Forest Stewardship Council®

FSC Monitoring & Evaluation Report

Context, figures, effects, and impacts

Public Report 2015

Explanatory notes: This report highlights some of the contributions that FSC delivered in pursuit of its mission to "promote environmentally appropriate, socially beneficial, and economically viable management of the world's forests". The scope of potential social, environmental, economic, and political contributions to this mission is as broad as the types of forest ecosystems, forest management, forest users, and their needs and interests in forests. FSC implemented a monitoring and evaluation (M&E) programme to increase the understanding of the complex impacts of its activities, and to provide a systematic foundation for a transparent, impartial, and consistent evaluation of FSC's effectiveness in delivering its mission. In 2013, the FSC Theory of Change was the subject of consultation and subsequently approved, and a set of intended impacts was identified. This document reports on some of these intended impacts and related indicators. This is a living document and will be updated periodically. This edition of the M&E report covers 2015 data, minor discrepancies between constituent figures and totals are due different reporting dates (15 or 31 December, or earlier data from other FSC reports), and to rounding.

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The FSC Vision

The world's forests meet the social, ecological, and economic rights and needs of the present generation without compromising those of future generations.

The FSC Mission

FSC shall promote environmentally appropriate, socially beneficial, and economically viable management of the world's forests.

FSC Monitoring & Evaluation Program Manager

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FSC Monitoring and Evaluation Program Report 2015

Contents

The FSC vision and mission are a response to a global crisis

Since the 1980s, scientific researchers have pointed clearly and precisely to the severe stress placed on the world's forests. The complex relationship between the natural functioning of forest ecosystems, forest use, and the people involved is a challenging one. Research on forest areas and the biodiversity of forest-dependent flora and fauna indicates prevalent deterioration of forest ecosystems, their functions and structures, for many and complex reasons, and that the destruction of tropical forests is proceeding at a frightening rate. In many countries, political and economic conditions result in fragmentation of resources instead of favouring and supporting sustainable use of resources. Data collected on social and socioeconomic conditions demonstrate that in many cases traditionally forest-dependent people (e.g. communities, Indigenous Peoples, and marginalized populations) are facing serious challenges to their reliance on forests for their livelihoods, often because of a change of management of the forest areas.

The Yale School of Forestry & Environmental Studies (Cashore et al., 2006, p. 8) summarizes these alarming research findings:

> *In the face of this body of knowledge and the consensus that many problems are intensifying, domestic and international governmental responses have been strongly criticized as woefully inadequate and far too slow to address the myriad problems facing global forest management.*
>
> *As a result of this frustration, some of the world's leading environmental groups and their allies decided to sidestep governments and, in 1993, created the "Forest Stewardship Council" (FSC). The FSC turned to the marketplace to generate incentives for forest businesses to conform to environmentally and socially responsible forest practices. Their solution was relatively simple: develop a set of global principles and criteria of sustainable forestry, have national and sub-national multistakeholder committees develop regionally appropriate standards, have third parties [i.e. independent] audit forestry operations for compliance, and "certify" those who pass the test – providing a badge of honour that, the hope was, would allow certified operations to gain some type of market advantage vis-à-vis their competitors (such as market access, price premiums, and the more abstract notion of a "social license to operate").*

Unique among social and environmental initiatives, FSC developed a new kind of certification system that evaluates the practices by which timber and other products from forests are produced, rather than the environmental performance of the products themselves. This evaluation is based on standards developed jointly by a broad range of stakeholders that usually do not work on the basis of joint consensus. Since 1993, FSC has evolved and grown in both scope and breadth. Today, over 20 years later, FSC is actively promoting responsible forest stewardship in more than 110 countries worldwide through both forest management (FM) and chain of custody (CoC) certification.

Through joint efforts of various FSC supporters and constituencies, almost 190 million hectares (Mha) of forest are managed and certified according to the high standards of FSC. Around the globe, 36 FSC-accredited certification bodies are working with committed forest managers and

forest product purchasers (see Table 1 on page 8). Consumers, often organized through powerful environmental and social nongovernmental organizations (NGOs), are pushing for products from responsibly managed forests.

What does FSC monitor?

There are many ideas about which impacts FSC certification should deliver beyond the transparency that certification brings via evidence for compliance of FM with FSC standards. FSC held a public consultation in October 2013 on its Theory of Change (see Annex 1, FSC, 2015b; and Figure 1), and the related intended impacts and indicators, to determine which kinds of effects and impacts (see Figure 2) to monitor and evaluate. The FM-related indicators cover the three areas addressed in the FSC mission (environmental, social, and economic effects of FM), as well as general, overarching aspects of FM. The auditors of FSC-accredited certification bodies continue to monitor elements of FSC impact and report on many of these indicators. This information is publicly available in the FSC certification reports for each of the approximately 1,350 certified operations, updated annually on the FSC website (info.fsc.org). FSC is working to improve the reporting format to allow easier analysis of these reports. In the previous years' M&E Reports (FSC, 2014a, 2015a), we reported that some of the suggested indicators are currently not assessed in FM audits, but might become reporting requirements for candidates in the modular approach programme (MAP). In 2015, the MAP was still not implemented nor fully developed for FM certification.

Another set of indicators focus on the tools that FSC uses to 'promote' responsible FM politically: in engaging stakeholder groups to develop solutions for conflicting interests in FM; in contributing to meaningful forest certification (e.g. through participation in standard development processes and public consultations); and through market-linked activities. While the progress against some of these indicators will be measured regularly, a subset of indicators might be assessed on a sample basis by external researchers, as explained in the FSC M&E System Reports (FSC, 2014a, 2015a).

Built on FSC's Theory of Change (FSC, 2014b, 2015b, and Figure 2), 12 intended impact areas are identified. The following report indicates with highlighted number in brackets where ① - ⑫ evidence or indications for theses intended impact areas can be found. Summarizing versions of the 'FSC Theory of Change' and of the 'Monitoring and Evaluation System' can be found in Annex I and Annex II of this document.

