does not have procedures for monitoring unauthorised land use changes and clandestine timber extraction. This was not a simple omission: the central idea behind the SNTCF was that by outsourcing administrative and verification services the MoE would greatly reduce its work burden and could therefore concentrate human, logistic and financial resources on tackling the central problem of deforestation. But the MoE's political instability (five different ministers held office from the beginning of 2003 to the end of 2005) and internal bureaucratic resistance to the system hampered this intention.

5.4 Transparency and crosschecks and balances

Apart from the official verification services carried out by the different entities, the system has inbuilt crosschecks and balances which allow all participants to verify the specific activities of the others and report any irregularities (Figure 4). Internally, the multi-institutional nature of Vigilancia Verde's teams and their periodic reassignment to new areas are intended to minimise the potential for corruption. The trust fund is administered by a bank and managed by a group of five directors, three from civil society and two from government agencies, with the same aim in mind (Contreras-Hermosilla, 2002).

Apart from controlling road transport, Vigilancia Verde also closely checks other entities in the system. It has a direct control function over the Regentes Forestales, since it verifies the transport permits that they receive and fill out on behalf of the forest authority. In addition, it has a direct interest in supervising auctions of confiscated timber, carried out by the district offices of the MoE, since it is entitled to receive 50% of the sale value. Through its advocacy civil society groups, Vigilancia Verde also carries out a social auditing role on the MoE at national and local level. In addition, Vigilancia Verde's direct employees acted as social supervisors of the functions of SGS at road checkpoints

and mobile patrols, and still perform this task towards the staff of Vigilancia Verde's other members (the police, the armed forces and the MoE). Conversely, SGS also played a role in directly validating information in the system on product transportation, and in controlling and reporting any irregularities in the performance of any member of Vigilancia Verde.

The system also includes a Regentes Forestales Committee,³² consisting of five different members (two from the MoE and three from civil society and the private sector), responsible for evaluating any reported irregularity or infraction committed by a Regente Forestal, and for recommending its eventual sanctioning to the MoE and to the Regente's relevant Association of Forest Engineers.³³ The Regente Forestal has the opportunity to challenge, in front of the Committee, any infraction by Vigilancia Verde in the process of confiscating wood being transported under their responsibility, and any verification report emitted by SGS with which he/she does not agree.

Until the suspension of SGS's work, Regentes Forestales and forest users were ideally positioned to scrutinise the quality of the administrative services delivered by SGS. In addition, the MoE monitored the services contracted out to SGS and had the authority to sanction any contractual infringement. The establishment of an open access webpage (with data from the information and statistics system) was supposed to enhance the overall transparency of the entire system. In sum, instead of focusing only on controlling the loggers, the structural organisation of the SNTCF also strongly promoted 'inward' monitoring activities, directed towards the acts or omissions of its different components and their officials.

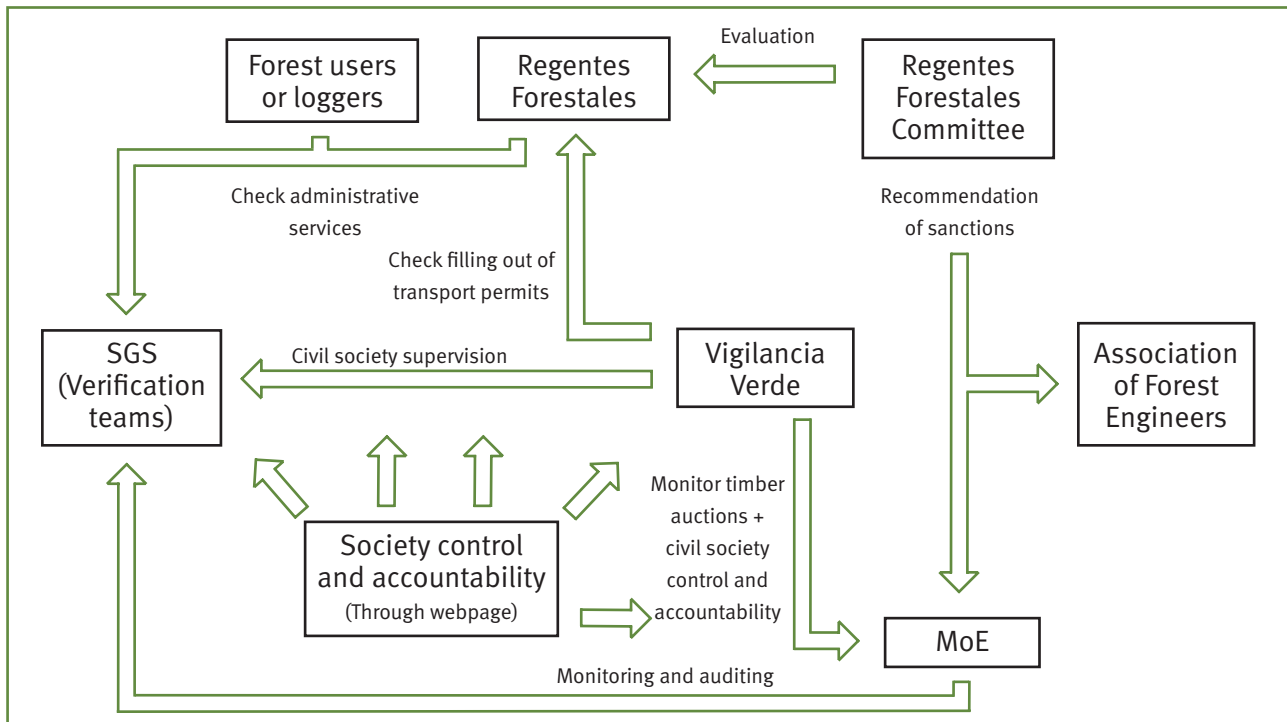
It could be argued that the fact that the system does not incorporate any explicit element of external and independent oversight represents a significant weakness. However, one option that has been suggested is to broaden the mission (and resources) of Vigilancia Verde in order for it to act as an independent supervisor of the entire system (Vigilancia Verde, 2003).

A limitation to transparency concerns public access to the information produced by the SNTCF system. Although the system included the publication of such information on the webpage operated by SGS, there was no specific procedure for the publication of audits, inspection reports or other sensitive information: it fell to MoE to decide what to publish. This limitation, however, was partly compensated in mid-2004 by the approval of the Law of Transparency and Access to Public Information,³⁴ which recognises citizens' right to access information in State hands or generated on behalf of the state.

5.5 Budgetary independence

Each component of the system has its own financing scheme (see Section 5.1), but not all ensure protection from external interference. As noted, Vigilancia Verde's financial management has several features that ensure transparency but not necessarily independence. Although the 50% of the sale value of the timber auctioned can be considered a neutral source of funds.³⁵ The same cannot

Figure 4: Checks and balances to administration and verification services of the SNTCF



Source: Elaboration by authors.

be said for grants from donor agencies and, in particular, companies. This became manifest in 2003, when Petro-Ecuador, the state oil company, donated US\$1.2 million to Vigilancia Verde as part of a wider grant of US\$2.7 million (Pozo, . comm.).³⁶ Officials inside Petro-Ecuador and the MoE questioned the deposit of these funds in Vigilancia Verde's trust; the result was that they were instead managed directly by the MoE. As well as leading to greater management bureaucracy, some observers felt that this undermined Vigilancia Verde's independence; inside the MoE there appears to be an increased perception that Vigilancia Verde is simply a unit of this ministry (not an independent public/private entity, as it was originally conceived to be).