Figure 1) FSC's Theory of change

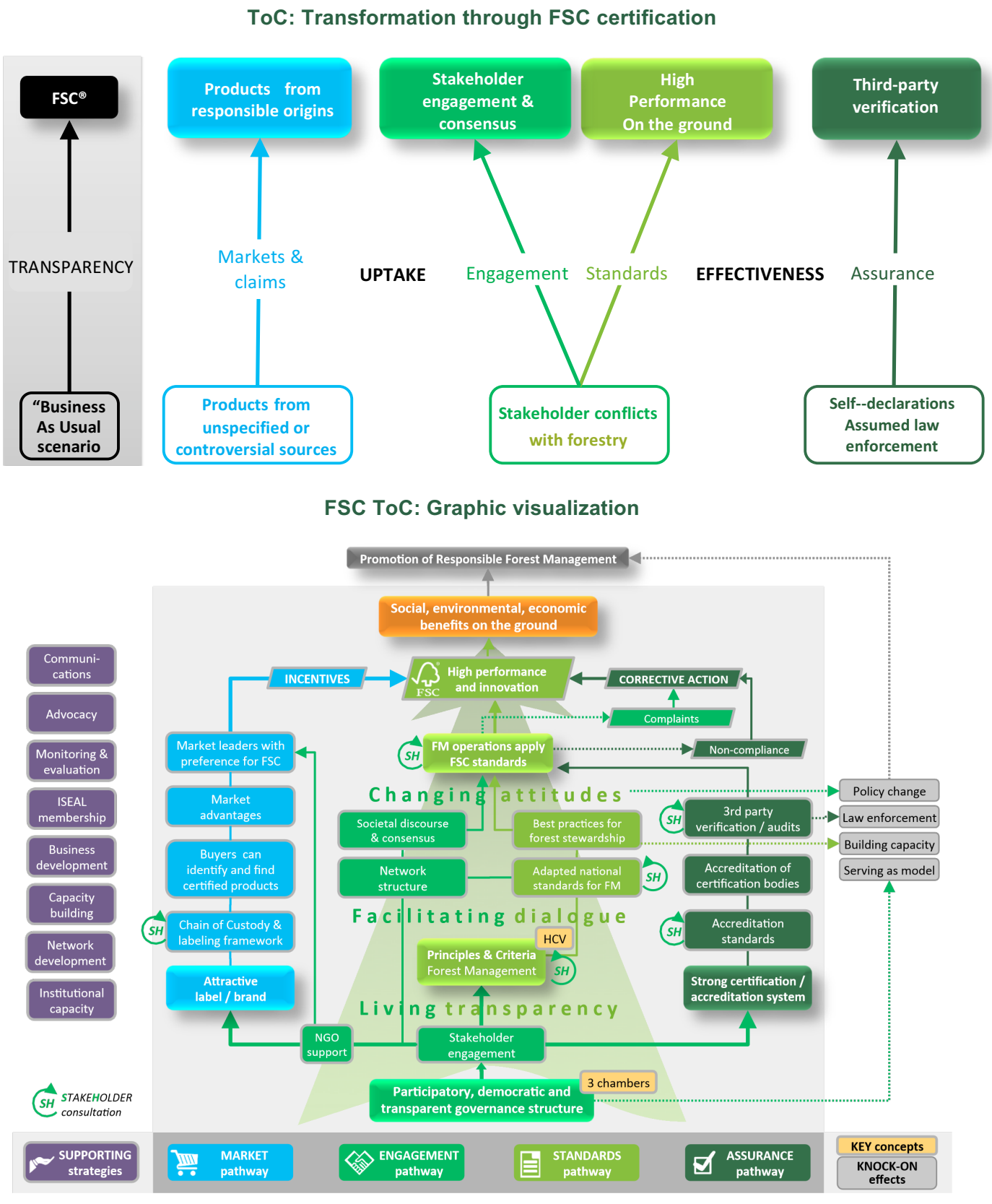

Figure 2) FSC Intended Impacts

PROMOTION OF RESPONSIBLE FOREST MANAGEMENT: HIGH PERFORMANCE AND INNOVATION – SOCIAL, ECONOMIC AND ENVIRONMENTAL BENEFITS ON THE GROUND

ECONOMIC	SOCIAL	ENVIRONMENTAL	GENERAL
① **Forest management (FM) operations gain market advantages through certification.** **1a.** Number (no.) and area of certified operations is growing in all climate zones and regions, for natural and plantation forests, for all ownership structures and sizes of operations. No. of re-certified operations increases. → Data, frequency and sample: No. and area of certified and re-certified operations. Trends from previous years compared to current. For all FM certificates, annual reports.	④ **FM operations have good and fair relations with indigenous and other local communities, and maintain or enhance fair access to resources and economic benefits.** **4c.** Aspirational: No. and quality of additional social services delivered by FSC-certified management. Access to forest resources and mechanisms for sharing benefits are perceived locally to be fair. → E.g. No. and area of certified operations with solved CARs related to legal issues. Reports on case studies.	⑦ **Minimized degradation of natural forests, no conversion of forests to other land use in certified areas.** **7a.** Area of certified FM operations managing natural forests increasing. → Minimized degradation of forests, no conversion of natural forests to plantations and other land uses: Area of natural forests in certified natural, plantation and mixed forests operations increases. → Aspirational: Sample sites show evidence that after five years defined priority areas are not significantly degraded.	⑩ **FM operations develop strategies to diversify their portfolio of forest products, and manage a broad portfolio to increase environmental and economic resilience.** **10a.** Aspirational: Portfolio of products incl. lesser known timber species, non-timber forest products and ESS offered as certified is maintained or growing. → No. of such products offered per certified operation. Trends of product range over time per region and operation type. Annual reports.
② **Harvesting activities are based on the principle of sustained yields: there is a balance of growth and yields of specific species.** **2a.** Aspirational[1]: The actual harvest of each species does not exceed allowable harvesting rates over defined timeframes. → Relations between annual allowable and actual harvest rates; for selected sites with counterfactuals.	⑤ **Forest-dependent, forest-managing certified communities improve their livelihoods as well as their forest management and marketing skills.** **5b.** Aspirational: No. of people obtaining an income through FSC is increasing. → Regular interviews of members of the smallholder support and of the modular approach (MAP) programs.	⑧ **FM operations maintain or enhance biodiversity. High conservation values (HCV) of forests are identified with stakeholder input and maintained or enhanced through appropriate management.** **8b.** Area of HCV classes, set asides, representative samples compared to entire certified area is maintained or growing. → Annual reports about such areas.	⑪ **Legal compliance by FM operations and exclusion of illegal activities within the forest management units.** **11c.** No. and quality of CARs issued and implemen0ted in relation to criteria addressing legal compliance, illegal activities. → E.g. Analysis of CARs related to human rights, protected areas, rare species within and in relation to the certified operation. Annual reports.
③ **FM operations gain increased competence, e.g. in planning, impact assessment & evaluation, silviculture, health & safety, marketing.** **3c.** E.g. Corrective action request (CAR) analyses over economic, social, environmental criteria show lessons learned. → For all FM certificate holders annually.	⑥ **FM operations improve workers' living and working conditions, especially with respect to occupational health and safety.** **6a.** Aspirational: No. of male / female forest workers (incl. contractors) trained in safe working techniques increases. → For all MAP candidates, qualitative case studies for some large-scale operations.	⑨ **FM operations identify and maintain the forests' manifold ecosystem services from forest soil, water, biodiversity.** **9b.** Aspirational: Areas certified as managed for ecosystem service (ESS) provision are maintained or increasing. → E.g. No. and areas of forests offering certified ESS. Trends, annually.	⑫ **FSC brings together diverse groups of people to craft policy; with local and international consistency; empower marginalized stakeholder groups.** **12c.** E.g. No. of FSC members per chamber and level of FSC awareness growing. → No. and structure of membership; statistics about prompted recognition of "FSC," users of FSC websites. Annual reporting.

[1] Indicators we are aiming toward, but are not yet available.

Table 1 gives a global, quantitative overview about FSC's developments in terms of certification (certified area, numbers of FM and CoC certificates, and numbers of certification bodies and national standards) and of the FSC network (number of members of FSC International and of countries with FSC representation). Most of this information will be elaborated in the following chapters.

Table 1. Overview about FSC's developments

	End 2000	End 2006	Sep 2008	End 2013	End 2014	End 2015
Forest area certified (Mha)[2] ①[3]	24.4	82.6	105.4	190.7	184.4	187.2
No. forest management (FM) certificates[2] ①	284	860	944	1,257	1,309	1,369
No. chain of custody certificates (CoC)[2] ①	1,138	5,178	11,111	27,054	28,519	29,764
No. countries where FSC certificates (FM, CoC) are issued ①	49	73	97	118	112	119
No. accredited certification bodies	5	16	19	35	35	36
No. countries with approved forest stewardship standards ⑫	5	26	29	31	32	32
No. FSC International (Asociación Civil) members ⑫	357	647	811	831	842	851
No. FSC network partners[4] ⑫	19	39	53	43	44	41
No. FSC regional offices and network managers[5] ⑫	0	4	4	4⑥+ central coord.	4 + central coord.	4 + central coordination

Sources: FSC Database; Karmann & Smith FSC Literature Review 2009; FSC Certificate database, 2014, 1 December 2015.

[2] For the first three categories, we used to report for 'global North' and 'global South', referring to the Organization for Economic Co-operation and Development (OECD) categories, but in 2015 FSC changed categories to geographically Northern and Southern countries; therefore these data sets are no longer comparable. In following reports we will use the geographical North / South data for comparisons.

[3] Numbers in parentheses refer specific intended impact indicators from FSC's Theory of Change T(see p.6).

[4] FSC network partners: before 2011 called 'national initiatives'.

[5] The roles and ownership of regional and subregional offices have changed over time. In 2014, FSC had regional offices in Africa, Asia, and Latin America, each with subregional offices and FSC-managed national offices. The subregional and country offices are now counted under FSC network partners.