The fact that SGS was paid directly by the users of its services has been one of the most controversial elements of the entire system, and an important factor in the opposition to it.³⁷ However, from the point of view of independence, this was arguably preferable to the alternative: that is, forest users directly paying the MoE, which would subsequently transfer the funds to SGS. Under such an arrangement, SGS would have been much more vulnerable to high-level political pressures, possibly manifested in delays in payments. Another associated risk was the possible deviation of these funds to other priorities, politically more rewarding for national or local politicians.

The least protected from external interference are the Regentes Forestales. Usually paid by forests owners or timber traders, they are susceptible to the economic interests of their clients. There is abundant anecdotal evidence about this, particularly under the current circumstances, in which the key third component – outsourced administrative and verification services – is suspended.

5.6 The SNTCF's legal approach

As discussed above, the SNTCF aims to increase the detection of illegal activities by outsourcing the verification services to three different entities. By the same token, the system aims to increase the likelihood of prosecution and sanctioning of such activities.

Although Ecuador's Penal Code considers the illegal harvesting, capture and trade of forest and wildlife products a criminal offence (punishable with up to four years in prison).³⁸ practical implementation of the SNTCF has been based on forest and environmental legislation, which sanctions these acts only as administrative offences (penalised by pecuniary fines and the seizure of the products as well as the equipment used for their harvest or transport).^{39,40} In the opinion of most informants, this is justified because of the notorious weakness of the country's judiciary system: its vulnerability to external influence and overwhelming bureaucratic burden offer little, if any, guarantee of forest crime prosecution.

Furthermore, the SNTCF promotes a general separation of the *institution that assigns* (the company with outsourced administrative duties, SGS), the *institution that controls* (each one of the three components) and the *institution that punishes* (the MoE and, in the case of the Regentes, also the relevant Association of Forest Engineers). Although some overlaps remain (e.g. SGS issues logging licences and monitors their implementation, the Regentes Forestales verify harvesting operation and at the same time manage transport permits), this situation is much improved compared with the former one. All these functions had previously been in the hands of the MoE. The new arrangement encouraged greater accountability.

Despite these features, the implementation of the system has suffered from some of the problems typical of forest law enforcement. In some cases, timber confiscated by *Vigilancia Verde* was incorrectly returned by MoE district offices to its 'owner' without being auctioned. In addition, when auctions were carried out, there appeared to be a tacit agreement between timber traders to avoid competition, leaving the original possessor to bid alone and therefore regain possession of the timber at an advantageous price (Hernández, pers. comm.).

Similarly, the follow-up on legal cases inside the MoE has been slow. Apart from the participation of civil society groups in *Vigilancia Verde*, the system does not include many safeguards to ensure an effective role for the MoE in prosecutions. Such safeguards would be particularly important in case an investigation turned 'upward', against mid-level or senior officials of the MoE.

6. Case study analysis

6.1 The politics behind the SNTCF: Who participated and who did not?

The idea of outsourcing forest-related responsibilities traditionally carried out by the state appeared in Ecuador's Forest, Natural Areas and Wildlife Policy, adopted in 1995. However, the real starting point of the process can be considered the 1999 Forestry Strategy, which outlined the conceptual design of the system. This strategy was the outcome of a broad participatory process, with multiple consultations, but it was endogenous to the forestry sector, with little participation of a broader social base (e.g. indigenous groups, forest owners, etc.).

The effort to develop the system arose from a relatively small group of people and institutions:

- A key role was played by a few senior officials inside the MoE, highly qualified, dedicated and with strong personalities. Their leadership was a central driving force, without which it is difficult to imagine the system developing.
- CEDENMA, through its Forest Group (*Grupo de Bosque*),⁴¹ was another key actor. Widely recognised as the most vocal and technically competent environmental advocacy group in Ecuador, CEDENMA represented the civil society voice in this process. Two organisational members of its Forest Group were founding members of *Vigilancia Verde*.
- The private timber industry also participated, mainly through AIMA and COMAFORS⁴² in alliance with small timber traders. Unsurprisingly, their positions have been perceived in different ways. According to several observers, in spite of their official discourse in favour of controlling illegal logging, they were never really supportive and became the main opponent when effective administration and monitoring services were delegated to SGS (*The Economist*, 2003; Álvaro, 2003; Thiel, 2004). In the COMAFORS interpretation, they opposed the third component because its final terms (in particular the payment) were not negotiated and took a different direction from what was originally agreed (Palacios, pers. comm.).

- Finally, a few bilateral and multilateral donors provided technical and financial support. But, more importantly, the donor community in general played an instrumental role by contributing to opening up a political space for the development of the system (based on two concepts high on their agenda: civil society-state relationships and outsourcing).

The police and the armed forces participated in the establishment of *Vigilancia Verde*, but they were never driving forces behind the creation of the concept. Forest professionals and their associations were also involved, but with a limited voice, probably due to their differing views on this issue.

A first noteworthy element is the lack of participation of other governmental institutions. The system was designed and developed by the MoE.⁴³ Although the State Attorney General and the Ministry of Foreign Relations had an important role in promoting a negotiation process in 2004 (after the suspension of SGS's contract), these two government institutions and others (e.g. Ministry of Economy, Internal Revenue Service,⁴⁴ State General Auditing Court,⁴⁵ INDA⁴⁶) had no role in the establishment of the system (see Section 7.1).

The isolation of the MoE has been detrimental because a good part of the opposition to the system has come from inside this institution, prompted by hundreds of employees afraid of losing informal benefits generated by the status quo. This internal opposition resisted the implementation of SGS's contract in 2003 and, according to many observers, is currently the main barrier to the signing of the new addendum negotiated by all the main actors in mid-2004 (see Section 7.1), which would allow reestablishment. Even if the Minister of Environment in charge has the political will to sign the addendum, he/she cannot do so against the will of the majority of the institution's employees. In theory, if other ministries were involved, whose employees did not have a stake in the status quo, a critical mass of political will could have been generated, capable of counterbalancing the MoE's internal resistance.

A second element, seemingly even more important, is the lack of participation of two fundamental direct stakeholders: indigenous peoples and private forest holders,⁴⁷ which together control the vast majority of the country's forests (Table 2) and represent hundreds of thousands of forest-dependent people. There are some practical reasons explaining this absence. Private forest holders are not organised at national level, therefore did not have recognised representatives when the process was underway. Indigenous peoples do have organisations and leaders at national level but at times lack effective communication with their communities and have other political priorities than illegal logging (primarily land tenure, but also broader issues such as policy reform, intellectual property rights and, more recently, the Andean Free Trade Agreement, AFTA).