Certificates in numbers

Certification of forest management

The FSC concept is based on the underlying assumption that each additional hectare certified to FSC standards brings us closer to achieving the FSC mission to improve FM worldwide. **The larger the forest area certified to FSC standards, the larger the forest area that brings evidence that its management is socially beneficial, economically viable, and environmentally responsible**. We also assume that forest managers apply for certification because they see an advantage in being certified. Therefore, we refer to the (FSC 2014b) "Theory of Change" Economic Intended Impacts area ①:

> *To be sustainable, Forest Management (FM) operations must be economically viable, (and environmentally appropriate and socially beneficial).*
>
> *1. Forest management operations gain market advantages through certification.*
>
> *[Proxy indicator] 1a. Number and area of certified operations is growing in all climate zones, regions, for natural and plantation forests, for all ownership types and sizes of operations.*

By the end of December 2015, some 1,369 FM operations were certified as managed according to FSC standards (4.5 per cent more than in the previous year's 1,309 certificates). These certified operations are spread over 81 countries on five continents, in different climate zones (see Table 2, p. 11). Of the total, 142 FM units received FSC certification for the first time in 2015, while 82 certificates elapsed. Another 119 were certified in 2015 for a second or later term (for more information about retention rates in chapter 'Certificate holders' perspective'. Ten new FM entities received 'controlled wood' status in 2015 (in seven countries: Australia, 2; Brazil, 2; Estonia; Indonesia; Peru; Russia, 2; and Suriname).

These 1,369 certified FM operations cover a total area of 187.2 Mha, slightly more than at the end of 2014 – but the steep annual growth in number of FSC-certified operations experienced until 2012 has not been maintained. During the five years 2009–2013, the forested area certified by FSC grew at a relatively constant rate of 15.5 Mha per year. On 15 December 2014, however, the certified area dropped by 6.3 Mha (3 per cent) from the previous year's 184.4 Mha, and in December 2015 the certified areas was between the December 2014 level and the December 2013 level of 190.7 Mha.

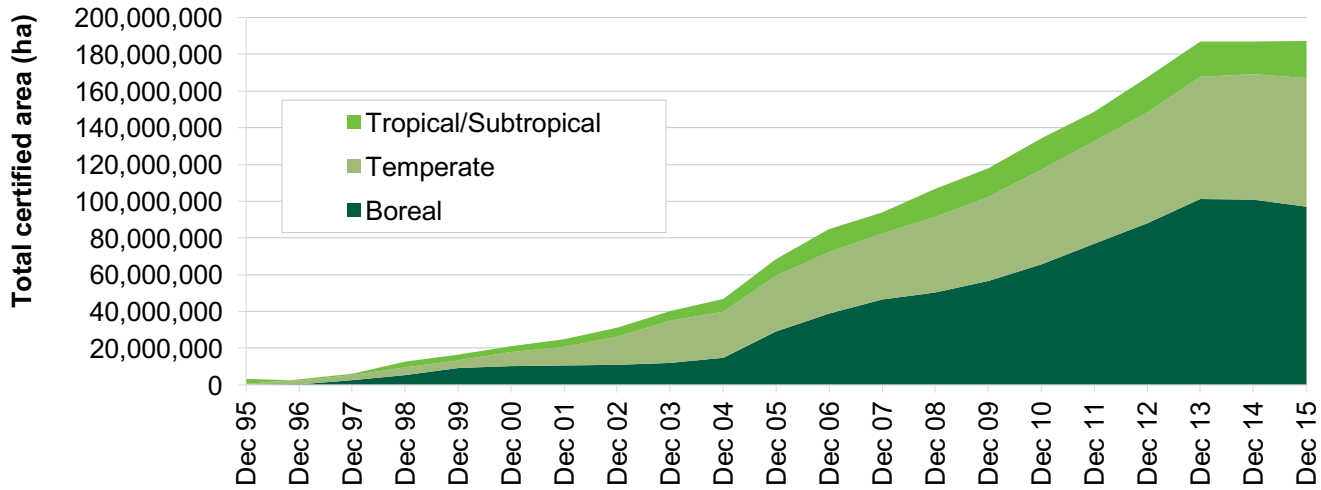

Figure 3. Total FSC-certified forest management area (1995–2015)

Source: FSC Certificate database, December 2015.

As in the previous year, the number of certified operations continued to grow, although the certified area did not reach the level of December 2013. Similar to 2014, a number of large-scale operations in Asia, Latin America, and Russia were among the 82 certificates that were not renewed in 2015. For 2014, we gave some examples reasons for terminations. More general information about terminations are laid out under 'Forest management recertification' (page 33). Information about each of the valid, suspended, and terminated certificates can be retrieved via info.fsc.org.

FSC-certified FM operations can be small to very large scale (millions of hectares). Forest operations can join and organize for group certification. The (simple) average size of a certified forest operation (including groups) in late 2015 was 136.742 ha (average of 1,369 certificates with a total area of 187.2 Mha). This was slightly lower than the December 2014 level (140.870 ha), but significantly larger than, for example, 15 years ago, late in 2000, when the average was 85.915 ha (284 certified operations with a total of 24.4 Mha).

Chain of custody certification

Because FSC is a market-linked instrument and its intention is to enable consumers to identify and choose products from responsibly managed forests, FSC reports on both certified FM figures and on the number of operations certified to buy and sell FSC-certified products (ranging from saw mills to copy shops). As of December 2015, some 29,764 CoC certificates had been issued in 119 countries, maintaining roughly the same growth rate of 4.5 per cent from 2013 (with 27,246 certificates) to 2014 (28,519 certificates) (Table 1). By the end of 2015, the number of CoC certificates was almost double that of January 2010 (when there were 15,766 CoC certificates). The majority of FSC CoC certificates (about half) were concentrated in Europe, followed by Asia and North America. Detailed information about the evolution and distribution of CoC certificates can be found in FSC Market Info Packs (FSC, 2015d, and upcoming reports).

These figures and more related information are updated monthly in *FSC Facts & Figures*, and are publicly available on the FSC website (FSC, nd-b).

Regional trends

Table 2 shows the distribution of FSC-certified area and numbers of FM operations and CoC certificates by region. The numbers in **bold** show that the continent-wide certified area is at an all-time high, while numbers in *italics* show that the current level is close to the all-time high.

Table 2. FSC-certified area per continent (ha) and number of certified operations

	North America	Europe	Asia	South America & Caribbean	Africa	Oceania
FSC-certified area						
2013	**77,526,654**	81,623,564	8,959,685	*13,390,488*	6,729,825	2,550,506
2014	67,871,110	85,420,144	**9,027,363**	12,686,538	6,832,756	2,580,791
2015	67,082,598	**89,224,338**	8,045,569	12,792,087	**7,745,980**	*2,666,952*
No. forest management (FM) certificates (operations certified)						
2013	241 in 3 countries	507 in 32 countries	181 in 13 countries	246 in 17 countries	47 in 11 countries	38 in 5 countries
2014	242 in 3 countries	542 in 32 countries	192 in 13 countries	*248* in 17 countries	46 in 10 countries	38 in 5 countries
2015	*247* in 3 countries	**595** in 32 countries	**210** in 13 countries	246 in 17 countries	**52** in 11 countries	38 in 5 countries
No. chain of custody (CoC) certificates (operations certified)						
2013	**4,306** in 3 countries	14,104 in 39 countries	6,796 in 27 countries	1,407 in 20 countries	165 in 16 countries	**468**[6] in 7 countries
2014	4,015 in 3 countries	14,950 in 41 countries	7,483 in 27 countries	1,445 in 19 countries	*168* in 12 countries	458 in 7 countries
2015	3,854 in 5 countries[7]	**15,849** in 41 countries	**8,095** in 29 countries	*1,496* in 20 countries	167 in 12 countries	439 in 8 countries

Source: FSC Certificate database, 15 December 2015, 15 December 2014, 15 December 2013.