At local level, illegal logging is often a priority for indigenous peoples, but actors tend to be dispersed in numerous small organisations: diverse groupings, frequently informal, fragile and with little, if any,

funding. This acted as a concrete barrier to their participation. The same can be said for non-indigenous local groups interested in forest conservation, and even more so for the less organised private forest holders.

Another significant influence is the fact that civil society organisations occupied an important political space in the establishment of the SNTCF, but it was unclear who they were and whom they represented. Indigenous or non-indigenous community-based civil society groups and forest owners from rural areas were almost totally absent. The persons who participated were by and large highly competent, university educated, environmentally concerned, Quito-based actors from the country's urban middle class.

It seems that Ecuadorian civil society concerned about illegal logging includes (at least) two broad groups, distinguished by their geographical distribution, educational level and social class. This is not surprising, as noted by Seppänen (2003): in a highly stratified and unequal society there is no reason to suppose that civil society organisations would escape stratification. However, the inability, for whatever reason, to connect these layers prevented the building of a broader civil society coalition around the SNTCF, which in turn made it much more vulnerable to the attacks of its opponents.

6.2 Economics of the SNTCF

Three basic issues condition the competitiveness of forestry in terms of land use: (i) direct regulation of resource management; (ii) high transaction cost of accessing legal use; and (iii) the fact that it requires intermediaries to access markets. These factors determine direct costs (out-payments to different technical and legal actors and contractors within the forestry sector, plus other services, taxes, fees etc.) and indirect costs (time invested in formalisation of permits and follow-up on other procedures, plus the use of other capital owned by the forest user).

Table 4 displays the costs of accessing legal permits under the SNTCF, in comparison with the previous and current SNCF,⁴⁸ which includes Vigilancia Verde and the Regencia Forestal but excludes the provision of outsourced supervision and administrative services by SGS (which are instead implemented by the MoE). Table 4 also distinguishes between the costs for extracting timber from natural forests (NF), trees outside forests (TOF) and plantation forestry (PF), and compares them with 'legalised' illegal logging: illegal cutting permits and/or transport permits obtained on the black market through illicit deals with MoE officials and/or Regentes Forestales.

Calculations in Table 4 for NF and TOF are based on a typical harvesting permit in the Ecuadorian Amazon consisting of 20 trees, with an average of 130 cubic metres of stumpage ($6.5\text{m}^3/\text{tree}$). Using a chainsaw, this permit will enable the manufacture of 1,400 pieces of lumber ($0.0464\text{m}^3/\text{piece}$), producing 65 cubic metres of sawn wood, which is a 50% yield (Gatter and Romero, 2005). Figures for PF assume a final harvest of $1,200\text{m}^3$ roundwood (Thiel, 2004).

The costs of accessing a legal harvesting permit in NF and TOF with the SNTCF and with the previous

and current SNCF are $\text{US}\$16.8/\text{m}^3$ and $\text{US}\$14.4/\text{m}^3$ respectively. The costs for accessing legality are lower in the SNCF compared with the SNTCF because the latter charges a stumpage tax and an outsourced administration and verification fee, which have been considered two payments for the same concept. Without this extra payment, the SNTCF would be more efficient in terms of costs for accessing legality. Still, legalising an illegal harvest is possible through the purchase of a transport permit within the SNCF at a cost of $\text{US}\$15/\text{m}^3$, because this system lacks effective crosschecks in an information system of transport permits, which allows forest officials and/or Regentes Forestales to provide such illegal 'services' at a high price and low risk of detection (Chamorro, pers. comm.). In contrast, in the case of PF, the costs for accessing legality were lower in the SNTCF compared with the SNCF, dropping from $\text{US}\$2.1/\text{m}^3$ to $\text{US}\$1.8/\text{m}^3$.

In terms of the distribution of these costs as income for other actors, under the SNTCF 35.7% of costs incurred by the forest user were collected by the MoE as stumpage tax, 28.5% by SGS as an administration/verification fee, 21.3% by a forester in the preparation of the management plan and Regente services, 1.5% by the notary for the property certification and the intermediary legal empowerment, and the rest, 13%, was for permit follow-up costs and opportunity costs for delayed net income which the forest user assumes inside the household. In the case of the SNCF, the MoE keeps 43.1% of the expenditure as stumpage tax, and for the harvesting licence, certificate of compliance, and transport permits; the notary and the forester receive as honoraries 1.7% and 24.9% each; and the forest user assumes 30.3% of the costs, owing to prolonged unproductive periods contributing to elevated opportunity costs, more expenses in terms of the number of visits to MoE regional offices following up on the permits, and other costs associated with bribes (Thiel, pers. comm.).

Figure 5 presents two graphs representing other ways of depicting barriers to legality in terms of number of actors, procedures and steps involved in accessing a harvesting permit in NF and TOF using the previous example, again comparing the SNTCF with the previous and current SNCF. The numbers of actors, procedures and steps are more or less the same in both systems from the point of view of the forest user (although there are 37 steps for the SNTCF and 39 for the SNCF). However, the SNTCF has many further steps in terms of crosschecks, which depend on other actors apart from the forest user, such as the Regente Forestal, SGS, MoE and Vigilancia Verde, but do not affect the forest user. The main difference between the systems was observed in the number of days required to achieve a complete harvesting process from permit preparation, to follow-up, to the harvesting operation. The SNTCF took 44 days, 10 days less than the traditional SNCF.

6.3 Pro-poor dimensions

The design and establishment of the SNTCF were driven, at least in part, by a pro-poor focus. A key underlying objective was to facilitate legalisation in order to provide more transparency within the marketing process, a basic

Table 4: Costs of accessing legal permits under the SNTCF and SNCF for natural forest (NF), trees outside forest (TOF) and plantation forestry (PF), in comparison to with the costs of legalised illegal logging (US\$)

| Activities | Cost per procedure | Cost per cubic metre | SNTCF | | SNCF | | 'Legalised' illegal logging | |
|---|------------------------|----------------------|------------------|------|----------|------|-----------------------------|--|
| | | | NF & TOF | PF | NF & TOF | PF | | |
| <i>Harvesting permit preparation</i> | | | <i>Sawn wood</i> | | | | | |
| Harvest plan elaboration | 0.80/m ³ rw | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | | |
| Ownership certification | 0.80/unit | 0.10 | 0.10 | 0.10 | 0.10 | 0.01 | | |
| Intermediary empowerment | 0.80/unit | 0.10 | 0.10 | 0.10 | 0.10 | 0.01 | | |
| <i>Formalisation of harvesting license</i> | | | | | | | | |
| Stumpage tax | 3.00/m ³ rw | 6.00 | 6.00 | | 6.00 | | | |
| Outsource verification fee (OVF) | 2.40/m ³ rw | 4.80 | 4.80 | 0.20 | | | | |
| Licence cost | 5.00/unit | 0.10 | | | 0.10 | 0.01 | | |
| Certificate of law compliance history | 5.00/unit | 0.10 | | | 0.10 | 0.01 | | |
| Transport permit | 1.00/unit | 0.02 | | | 0.10 | 0.10 | | |
| Permit follow-up costs (man/day, expenses and travel) | 10.00/day | 0.20 | | | 0.90 | 0.10 | | |
| Opportunity cost of delayed net income (10%/month) | 2.40/m ³ sw | 2.40 | 1.60 | | 2.40 | | | |
| Bribing | | 1.00 | | | 1.00 | 0.30 | | |
| Illegal transport permits | | 15.00 | | | | | 15.00 | |
| <i>Timber harvesting</i> | | | | | | | | |
| Added value tax reg, services (12%) | 0.20/m ³ rw | 0.40 | 0.40 | | 0.40 | | | |
| Regentes services | 0.80/m ³ rw | 1.60 | 1.60 | | 1.60 | | | |
| Total | | | 16.80 | 1.80 | 14.40 | 2.10 | 15.00 | |