① While in Europe the certified area and numbers of certified FM and CoC operations continued to grow, the certified area and number of CoC certificates in North America has declined since 2013. A part of this decline can be explained with the termination of certificates

[6] In 2013, we erroneously reported 1,468 CoC certificates where it should have read 468 CoC certificates.
[7] North America here includes Bahamas and Puerto Rico with 1 and 3 CoC certificates, respectively.

of two large operations totalling 1.5 Mha. In Asia, the number of certified FM and CoC operations increased, while total certified area decreased compared to 2014, along with a smaller average size of certified forest operations, due to loss of a number of large-scale certified operations in China. In Africa, the certified FM area and number of FM operations continued to grow, with a stable number of CoC certificates, though in fewer countries. Except for the decrease in CoC certificates in Oceania, there, as well as in South America & Caribbean, the numbers have been more or less stable over the last three years.
The order of the countries with the largest FSC-certified areas is almost the same as in the previous years: Canada, Russia, the United States, and Sweden account for 62 per cent (63 per cent in 2014) of the total FSC-certified area. With the area certified in Poland and Brazil (the fifth and sixth largest certified areas), six countries cover 70 per cent of the total FSC-certified area. Canada alone (53 Mha in 2014) has about one quarter (27.5 per cent, cf. 29 per cent in 2014) of the total FSC-certified area, while Russia (40.5 Mha) has about one fifth (21 per cent).

Table 3 shows the percentage of FSC-certified forest area by continent or region.

Table 3. Geographical distribution (per cent) of FSC-certified forest area by continent and region, 2013, 2014, and 2015

Region	2013	2014	2015[8]
Europe (incl. Russia)	43	46	47.5
North America (incl. Mexico)	40	37	35.9
South America and Caribbean	7	7	6.8
Asia	5	5	4.4
Africa	4	4	3.9
Oceania	1	1	1.4
Total FSC-certified area	100	100	100

Source: FSC Certificate database, 2015.

While FSC has achieved particular success in European and North American countries, its coverage is significantly less in tropical regions. Comparing 2013, 2014, and 2015 data, we see a shift of certified area from North America (Canada) to Europe (including Russia), while the proportions for the other continents remained stable at low levels (in total 17 per cent of the FSC-certified area; Table 3).

The concentration of certification in the temperate and boreal forests of North America and Europe is illustrated in Table 4 and Figure 3.

[8] *As of 1 December 2015.*

Table 4. Percentage of FSC-certified forest area by biome, 2008, 2013, 2014, and 2015

Biome	Apr 2008	Dec 2013	Dec 2014	Dec 2015[9]
Boreal forest	49	54.4	53.3	51.7
Temperate forest	38	35	36.2	37.4
Tropical / subtropical forest	13	10.6	10.5	10.8
Total	100	100	100	100

Source: FSC Certificate database, 2015 ([1] as of 1 Dec 2015).

Table 4 breaks down the FSC-certified area by biome for the years 2008, 2013, 2014, and 2015, showing very similar figures for these years, and indicating that half of the total FSC-certified area is in boreal forests, and only 10 per cent in tropical and subtropical regions.

Table 5. Percentage of FSC-certified forest area by forest type, 2008, 2013, 2014, and 2015

Forest type	Apr 2008	Dec 2013	Dec 2014	Dec 2015[1]
Natural forest	65	64	64.5	65.64
Mix (semi-natural and/or mix of plantation and natural forest)	27.5	27	27	26.05
Plantations	7.5	9	8.5	8.28

Source: FSC Certificate database, December 2015.

Most of FSC's certified area is natural forests (Table 5). As with the breakdown by biome, the figures forest type for 2008, 2013, and 2014 are very similar.

187 million hectares are FSC certified – how much is this in relation to the forests of the world?

To answer this question, we first have to agree on a definition about what kind of 'forest' area we use as baseline. Would the savannah in East Africa count as forest area, or the park with trees close to a big city? Can we include strictly protected forest areas, which are not meant for harvesting activities? We decided to refer to the statistics of the Food and Agriculture Organization of the United Nations (FAO). FAO has been monitoring the world's forests since 1946, initially at 10-year intervals, and every five years since 2000. The FAO Forest Resources Reports (FRA) provide a consistent approach to describing the world's forests and how they are changing (FAO, 2010,

[9] *As of 1 December 2015.*

2015c). FAO sets definitions for forests (FAO, 2015a,b), and we use FAO forests figures as baselines for our calculations.

"Forest area"

The total global forest[10] area reported by FAO for 2015 (based on country information) was close to 4,000 Mha. This area includes areas that will not be used for forestry for various (ecological, legal, geographical) reasons.

Of the 4,000 Mha global forest area, the 187 Mha managed under FSC certification make up 4.7 per cent.

"Forests with management plan"

One of the preconditions for FSC certification is that the forest operation has a management plan, and FSC can therefore be a driver for the development of FM plans. FAO also sees management plans as an important tool for achieving sustainable forest management and hence as a relevant indicator for reporting on the state of the forests. FAO (2015a) defines "Forest with management plans" as "Forest area that has a long-term documented management plan, aiming at defined management goals, which is periodically revised." FAO (2015c) reports that this area is steadily increasing, in 2010 it was more than half of the total forest area. But the information from the countries reporting to FAO is only available for 80 per cent of the total forest area.

"Production and multiple-use forests"

One of the FAO (2015a) categories is "production" forests, which are "primarily used for production of wood and non-wood forest products". About 30 per cent, close to 1,200 Mha, is managed primarily for the production of wood and non-wood forest products. An additional 949 Mha (24 per cent) are designated for multiple uses – in most cases including the production of wood and non-wood forest products (FAO, 2010, 2015a,b). FSC-certified forests are often multiple-use forests; fewer are tree plantations. But these definitions are not aligned with FAO categories, and not applied in the reporting and the FSC certificate database. **If we decide to use the FAO production forest together with the multiple-use forests as baseline, the 187 Mha FSC-certified forests would make up 8.7 per cent of global forests.**

"Planted forests" versus "natural forests"

The differentiation of "planted" and "natural" forests is important, as they have different ecological and socio-economic roles and values. When estimating the change of forest area, it is most relevant to be clear with these categories: "forest area" can include natural and planted forest, and a reduction in net forest loss (which could result from a combination of a loss of natural forest and a gain in planted forest) is not the same as a reduction in deforestation.

In the FAO (2015a) definition, "planted forests" are "forest predominantly (more than 50 percent of the growing stock at maturity) composed of trees established through planting and/or deliberate

[10] FAO (2015a) defines forest as "land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use." It does include areas that are temporarily not covered by trees (clear cut), but foreseen for further reforestation management.

seeding." They include coppice from trees that were originally planted or seeded, and exclude self-sown trees of introduced species. Nevertheless, this category includes more than the narrow definition of "plantations" which are homogeneous, even-aged, planted (or coppiced), and often (exotic tree species) monocultures with short rotation cycles. FAO (2016) reports that of all forest area in 2015, some 291 Mha (7.2 per cent) were planted forests.

FSC area classified by certification bodies as "plantation" and as a "mix of semi-natural forests and/or mix of natural and plantation" (see Table 5) together covers 64.25 Mha. Note that this can include in some certified entities with a large share of natural forests. Therefore, simple calculation of the portion of FSC categories "plantation" and "mix" within the FAO "planted forests" (22 per cent) is an overestimation of the FSC-certified area.

For this "planted forest" category and others, FSC would need to adapt its internal reporting requirements and align them with the FAO definitions, to better set FSC-certified areas in relation to FAO-reported figures. It then makes more sense to calculate these ratios also at country and regional levels.

Forest-managing smallholders

⑤⑥ Various stakeholder groups expect FSC to attract more forest-managing smallholders so that this group can benefit more from FSC certification, and FSC is committed to support a general increase of smallholder representation in the system. The calculations for 'smallholders' are based on the members in the categories for community-managed forests and for the 'small and/or low-intensity managed forests (SLIMF)'.