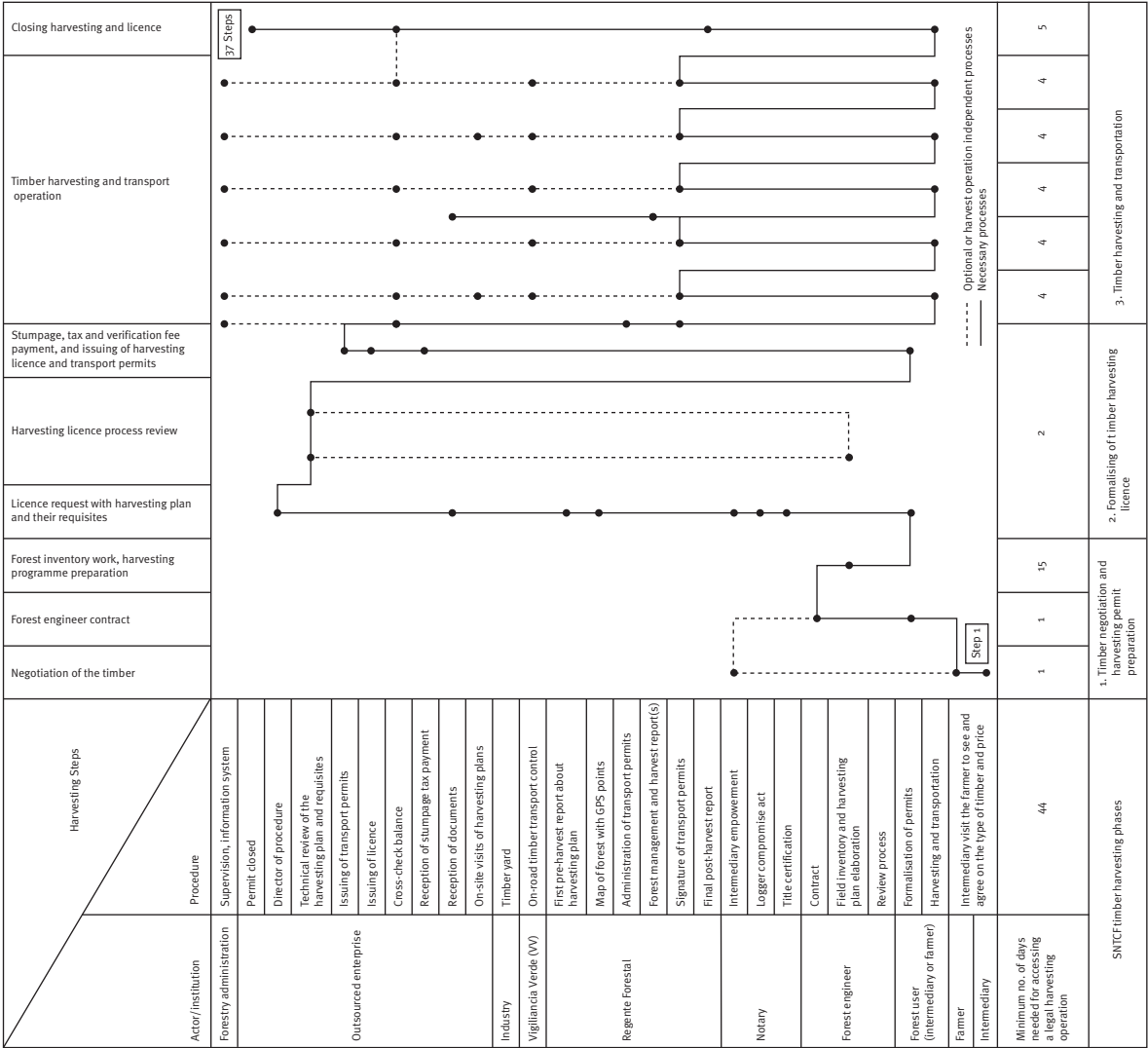
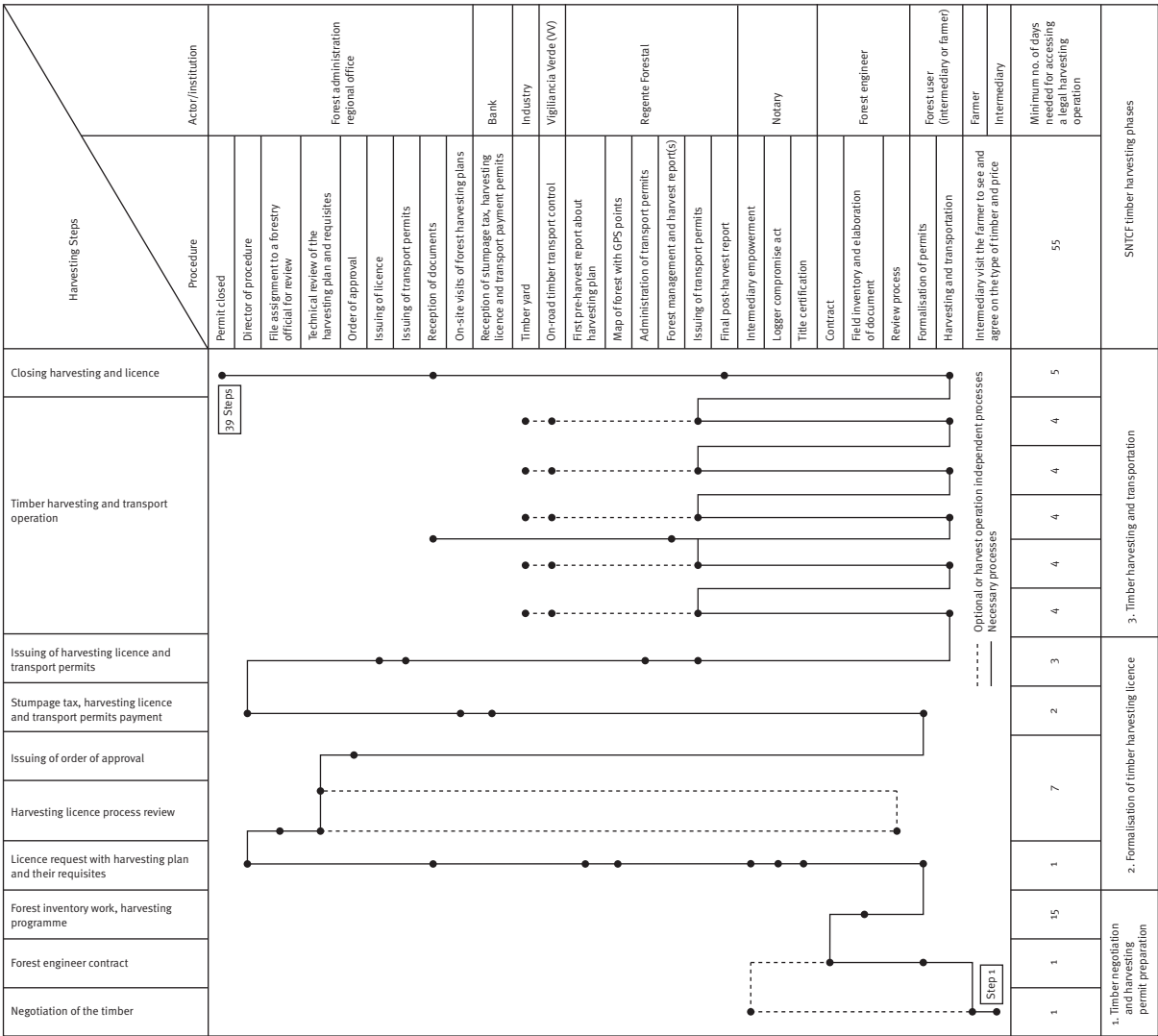
Source: Elaboration by authors.

prerequisite for an improved and more equitable and balanced negotiation between forest holders and timber traders. The establishment of peripatetic administrative units, as specified in SGS's contract, responded to this objective. Their function was to bring administrative services directly to communities, so small producers could reduce their dependence on timber intermediaries, ensure legality at diminished transaction costs, and eventually generate higher profits.

The regulations of the Forestry Legislation, strictly related to the architecture of the SNTCF, provide

simplified operational rules for small-scale forest management in native forests, for wood exploitation outside forest areas, and for the conversion of up to 30% of individual property to non-forest land. Special permits were also introduced to facilitate the extraction of certain timber species from agroforestry systems. Such permits were tax exempt, and did not require the preparation of a management plan or the services of a Regente Forestal. Likewise, timber exploitation in plantations and other anthropogenic forest areas require only minimal bureaucratic efforts in the legalisation

Figure 5: Barriers to legality in accessing a legal harvest operation with the SNTCF and the previous and current SNCF



Source: Elaboration by the authors based on de Soto (2000).

process.⁴⁹ In addition, Executive Decree No. 346 (see Section 3) introduced the opportunity to prove land tenure through a certificate that shows that the land title is in process, or through declaration of an oath with three witnesses that attests possession of the land; this allowed poor forest holders without an official land title to obtain logging permits.

On the other hand, SNTCF verification standards and taxes do not differ according to the socioeconomic characteristics of the specific client. Also Regentes Forestales usually charge according to exploited volume (higher unit fees for smaller volumes⁵⁰), without considering further criteria of the clients. This means that small forest owners tend to pay comparatively more per timber unit for the Regentes, as they usually exploit smaller quantities of wood.

The Secondary Environmental Legislation theoretically provides the option for stumpage taxes to be partially reinvested in environmental and forest development projects designed to generate pro-poor benefits.⁵¹ In practice, however, these taxes are utilised exclusively to maintain the structure and administration of the MoE.

6.4 Impacts

It is difficult to evaluate SNTCF's impacts because the three components worked together only for a few months in the second half of 2003.⁵² In October 2003, the MoE suspended SGS's services (see Section 7.1), after which the entire system entered a downward cycle. However, some impact indicators can be assessed.

The first years of Vigilancia Verde were highly successful. In 2002, it seized five times more illegal timber than did the state acting alone in 1999. In the few months of 2003 when Vigilancia Verde and SGS were acting jointly, the amount of timber confiscated increased sharply, suggesting that if SGS had continued its work the seizure of timber could have been nearly double that of the previous year (Figure 6).⁵³ In those same few months SGS recommended to the MoE the suspension of 42

logging licences for logging outside the allotted areas, logging higher volumes and different species than those authorised, fraudulent use of transport permits, etc.

According to several observers, more effective controls in that brief period moved many forest holders and timber intermediaries to try to act legally. In addition, anecdotal evidence suggests that among most users of SGS's services, especially forest smallholders, there was growing satisfaction at the increased speed of the paperwork.

Nonetheless, in those same months there were also violent protests against SGS: staff were threatened, offices were attacked and computers were stolen. In the opinion of some analysts, these protests, carried out by local people but stimulated by vested interests, were another indicator of the system's success, of which it may later have become a victim. Some actors were ready to change their operations, but some powerful players were not.

7. Recent developments

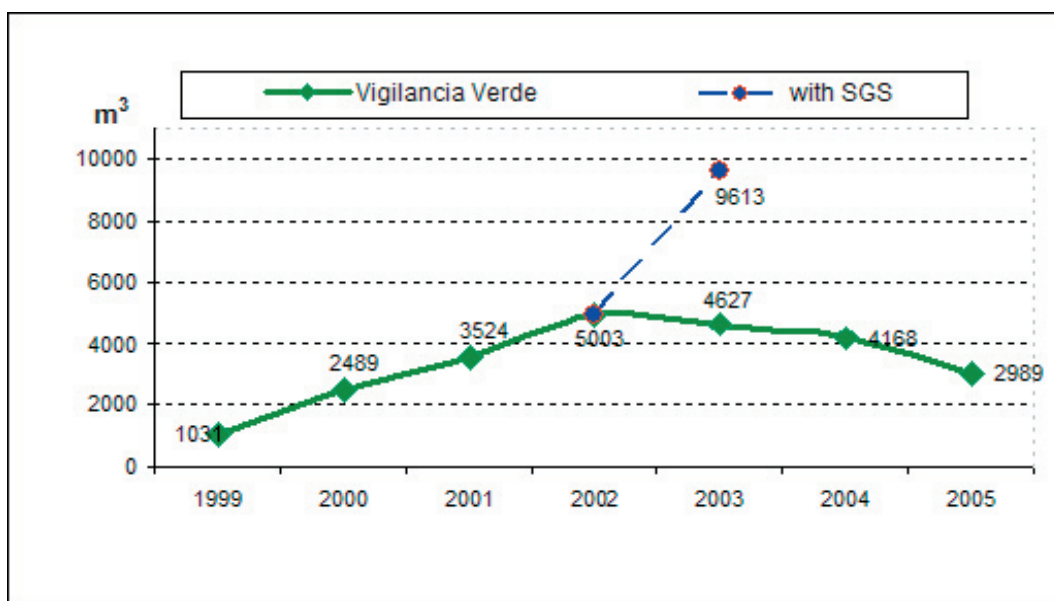
7.1 SNTCF's legal deadlock

In October 2003, Ecuador's Constitutional Tribunal ruled against the system's third component – the outsourcing of services to SGS. In the judgement of the Constitutional Tribunal, the Administrative Act placing forestry administration and supervision in private hands was unconstitutional. The court also declared unconstitutional the administrative measure authorising SGS to collect fees for its services.