In *ETFRN [European Network for Tropical Forest Research] News* 57 of September 2015, we published the following summary, based on January 2015 data:

> *Worldwide, 285 forest management certificates are held by smallholders: 60% are organized in group certificates; and 40% are individual certificate holders. More than one-third of certified smallholders are in developing countries, most of them in the tropics. The total certified area is almost 7.5 million hectares (ha), more than 1.5 million ha of which are in the Global South, mostly the tropics; 78% is community forest. (FSC Database January 2015).* (Meier-Dörnberg and Karmann, 2015)

In mid-2015, the *FSC Market Info Pack 2015* reported that, globally, smallholders made up 22 per cent of all FM certificates valid in June 2015, an increase of 2 per cent from 2014 (FSC, 2015d). They account for 4 per cent of the total certified area. In 2014, the FSC Smallholder Programme reported that, while only 11 per cent of the FSC-certified area is in the tropics, more than 50 per cent of the smallholders united in group certificates can be found there, with 46 per cent of the group certified area. As a result, 25 per cent of the tropical forest certificate area is under group certificates, whereas only 7 per cent in temperate forests and 1 per cent in boreal forests are under group certificates. For 2016, we will analyse these figures in more detail.

Access to finance often limits the quality of FM provided by smallholders, and also their ability to apply for certification. To overcome this challenge, at least for some smallholders, FSC initiated the **FSC Smallholder Fund**. This is a small-grant scheme that funds projects for 1–3 years with the objective of supporting small and community producer organizations to become certified or to maintain their certificate. By end of 2015, some 41 projects in 26 countries had been supported by this fund. Project ideas range from acquisition of safety equipment to fulfil health and safety

requirements of certification, though developing and monitoring procedures for high conservation value schemes, to investment in equipment and training followed by marketing activities to enhance the value chain. Two 3-day training courses were conducted in 2015 in Indonesia for indigenous community forest managers on 'Value chain and business models' with 21 and 12 participants, respectively. A New Approaches Initiative was set up, among other things, to review the effects of the programme. Evaluation results are not yet available as the project is still being implemented, but results will be published in a future M&E report. Meier-Dörnberg and Karmann (2015) give more details about the programme. Some success stories are available on our website (FSC, nd-j).

⑤⑫ Training for trainers

The training courses for smallholders were conducted by FSC trainers trained in The Trainers Program for Asia by Regional Community Forestry Training Center (RECOFTC), Bangkok, aiming to build the capacity of auditors and other trainees so that they can go on to deliver training to smallholders in their own regions and countries. Since 2014, FSC has been offering two-day 'Training for trainers' courses as well; in 2015, there were 17 participants, and the focus was on auditor qualities. M&E of these training activities are ongoing, and evaluation results will be published in a future M&E report. More information is available https://ic.fsc.org/en/news-updates/smallholder-news-and-updates/id/1083.

Research on the impacts of certification on the quality of forest management

To evaluate FSC's impacts and outcomes on the ground, in 2008–2009 the FSC M&E Program reviewed independent research from hundreds of references, including reports, academic journals, and books, and screened analyses by various NGOs. The full report is freely available (Karmann and Smith, 2009).

FSC is working on a more elaborate literature database with research findings about FSC-related effects and impacts, most likely to be tested in 2016. In the meantime, FSC has a list of recommended reading on its M&E website. The ISEAL Alliance shares knowledge on sustainability initiatives, including FSC, by uploading information about published, ongoing, and planned studies, and research projects to its Sustainability Impacts Learning Platform (ISEAL Alliance et al., 2016). FSC and ISEAL Alliance encourage researchers and practitioners active in the field to contribute studies to this platform, and to use it to learn from and connect with others doing similar work.

Today, different FSC entities work with a variety of research consortia to identify FSC strengths and weaknesses, and intended and unintended outcomes and impacts. For example, the FSC M&E Manager has engaged with the Center for International Forestry Research (CIFOR) and World Wide Fund for Nature (WWF) International at steering committee level, and as technical advisor for various studies of ecological and social impacts in Africa, Asia, Latin America, and Russia. Other FSC programmes cooperating with independent research organizations are the Forest Certification of Ecosystem Services (ForCES) project, the Quality Assurance Programme, and the Business Development Unit.

In the 2013 M&E Report (FSC, 2014a), we gave detailed findings from the *WWF Living Forests Report* (WWF and IIASA, 2011), which found that FSC certification has a positive impact on the overall economic, environmental, and social aspects of FM. WWF published the findings of its Certification Assessment Tool (WWF, 2015) and came (as in previous years) to the conclusion that

FSC is the best certification system to ensure environmentally responsible, socially beneficial, and economically viable management of forests. WWF therefore recommends the FSC system to consumers, forest managers, policy-makers, and businesses.

For 2014, we reported that FSC started detailed analyses of corrective action requests (CAR) given in certification assessments in different regions; for example, for the FM certificates granted in Asia. It is still too early to report results from this activity.

These impact evaluations are ongoing with multidisciplinary research teams taking long-term perspectives. They include, where possible, first-hand data and counterfactual control groups. The Helmholtz Alliance conducts other research projects with other research organizations focusing on earth observation tools to identify options to better evaluate changes in forest cover and use. This evaluation identifies the status, dynamics, and disturbance of certified forest areas and the neighbouring landscapes. It is run in parallel with on-the-ground monitoring activities in FM certification to increase transparency in strengthening the reliability of monitoring activities of foresters, auditors, Accreditation Services International (ASI)/FSC, and other stakeholders, such as environmental NGOs. The most prominent expert working group is the Value and Impact Analysis Initiative (VIA) (http://www.isealalliance.org/VIA) coordinated by ISEAL Alliance, independent from FSC and developing research designs for impact evaluation first for FSC, and later for other ISEAL Alliance member certification schemes. Results from VIA are expected to be published in late 2017.

Examples of recent independent research projects and findings

⑤⑩⑫ Honduras: The Miskitu world view, forest management, and market logic

Hodgdon and Sandoval (2015) evaluated the work of the FSC-accredited certification body Rainforest Alliance in Honduras in supporting a Moskitabana community. This community is managing, for example, non-timber forest products (NTFPs) in compliance with the FSC standard. *Batana* is harvested from American palm (*Elaeis oleifera*) and used in the manufacture of haircare products. This case study is one of 10 produced under Forest Conservation through Certification, Markets and Strengthening of Small and Medium-sized Forest Enterprise, a five-year project supported by the Inter-American Development Bank Group. Led by the Rainforest Alliance, the project involves approximately 100 community operations and small and medium-sized enterprises in Guatemala, Honduras, Mexico, Nicaragua, and Peru. The project's central aim is to improve local livelihoods through sustainable forestry and enterprise development. Although the support needs, contexts, and development levels of partner communities vary tremendously, the project's unifying strategy is to improve business capacities, market access, and financial support for enterprise development to secure sustainable FM and livelihood development. A core finding of this case study is that

> *the indigenous Miskitu world view ("cosmo-visión" in Spanish) is not incompatible with enterprise development that is based on natural resource management. Processes that were undertaken to achieve FSC certification were driven by market logic and led to the mapping, documenting and, ultimately, legitimizing of indigenous management practices. Moreover, the founding of a local NTFP enterprise among Miskitu communities, which was also driven by a desire to develop local business capacities, demonstrates the ability to merge new business models with traditional institutions. As such, these efforts stand as an important model for other groups as land titling unfolds*

> *across the Muskitia. Furthermore, these findings have global relevance given the increasing number of indigenous groups in the tropics that are gaining control over ancestral lands that comprise resources suitable for enterprise development.*

Hodgdon and Sandoval (2015) describe that a key result of assistance is the documentation and subsequent official recognition of indigenous practices for the management of *batana*:

> *Working towards certification required that harvesting, transporting and processing be documented and made auditable, thus adding to the official "legibility" of indigenous practices. Likewise, the mapping of management areas under traditional use helped to make indigenous natural resource management practices more visible.*
>
> *At the same time, the drafting and application of a standard for NTFP management – which was previously unregulated by the Honduran state – helped to strengthen the ability to monitor compliance with best practices, as well as to demonstrate the viability of indigenous management systems. Indeed, the standard that was developed was largely a documentation of traditional management practices.*
>
> *Another key result of the certification process was the creation of a chain-of-custody system (i.e., product traceability) that could be documented and controlled. The chief challenge in attaining FSC certification (and a significant achievement of the endeavor) was the design of a documentation system that could be used by local producers to register and monitor production along the* batana *value chain.*

④⑥⑦ Tanzania: Improved forest structure and more equitable distribution of benefits

Kalonga et al. (2015) describe the Miombo woodlands in Tanzania's Kilwa District as open, and allowing easy access for selective logging for domestic consumption and export, resulting in heavy exploitation. They analyse six forest areas and four adjacent villages, to assess and compare forest structure, human forest use, and the forest governance system. They assess two FSC-certified community managed forests, two open access forests (non-FSC), and two state forest reserves (non-FSC) – in theory, these forests have similar legal management requirements. In the two forest reserves, legal harvesting stopped in 1986 and 1990; since then, the reserves have been illegally harvested. In addition, the reserves are threatened by uncontrolled wildfires and livestock grazing. The researchers applied mixed methods of qualitative and quantitative (household survey) research approaches to collect data from the villagers, plus measurements of stumps and fire incidents in the forest. They state that the FSC-certified forests have better forest structure, appropriate regeneration, and lower incidence of fire than the uncertified open-access forests and state forest reserves. Certified forests also provide additional economic benefits to communities compared to non-FSC forests. The researchers highlight that, because of the short time the certification has been operational, it is hard to identify the precise effects of the certification intervention and that further empirical evidence on such effects in space and time is therefore desirable. In a paper from 2014, the main author describes, with co-authors, for the same certified entities, a baseline for future research on income generation and distribution along the certified timber trade chain (Kalonga et al., 2014). The authors note that the sustainability of this income and its distribution is highly context specific and dependent on how much the communities will continue to earn and become independent in income, and stop depending on external financial support to cover certification costs, which is the case at present. Currently, the actors from certified forest communities have a more favourable distribution of net revenue of roundwood equivalent than those from non-FSC forests,

where the certified sawmill recruits villagers for work, trains them, and pays them higher wages (above the national minimum wage). The methods and findings of the studies in the Kilwa region are promising, and further research should be conducted to show whether certification has positive effects from compliance with the FSC standards, whether there is market demand for certified products, or if there are addition positive impacts on the environment and socio-economic development.

④⑤ Brazil: Not the expected economic power, but enhanced political empowerment

In 2014, Quaedvlieg at al. published an evaluation of empowerment outcomes of certification, based on data collected in field studies in 2008 and 2010 in Madre de Dios, Peru – 10 years after the concept of FSC, Organic, and Fairtrade certification of Brazil nut (*Bertholletia excelsa*) management was introduced as a means of promoting sustainable community forestry and smallholder access to profitable niche markets.

The study showed that the alliances among producers, marketing firms, and NGOs involved in certification in Madre de Dios have not brought the economic empowerment outcomes that were originally expected, and two of three Brazil nut producer associations (*castañero*) have abandoned the certification programme. However, certification enhances the *castañeros'* political empowerment (giving them a voice and increased self-confidence in their ability to effect change) by strengthening their collective social and political capital. Although this does not yet go together with economic empowerment, it is a prerequisite for achieving it. Only well-organized producers in strong associations whose members understand the certification process, the uncertainties of international markets, and how to form alliances among various actors can take advantage of emerging market opportunities. Moreover, only stronger social organization will enable certification to break the hierarchical economic structures that disadvantage producers.

However, limited demand, monetary benefits, and economic viability are major constraints to their economic empowerment (increased assets and capabilities that enable them to benefit from new opportunities and freedom to make economic decisions). Similar to the findings from Tanzania, the authors argue that in Peru only stronger social organization will enable certification to break the hierarchical economic structures that disadvantage producers and prevent their replacement with new dependencies on donor and NGO support.

Meta-analysis: The global view on research findings summarized by WWF's GFTN

In early 2015, WWF Global Forest and Trade Network (GFTN) and its Global Forest Programme published a research review based on 25 publications from 2010 to 2014 – rigorous, independent research related to FSC-certified forest management (Mo and Khan, 2015). We have reported on some of the reviewed papers' findings in earlier FSC publications. The WWF-GFTN's review groups the findings of these papers in four impact areas:

1. ⑦⑧⑨ "Environmental impacts" summarizes the effects on forest degradation and protection of biodiversity. Based on empirical work in Gabon, the authors find that the application of the FSC Principles and Criteria mitigated forest degradation within the certified area, compared with conventional logging. For example, in the FSC-certified concession, the number of other trees damaged for every tree felled was less than half of that in the conventional logging site, and the FSC concession also had better road design and construction. These factors are critical for maintaining the health of production forests, allowing them to serve as important carbon sinks and habitat for wildlife. Studies in Guatemala and Malaysia showed that FSC-certified forest

concessions, through engagement with local people and communities, are more effective in halting environmental degradation than strictly protected areas in places where law enforcement is weak and local support for forest protection is lacking. Mo and Khan (2015) find that FSC certification has better measures to protect biodiversity and wildlife habitat than conventional logging.

2. ④⑤⑥ "Social impacts" refers to effects of certification processes on community relationships, empowerment of marginalized groups, and on workers' safety and health. Research, for example, in concessions in the Congo basin finds that FSC certification resulted in increased inclusiveness and gives more power to workers and communities. In the same region, as well as in other countries and on other continents, certified operations are found to offer better working and living conditions (e.g. better housing and medical facilities, and health insurance) than conventional logging concessions in comparable situations. Certification processes under certain circumstances also encourage more equitable redistribution of profits from FM to affected stakeholders. For example, in Russia the certification process, coupled with demands from supportive NGOs, led to more interaction of certified operations with their neighbouring communities.
3. ⑪⑫ "Impact of FSC certification processes on governance": Forest legislation is usually well thought through, but in many countries it is not really enforced. Studies in Bolivia, Brazil, Russia, and other countries showed that in certified operations the compliance with legal requirements (payment of taxes, adherence to environmental protection rules, legal safety and health requirements, etc.) is higher than in comparable uncertified operations, because certification processes include the need to monitor effects of FM. Mo and Khan (2015) also note that FSC has been shown to have positive effects on regional and national regulations, thereby having an effect well beyond the certified operations.
4. "Gaps in the literature": Most studies published so far (to the end of 2014) on the impacts of FSC certification have been based on corrective action requests (CAR) of public certification reports, stakeholders' perceptions, and small-scale field data collection. Mo and Khan (2015) state that, "With the exception of a few, many of these studies do not compare on-the-ground impacts in FSC-certified concessions to those in non-certified concessions" – they probably miss the evidence that the changes in FM introduced by forest managers are triggered by certification processes and requirements. They continue that different authors find that surveys and desk studies (including research based on CARs) are not scientifically rigorous, and they suggest a number of reasons for shortfalls in scientific papers (lack of attribution to certification, studies in time, and scope too limited). Mo and Khan (2015) conclude that WWF, with other partners in the ISEAL VIA, plans to address and contribute to overcoming these shortfalls in science.

④ Nepal: Certification too new to say more than about improved governance

Acharaya et al. (2015) are cautious with conclusions about the effects of the newly introduced forest certification concept in Nepal on ensuring conservation and the sustainable use of forest resources. Instead they highlight the positive effects of certification on the governance of the forest-managing communities:

> *The major positive changes due to FSC forest certification related process in management of resources included sustainable and scheduled collection of forest products, maintenance of records (which allows monitoring and evaluation of the forest management activities) and maintaining transparency of all process and methods.*

> *Certification was perceived as a vehicle for local value addition, environmental restoration and building network among stakeholders.*

They state that the progress in income and employment generation and rural poverty reduction was insignificant, but that forest certification is new and in a growing phase. But they did find that "The improved documentation of forestry operations, bookkeeping and reporting resulted in overall improved forest governance" and that "Certification sometimes improved organization of communities in order to conduct dialogue with government, industry and donors because some initiatives were recorded". They also found that "decision-making and participation were improved because the certification process triggered transparent and equitable participation in forest management".