The ruling did not directly address the question of the validity of the SGS contract, prompting CEDENMA and other groups to believe that the contract was still valid. However, the MoE then unilaterally recovered all the administration and supervision duties previously delegated to SGS, throwing the contract with this company – and the entire key third component – into disarray.

In December 2003, the State Attorney General and the Ministry of Foreign Relations convened an ad hoc group to negotiate a consensus on the various

Figure 6: Volumes of timber seized by Vigilancia Verde (m³)



Source: Adjusted by authors for 2005.

controversial aspects of the system, which involved the MoE, SGS, AIMA/COMAFORS, CEDENMA and CONIFOR.⁵⁴ In January 2004, the group reached a first consensus, refined in April 2004. Based on this, a new addendum to the contract between the MoE and SGS was prepared in mid-2004. Since then the media, CEDENMA, AIMA/COMAFORS, the donor community and some associations of forest engineers have pushed repeatedly for this to be signed. These efforts were reinforced in November 2004 and again in December 2004 by two State Attorney General statements which reiterated that the Constitutional Tribunal's declaration of unconstitutionality could not be extended to the contract between the MoE and SGS. As a result, the contract still stands, and its implementation is an obligation for the two parties. However, the MoE's lack of political will (see Section 6.1) – and continuing political instability – has impeded substantial progress.

7.2 Options for forest control in Ecuador

These legal and political issues have had profound implications for the other two components of the system. Weighed down by financial restrictions, Vigilancia Verde is currently manning only four road checkpoints and no mobile patrols, compared with the 12 and six respectively that were operating in 2003; since the suspension of the SGS contract, the MoE has little or no presence at these checkpoints. Left without supervision, the Regencia Forestal has lost credibility and rumours of malpractice abound.

The general view of most stakeholders, including senior officials of the MoE, is that since October 2003 Ecuador has not had an effective forest control system, and illegal logging is again thriving. Current contracting of additional supervising staff by the MoE indicates a general tendency to go back to forest control activities carried out by the state authority itself. Nonetheless, the debate on reviving an efficient forest verification system is intense. The following common points among stakeholders can be identified:

- Vigilancia Verde should be strengthened as soon as possible, by increasing its human and economic resources, redefining its role and scope, and clarifying the way it should be financed, in order to ensure its independence, transparency and specificity.
- The Regencia Forestal should continue, but with an improved system of crosschecks and balances to ensure control, even allowing for suspension where necessary.
- Verification services in the forest should be delegated to a third party, but without creating additional costs for forest smallholders.
- There is an urgent need to establish an efficient computerised information and verification system within the forest administration. This is a key requisite for transparency and accountability in the forestry sector.

There are also many unanswered questions, including:

1. First and foremost, what type and degree of outsourcing is adequate for forest administration services?
2. If administration services are also outsourced,

should administration and verification services be contracted to the same entity (as with SGS) or to two different entities?

3. How should these parties be selected in order to ensure their suitability, and which safeguards should be established in order to guarantee their independence?
4. Who will be tasked with developing/operating the computerised information system?
5. Could Vigilancia Verde broaden its mandate and also embrace verification activities in the forest (and attempt to tackle land use change activities and other illegal acts not covered by the SNTCF system)?
6. How should these administration/verification services and the establishment of the computerised information system be financed?
7. What role could be played by other central government institutions (e.g. revenue office (SRI) and rural cadastre (INDA))?
8. What role could be played by local government authorities (e.g. municipalities and provincial councils), which are increasingly asking for greater power and voice on forest and environmental issues?
9. How should the social base of the new system be widened, involving indigenous peoples and other stakeholders from the forestry sector and other relevant players?
10. How could a pro-poor type of permit be implemented that gives a legal alternative to small landowners and indigenous communities in their territories?

8. Analysis of the hypothesis

An analysis of the SNTCF offers contradictory conclusions with respect to the working hypothesis put forward at the beginning of the paper, that effective systems of forest verification are a product of wider pressures and developments in the host society, and do not arise endogenously in the forestry sector. On the one hand, it could be argued that the hypothesis is proven: the SNTCF was a verification system endogenous to the forestry sector which saw little or no involvement of other actors or attention to the demands of Ecuadorian society. This made it significantly more vulnerable to the attacks of its opponents.

However, another and rather different view states that SNTCF's main weakness was not the fact that it was endogenous to the forestry sector, but rather the fact that it lacked broad and weighty societal and political support. In this context, it is considered of key relevance that two main stakeholders – indigenous peoples and private forest holders – were not involved in the design and implementation of the system. Considering the political space occupied by these two groups in Ecuador, in particular indigenous peoples, it could be assumed that their participation could have altered the correlation of social forces in the clash around the system.

The key issue for effective systems of forest verification does not appear to be the dichotomy between endogenous or exogenous pressures and developments, but rather the

existence of broad and lasting stakeholder participation and intervention. Ecuador's experience suggests that an endogenous process is not likely to be successful if it is promoted and carried out only by powerful elites of the sector, but it could be so if it manages to promote wider participation of forest stakeholders. On the other hand, an exogenous process does not necessarily entail broad stakeholder participation. This means that it could still be the result of views and actions promoted by a relatively small group of powerful players, in which case it might well reveal the same weaknesses as an elitist endogenous process.

The Ecuadorian case also shows that strong social backing by multiple stakeholders is all the more important in a context of predominately weak institutions and a highly politicised administration, heavily dependent on political cycles, which hamper the installation of sustainable forest verification structures.

9. Lessons learnt from the rise and fall of the SNTCF

The study offers several important lessons relating to the political, institutional and legislative context of the Ecuadorian forestry sector which have conditioned the rise and fall of the SNTCF system. These lessons relate both to contextual and structural factors. 'Contextual factors' refer to those particular to the context of Ecuadorian society, such as its political culture, poverty profile, environmental awareness, property rights, etc. 'Structural factors' are those linked to the specific legislation and architecture of the control system, which deals more with issues of performance, social acceptance, applicability, competence, governance, and independence, among others. Some of the contextual factors that influenced the rise of the SNTCF are as follows:

- Political stability in terms of national policies and mandate (at least) in the period of design and implementation of the SNTCF.
- Two strong allies, the urban environmental movement, well aware of the issues of deforestation, illegal logging and clandestine timber trade, and the donor community, both influential in terms of decision making to favour the implementation of the outsourced forest control system.

Structural conditions that hindered the implementation of the SNTCF were as follows:

- Ecuador's political and institutional culture, characterised by uneven, often weak, state presence and performance, corruption, and minimal law compliance at all levels of society. Aware and proactive environmental stakeholders were unable to counterbalance such weak governance, compounded by influential industrial interest in the *status quo* and by the disengagement of key rural stakeholders owing in part to the insufficient pro-poor focus of the SNTCF.
- Lack of clarity of legislation (despite clarity in national policies in respect of the modernisation of the state with regards to the intention to delegate functions to the private sector); this hindered successful implementation in terms of what was delegable and what was not. The SNTCF failed

to hold a strategic process of thorough legal analysis to evaluate constitutional and institutional incompatibilities as well as the development of a sensible implementation scheme, especially in terms of old and new roles of the actors.

Several associated factors in terms of social acceptance have contributed to positive and negative perceptions of the legitimacy of the forest control system:

- The process of formulation of the SNTCF was endogenous to the forestry sector, lacking the support of a wider social base within the forestry sector (forest owners and indigenous peoples), as well as the support of other sectors of society. Such wider social support would have given the SNTCF a stronger position against its detractors.
- The SNTCF lacked an implementation strategy (a process of information and training of forest resource users), and a clear transition agenda for actors such as the officials of the MoE for whom the SNTCF implied a dramatic change in function. Such an agenda would have been key to handing out new functions in combating clandestine forest harvesting, land use change, and other illegal activities outside the scope of the SNTCF, and in avoiding the sense of a loss of power among many officials, who unsurprisingly became fierce opponents of the system. In the context of the MoE's institutional weakness, this made the SNTCF more susceptible to the influence of powerful actors within the forestry sector.
- One key factor undermining SNTCF legitimacy was the outsourced verification fee collected by SGS, in addition to the stumping tax. This fee was perceived not only as an increase in the cost of accessing legality, but also as two payments for the same concept. However, if the fee had been collected within the stumping tax, SGS would have not had secure budgetary independence. The opposition spurred by the new fee might have been less had the sum of this fee plus the stumping tax in the SNTCF not exceeded the stumping tax in the previous SNCF.
- The forest policy lacked a compensatory or incentive mechanism for forest users to counterbalance the burden of increased forest control. The MoE was not able to implement, with the funds coming from the stumping tax, a programme for promoting forest conservation and reforestation for legal forest users, or the control of illegal activities outside the scope of the SNTCF. This situation produced a sense of unfair competition among legal and illegal forest users.

Some lessons learnt regarding the architecture and functioning of the SNTCF, and the competence of their actors, scope, and performance are:

- In terms of SNTCF performance, SGS was efficient and transparent in providing on time and online information to the MoE, the public and interest groups. However, SGS confronted a conflict of interests because it had administrative *and* control functions, a situation inherited from the previous and current forest control system implemented by the MoE.

- A forest control system such as the SNTCF should try to prevent conflicting functions, such as the situation of private forest professionals acting both as forest managers (who prepare forest management plans) and as Regentes Forestales (who supervise logging operations on behalf of the state). This situation practically nullifies the validity of the Regentes Forestales' initial reports on the forest management programme and the subsequent revision that SGS made to the technical documents in terms of producing a harvesting licence in eight hours.
- The scope of a forest control system should focus on the entire wood processing chain, from the forest to the market. The SNTCF controlled various types of illegality in the forestry sector, such as illegal transport of forest products and fraudulent harvesting permits, and corrected institutional bad habits such as corruption, influence and 'political clientelism'. However, the scope of the SNTCF did not cover controlling clandestine harvesting activities, deforestation, forest industries and wood markets.
- Costs from SNTCF for wood from planted forests were very competitive compared with those for natural forests; nonetheless, any additional cost for harvesting planted forests made corresponding investments less competitive in comparison with other farm products, which do not have harvesting transaction costs.
- Illegal logging is a criminal offence in Ecuador; however, the MoE is under political pressure to apply only those administrative sanctions based on the forest legislation (e.g. fines and seizure of illegal products), which are not compatible with the seriousness and scale of forest crimes.

Other important lessons that could be drawn with regards to the functional and budgetary independence of forest control bodies are:

- Vigilancia Verde was able to maintain its independence because of its particular structure: a self-controlling body composed of public, private, forestry and extra-forestry sector institutions with a system of staff shiftwork, reducing possibilities for corruption. However, Vigilancia Verde needs to find other innovative ways of obtaining funds because control should not be financed by auctioning timber from illegal activities, or from sources that could hamper its independence and are not sustainable in the context of a successful forest control system. Moreover, Vigilancia Verde should be reconstituted to avoid political interference in contracting and removing staff.
- The way the SGS collected its revenues gave it independence of action; however, SGS's fee increased the cost of accessing legality compared with the previous and current forest control system. It is probable, though, that higher costs were not the drivers of its unpopularity, since the cost of an illegal transport permit on the black market is in the same range, just US\$1.2/m³ cheaper than the SNTCF and US\$0.6/m³ more expensive than the SNCF.
- The Regentes Forestales do not have independence in terms of defending the interests of the state in

supervising forest management owing to their economic dependence on forest owners and timber intermediaries who pay their services.

With regard to the associated factors, it can be concluded that the formal legitimacy of the SNTCF with public and legal backing was not sufficient in a context of weak and influenced institutions. Formal legitimacy is further threatened when additional financial burdens for forest users arising from intensified forest control are not counterbalanced with incentives, transparent information and capacity building. Nonetheless, the overall architecture and concept of the SNTCF is considered firm and adequate, owing among other things to its independently functioning branches. Aspects of financing and role definition by the MoE remain crucial in this context. Among other (minor) operational aspects for which margins of improvement have been identified, it is considered crucial that any forest verification scheme also includes controls on general forest-conversion activities (e.g. land use change from forest to agriculture) and does not exclusively concentrate on wood extraction and transport.

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- total industrial consumption, suggesting an 80% of illegal supply.
- ⁸ Política Forestal, de Áreas Naturales y Vida Silvestre.
- ⁹ Estrategia para el Desarrollo Forestal Sustentable del Ecuador.
- ¹⁰ (i) Production sustainability, (ii) maintenance of forest cover, (iii) biodiversity conservation, (iv) private-public co-responsibility in SFM, and (v) reduction of social and environmental impacts.
- ¹¹ *Texto Unificado de la Legislación Ambiental Secundaria del Ministerio del Ambiente (Decreto Ejecutivo No. 3399, Registro Oficial 725, 16.12.2002 y Decreto Ejecutivo No. 3516, Edición Especial, 31.1.2003)*.
- ¹² *Art. 120, Libro Tercero, Del Régimen Forestal*.
- ¹³ *Ley de Modernización del Estado, Privatizaciones y Prestación de Servicios Públicos por Parte de la Iniciativa Privada (Ley No. 50, Registro Oficial 349, 31.12.1993)*.
- ¹⁴ *Normativa Forestal (Acuerdo Ministerial No. 131, Registro Oficial 124, 24.7.2000)*.
- ¹⁵ The definition of these 32 indicators was considered a pre-requisite for going ahead with the outsourcing scheme, since it clarified the Regente's discretionary power in monitoring forest management activities.
- ¹⁶ *Reconocimiento del Cuerpo de Vigilancia Verde (Acuerdo Ministerial No. 86)*.
- ¹⁷ *Decreto Ejecutivo No. 2609, Registro Oficial 579, 20.5.2002*.
- ¹⁸ *Acuerdo Ministerial No. 50, Registro Oficial 582, 23.5.2002*.
- ¹⁹ *Normas del Sistema de Regencia Forestal (Acuerdo Ministerial No. 38)*.
- ²⁰ (i) *Normas de Procedimientos Administrativos para Autorizar el Aprovechamiento y Corta de Madera (Acuerdo Ministerial No. 37)*; (ii) *Normas para el Manejo Forestal Sustentable para el Aprovechamiento de Madera en Bosque Húmedo (Acuerdo Ministerial No. 39)*; (iii) *Normas para el Aprovechamiento de la Madera en Bosques Cultivados y de Árboles en Sistemas Agroforestales (Acuerdo Ministerial No. 40)*; (iv) *Normas para Fijar el Derecho de Aprovechamiento de Madera en Pie (Acuerdo Ministerial No. 41)*.
- ²¹ AIMA (*Asociación Ecuatoriana de Industriales de la Madera*) is a broad association of forest-based processing industries, including the biggest plywood producers.
- ²² COMAFORS (*Corporación de Manejo Forestal Sustentable*) is a non-profit organisation dedicated to the promotion of sustainable forest management, linked to AIMA. It is also a funding member of Vigilancia Verde.
- ²³ The NGOs in Vigilancia Verde are *Fundación Ecuatoriana Populorum Progressio (FEPP)*, *Fundación Natura*, *CARE Ecuador*, *Fundación Maquipucuna* and *Corporación de Manejo Forestal Sustentable (COMAFORS)*.
- ²⁴ A logging licence is issued to the relevant forest user or logger, and the corresponding transport permit is given to the Regente in charge of supervising that logging licence.
- ²⁵ Until June 2004, when new norms concerning the Regencia Forestal were adopted through Ministerial Decree No. 38, they also risked losing the US\$2,500