FSC is keen to hear about and to learn from future research on direct and indirect effects of certification in Nepal.

①③④ Profitability and sustainability: Economic impacts on forest managers

In 2015, WWF took a novel approach to evaluate *Profitability and Sustainability in Responsible Forestry: Economic impacts of FSC certification on forest operators* (Breukink et al., 2015). The authors synthesized a wide range of quantitative and qualitative data acquired through extensive field and desk research, including primary research on 11 certified entities across four continents, to seek to advanced knowledge about the impact of FSC certification on a company's "bottom line". More than 500 original data points are analysed to assess upfront investments, annual costs, annual benefits, and the overall net present value (NPV) of the decision to pursue FSC certification. The authors find that

> *For the forest operations evaluated, the financial benefits of FSC tend to outweigh the costs, albeit with high company-by-company variance, and special consideration required for high conservation value (HCV) set-asides and intangible benefits. On average, the companies earned an extra US$1.80 for every cubic metre of FSC-certified roundwood or equivalent, over and above any new costs, due to price premiums, increased efficiency, and other financial incentives. The business case was strongest for tropical forest operations and small/medium producers (regardless of geography) who experienced significant financial gains, while temperate and large producers experienced small losses. It took the companies, on average, six years to break even on their FSC investment.*

They also came to the conclusion that

> *Tropical forest managers and small/medium producers accrued the largest average net benefits. Additionally, companies reported significant qualitative benefits of FSC such as market access and retention, management effectiveness and quality control, legal compliance, reduction in accidents, stakeholder relations, and improved staff morale.*

⑨⑩ Indonesia: Certification is demanding, but does help to improve forest management

Ruslandi et al. (2014) describe five cases of forest concessions, following the paths to FSC certification in Kalimantan, Indonesia. They note that there is a lack of empirical evaluation of the impacts of forest certification in Indonesia or elsewhere, which makes it difficult to specify impacts of certification. But they do note that "certification has helped promote the transition from forest exploitation for timber to multiple-objective forest management in Indonesia".

They find that while only modest improvements in FM practices would be required for the concessions to comply with governmental regulations, much more substantial improvements are needed for FSC certification. They point out that the direct and indirect costs for achieving FSC certification are one of the barriers to certification, as is unclear land tenure. The authors suggest that synergies between Indonesia's new mandatory certification programme, and international efforts for legality verification (which have all helped spur progress towards voluntary, third-party certification) and voluntary certification, if realized, could encourage even poorly performing concessions to improve their management. They conclude that "understanding the motives for and barriers to certification is important to develop strategies to increase the success of this important conservation intervention."

④ Russia: Managed citizenship

Tysiachniouk and Henry (2015) examined the political implications of FSC certification and its requirements for participatory governance by focusing on three case studies in Russia, drawing upon data from 2002 to 2014. They argue that one of the unintended by-products of forest certification is the advancement of a specific type of citizenship, what they call "managed citizenship". In managed citizenship, local communities are empowered by new rights endowed to them by a global governance generating network (GGN), such as FSC. Through the GGN, local stakeholders may become involved in long-term initiatives that provide new opportunities to participate in democratic governance. However, citizens' involvement is cultivated, directed, and circumscribed by actors from outside the communities, such as environmental and certification experts who educate local residents about their stakeholder status. They also find that the persistent weakness of social interests, as opposed to environmental interests, within FSC and the effects of economic instability and weak democracy domestically contribute to the challenges of engaging local communities.

> *At the broadest level, one could argue that FSC transformed the residents of some timber communities from solely citizens of the Russian Federation to stakeholders engaged in a global process of forest governance under which they have new rights and opportunities for participation.*

They explain that FSC certification has had a variety of impacts related to introducing a new model of democratic governance and citizenship in Russia. Prior to certification, the terminology of 'stakeholder' was virtually unknown, as was the concept of stakeholder rights and responsibilities. The authors say that these new ideas about stakeholder citizenship remain in some tension with both local conceptions of firms' obligations to communities and with the role that the Russian state sees for itself in forest governance.

Beyond the certified operations, Tysiachniouk and Henry (2015) find that the FSC GGN has fostered new varieties of public engagement and new models of governance in Russia. They describe that, beginning in the late 1990s, FSC encouraged intersectoral dialogue between NGOs and business – dialogue that had not previously existed. They summarize: "FSC certification also injected global norms and values into political discussion at the local level in Russia. Requirements for FSC certification, combined with NGO pressure, have forced companies to adopt new approaches to corporate social responsibility that include closer interaction with local communities. One of the most notable aspects of this engagement in the Russian context was that the role of the government, generally the dominant actor, was absent. Government interests were just one of many

stakeholders at the local level rather than the primary decision-maker, and the government is not formally incorporated into the decision-making institutions of the FSC."

About deforestation and certification impacts

On a global scale, and despite all the satellite data we can generate today, our knowledge of forests, degradation, and deforestation remains incomplete. Analysing the same data, experts of big organizations (FAO and Global Forest Watch) came in 2015 to different conclusions about the reach and consequences of deforestation globally – most likely due to different political agendas, different research questions and approaches, and different interpretations of the terms and concepts of 'degradation' and 'deforestation'.

Evaluation of the impacts of forest certification on avoided deforestation and forest degradation is important but challenging. It is particularly challenging to measure degradation, and it can be difficult to differentiate the impacts of certification from those of other factors that affect forest use and management. Identification of counterfactuals, i.e. comparable, uncertified FM entities, is usually not easy. Under certain conditions, e.g. forestry concessions in large forest areas in the Congo basin, the more intensively managed operations apply for certification, while others with low-intensity interventions do not. Some researchers then find more degradation in managed, certified forests than in unmanaged, uncertified forests, which can be explained by the necessary infrastructure for supporting transport of logs and/or living and work space for the local population. In fact, development of local communities and social programmes in the form of 'social contracts' are characteristic of responsibly managed concessions, especially those certified by FSC (e.g. Cerutti et al., 2011).

Research is often not designed to specify only the direct certification-related effects, but tends to look at the forest development from a broader angle. That can result in studies which include areas that were not certified from the start and/or only partially certified. Impact of activities before certification then complicate conclusions about possible continuation of deforestation during the period when certification determined the activities of the forest managers. While researchers are usually aware of this problem, summaries or media coverage of such studies sometimes give the impression that FSC certification does reduce deforestation and forest degradation, but does not halt it. A recent example is the press release of a study done by Stanford University researchers about the impacts of certification on deforestation in Chile (Nierenberg, 2016). The press release highlights that FSC certification resulted in a 43 per cent reduction of forest loss, more than twice the impact of two other schemes investigated. While this study did show how FSC out-performs other schemes, this conclusion still is problematic, as it creates the impression of **reduced** rather than **halted** deforestation. One needs to read the study itself to find the nuance:

> *Although NSMD [nonstate, market-driven scheme] governance reduced deforestation, all three programs sought to end, rather than reduce, the rate of forest substitution. In this context, anything short of 100% reductions in deforestation within NSMD properties could be interpreted as noncompliance with the governance regimes. However, because our treatment time period included several years before the implementation of the NSMD governance regimes, our analysis would tend to underestimate compliance. In addition, given the voluntary nature of the governance regimes, any significant reductions in forest conversion could be viewed as a policy success.* (Heilmayr and Lambin, 2016)

There is more about the Heilmayr and Lambin (2016) study in the following section.