Footnotes

¹ *Sistema Nacional Tercerizado de Control Forestal*.

² *Instituto Geográfico Militar del Ecuador* (Ecuador's Geographic Military Institute).

³ CLIRSEN/INEFAN, 1997 cited in FAO/CATIE, 2000; FAO, 2000; CLIRSEN, 2003.

⁴ *Patrimonio Forestal del Estado*.

⁵ According to the 1981 Forestry and Conservation Law (*Ley Forestal y de Conservación de Áreas Naturales y Vida Silvestre, Ley No. 74, Registro Oficial 64, 24.8.81*) all areas included in the National System of Protected Areas (*Sistema Nacional de Áreas Protegidas*) are state property and may not be subject to private ownership.

⁶ *Censo Nacional Agropecuario*.

⁷ Other authors (e.g., Almeida, 1995 cited in Barrantes *et al.*, 2001) indicate even higher levels of wood consumption from natural forests, which would imply yet higher percentages of illegal extraction. Furthermore, the 2.8 million cubic metres reported by Echeverría represent round cubic metres in logs, whereas the 660,000 cubic metres authorised by the MoE are of standing timber. If converted to standing timber, 2.8 million cubic metres in logs would represent approximately 3.36 million cubic metres of standing timber (considering a 20% conversion rate), which would mean that the 660,000 cubic metres officially authorised are only 19.6% of the

guarantee deposit required to receive the qualification from the MoE.

²⁶The initial fee for natural forests was US\$2.70/m³; this was reduced by the first addendum to the contract signed in June 2003. However, a decrease of 7% in SGS's fee brought a decrease in the number of offices from 15 to 7 (53%). In addition, SGS and MoE agreed to reduce the minimum profit from 30% to 24% (a cutback of 20% in SGS's profits).

²⁷In the original contract, there were 15 UAIs; this number was subsequently reduced to seven in the first addendum signed in June 2003. If the management plan were delivered to a UAI, SGS had 72 hours for its revision and approval.

²⁸These percentages concerned timber-oriented management plans in natural forests; in the case of plantations, non-timber forest products and other special permits, the percentages were lower, varying according to the different case between 1-5% for approval and 5-15% during implementation.

²⁹However, SGS had the faculty to inspect a management plan at any moment, independently from the Regentes' reports.

³⁰In retrospect, it may have been advisable to pinpoint a short interval period (perhaps only three days) between the approval of a forest management plan and the beginning of logging operations.

³¹Apart from that smuggled out of the country before processing.

³²*Comité de Regencia Forestal.*

³³*Colegio de Ingenieros Forestales.*

³⁴*Ley Orgánica de Transparencia y Acceso a la Información Pública (Ley No. 24, Registro Oficial Suplemento 337, 18.05.2004).*

³⁵The funding scheme based on impounded timber auctions could, however, create a somewhat 'perverse' incentive towards illegality, since detecting illegal products once they have been extracted becomes economically preferable to preventing illegal activities.

³⁶The transfer of the remaining US\$1.5 million is currently being negotiated.

³⁷As discussed in Section 6.2, this opposition was not prompted so much by the conceptual refusal to pay a foreign company directly, but rather by the fact that it represented an extra payment, since the MoE did not reduce its stumpage taxes despite the fact that it had outsourced the majority of its functions.

³⁸*Código Penal, Capítulo X A, De los Delitos Contra el Medio Ambiente (capítulo agregado por el Art. 2 de la Ley 99-49, Registro Oficial 2, 25.1.2000).*

³⁹*Ley Forestal y de Conservación de Áreas Naturales y Vida Silvestre, Título IV, Capítulo I, De las Infracciones y Penas (capítulo reformado por la Ley No. 91, Registro Oficial 495, 7.8.1990 y la Ley No.99-37, Registro Oficial 245, 30.7.1999).*

⁴⁰However, in the confiscation of forest and wildlife products at road checkpoints only the products are

taken away, not the trucks, because of the political influence of transportation groups.

⁴¹CEDENMA (*Comité Ecuatoriano para la Defensa de la Naturaleza y el Medio Ambiente*) is a third-level organisation formed of about 70 environmental NGOs and networks of NGOs; its Forest Group is made up of 20 organisations.

⁴²As noted in Footnote 21, COMAFORS is a funding member of Vigilancia Verde. Furthermore, COMAFORS' Executive Director at the time was hired by PriceWaterhouseCoopers to work on the tender documents for the outsourcing of administrative and verification services.

⁴³With limited participation of the National State Modernisation Council (*Consejo Nacional de Modernización del Estado*, CONAM).

⁴⁴*Servicio de Rentas Internas (SRI).*

⁴⁵*Contraloría General del Estado.*

⁴⁶*Instituto Nacional de Desarrollo Agrario* (National Institute of Agrarian Development).

⁴⁷Private holders did, however, participate as opponents to the system, often instigated and backed by local timber barons.

⁴⁸*Sistema Nacional de Control Forestal* (National Forest Control System).

⁴⁹Although this represents a significant advantage in comparison with other forest permits, the harvesting of plantations and other induced forest areas still implies higher transaction costs than agricultural activities.

⁵⁰Because there are associated fixed costs in their services, such as transportation.

⁵¹*Art. 262, Libro Tercero, Del Régimen Forestal.*

⁵²SGS's activities started in mid-June 2003 in the Province of Esmeraldas and were expanded to national level from the beginning of August; they were suspended by the MoE on 19 October.

⁵³The 1999 volume refers to the state acting alone: Vigilancia Verde was established at the beginning of 2000.

⁵⁴National Association of Forest Engineers (*Colegio Nacional de Ingenieros Forestales*).

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