A number of independent researchers have, however, over time, found that certification does lead to deforestation-free management of forests with no or minimal degradation due to responsible harvesting activities. One example is a study by Price (2010), which shows that FSC certification led to positive changes in land management in South America. The study examined the indirect impacts of forest certification on elements of biodiversity conservation. It confirmed that FSC-certified forests had no significant negative impacts on species diversity or abundance in three certified forests in Bolivia, while in portions of Brazil's Atlantic Forest, certified forests retained more natural areas than other parts of the watersheds. It pointed at biodiversity conservation through measures such as expanded riparian protection, the identification and conservation of high conservation value areas, and protection for a broader range of rare species. "The certified areas resulted in improved conservation management status because under FSC, managers must develop a management plan for the area, monitor and inventory natural areas regularly and use the information derived from monitoring efforts to abate any threats (including fires and poaching)". Some other positive studies are summarized in a special publication on FSC and deforestation (Hontelez, 2015).

⑦⑫ Chile: FSC certification may have increased the rigour of environmental safeguards

Heilmayr and Lambin (2016) used quasi-experimental methods to analyse the impacts of nonstate, market-driven governance on Chilean forests with a focus on their success in reducing natural forest conversion to plantations. The authors analysed three nonstate-driven (NSD) governance regimes – two certification schemes, FSC and the Chilean PEFC partner CERTFOR, and the Joint Solutions Project (JSP), in which Chilean timber corporations committed not to clear natural forests on their properties. The authors conclude that "the multistakeholder FSC certification standard achieved better environmental performance than either the industry-led CERTFOR standard, or NGO-incited JSP moratorium". They note that, in contrast to traditional public conservation policies such as protected areas, these governance regimes were often implemented on properties with high historical rates of deforestation.

> *Although compliance with NSMD governance is often less than that achieved through public conservation efforts such as national parks, NSMD policies tend to do a better job in targeting high-deforestation properties. As a result, NSMD governance may serve as a useful complement to traditional, government policies. Finally, greater collaboration between environmental and industry interests in establishing NSMD standards is likely to improve the environmental performance of the resulting policies.*

Heilmayr and Lambin (2016) also state that FSC certification, as a product of multi-stakeholder negotiations, represented the most collaborative governance regime:

> *Nearly all of the companies certified by FSC in its first 5 years of operation in Chile actively participated in the rule-making process for the development of FSC's Chilean standards. In contrast, the CERTFOR certification scheme sought to demonstrate that industry could self-regulate, without participation from civil society. Given their exclusion from the CERTFOR standard-setting process, several NGOs expressed concern over the certification scheme's environmental rigor. Finally, the JSP was developed through a combination of confrontational and collaborative strategies. Initially instigated through negative publicity by NGOs, industry and NGO interests eventually collaborated to develop the JSP's commonly agreed-upon standards.*

Heilmayr and Lambin's results

indicate that FSC certification was more effective in slowing forest conversion than either the more industry-friendly CERTFOR standard or the JSP moratorium. Furthermore, the CERTFOR certification standard, which arguably had the least engagement between companies and civil society, was the least effective NSMD policy.

They also find that "the existence of FSC certification may have increased the rigor of environmental safeguards in the final CERTFOR standards." This is similar to what was observed in several cases, described for example by several scholars, and described as one of the "spill-over effects" of FSC-triggered processes.

Examples for FSC-conducted marketing research projects and outcomes

For research outcomes from the FSC Business Development Unit see section 'Certificate holders' perspective' (page 33), and FSC (2015c,d).

Promoting responsible forest management politically ⑫

The FSC governance structure and stakeholder engagement

In standard development and FM certification processes, stakeholder engagement at national and international levels is important for the acceptance and the improvement of the FSC system. The FSC stakeholder systems that balance economic, environmental, and social aspects encourage interaction and allow solutions to be developed for FM requirements of standards and policies acceptable for all parties.

FSC membership at global level

FSC is governed by its members. FSC Asociación Civil (FSC AC) is the international membership body. The FSC AC membership nominates and elects the FSC Board of Directors annually. The general assembly is the Council's highest decision-making body. Every three years, members of the social, environmental, and economic chambers (further split into subchambers of global North and global South) come together to discuss the political direction of FSC. These members may be organizational – representing organizations (e.g. environmental NGOs, furniture companies, labour unions) – or individuals, such as researchers. Within one chamber, individual members are collectively allotted a total of 10 per cent of the voting power of the respective chamber. The number of members per chamber does not influence the voting power of the chambers: each chamber has the same weight. Those applying for FSC membership require supporting letters from existing FSC members, and members pay an annual fee. Individual members pay less than organizational members, and members in the economic South less than members from the North. This could explain the relatively high number of individual members in the social South subchamber.

The number of FSC AC members is growing in line with the number of participants (members and observers) in the general assemblies. FSC takes this as an indication that it is able to interest

people at a global level, that members find their financial and time investment is meaningful, and that the system is trusted.

At the end of 2015, FSC AC had 851 members – a few more members than at the end of 2014 (with 842 members). Between 2010 and 2015, the numbers of individual members decreased in all subchambers except in social South, while the number of organizational members increased, except in environmental North. In 2015, the economic chamber had more than half of all FSC members, and the social chamber had the lowest though slightly increasing membership (165 in 2015 cf. 141 in 2010). The ratio of the number of members from Northern countries to Southern countries is also stable, almost the same as in 2012, i.e. 433 members (438 in 2012) are in Northern subchambers and 418 (415 in 2012) are representing Southern countries (Table 6). For the long-term trend, see also the overview given in Table 1 (page 8).

Table 6. FSC AC membership in 2010, 2012, and 2015, by type: chamber and subchamber affiliation, and individual vs organizational membership

Chamber	Type	2010			2012			2015		
		Sub-chamb. North	Sub-chamb. South	Total 2010	Sub-chamb. North	Sub-chamb. South	Total 2012	Sub-chamb. North	Sub-chamb. South	Total 2015
Environ-mental	Individual	32	159	191	41	127	168	27	95	122
	Organiz.	89	30	119	90	28	118	84	32	116
	Subtotal	*121*	*189*	*310*	*131*	*155*	*286*	*111*	*127*	*238*
Economic	Individual	56	95	151	64	94	158	57	80	137
	Organiz.	120	58	178	172	82	254	195	116	311
	Subtotal	*176*	*153*	*329*	*236*	*176*	*412*	*252*	*196*	*448*
Social	Individual	23	68	91	34	67	101	31	63	94
	Organiz.	30	20	50	37	17	54	39	32	71
	Subtotal	*53*	*88*	*141*	*71*	*84*	*155*	*70*	*95*	*165*

	Total	**350**	**430**	**780**	**438**	**415**	**853**	**433**	**418**	**851**

Source: FSC Membership Program database, 2015.

At least two factors might have contributed to the fact that there are more economic than social members: as a result of a consultation in 2012 (revised FSC statutes), some FSC staff (social and environmental) members at FSC International and national offices lost their status as individual FSC members, to comply with FSC regulations to form FSC national offices. Second, it is expected that FSC members with economic activities in the forestry and timber sector are committed to getting their businesses FSC certified were applicable; meanwhile certificate holders see the power they have as FSC members, and they are eligible for the economic chamber.

In 2014, we reported on developments in membership numbers, especially organizational members, in relation to the FSC general assembly (GA). We will conduct a similar analysis close to the time of the 2017 GA to see whether the undulation (the previous peaks of membership application prior to GAs) follows a stable pattern.

Nevertheless, it is important to recall here that each of the chambers has same voting weight, so the actual number of members does not matter in that respect, as the chamber-balanced voting system helps to avoid one chamber overruling other chambers' interests, which simple majority voting could result in. More importantly, FSC generally strives for decision-making based on consensus, so voting should simply be a pragmatic response to time constraints.

FSC network partners and membership at national level

Since the establishment of FSC in 1993, many individuals and organizations have been interested in liaising with FSC in its development and this has resulted in a one of the organization's strongest assets: a group of FSC network partners around the world. Network partners are defined as: "FSC partners on a national level with a cooperation agreement with FSC. This comprises FSC national offices,[1] FSC national representatives[1] and FSC national focal points[1]" (FSC, 2014). The level of interdependence between FSC and its network partners contributes to FSC's global aims because network partners, among others, agree to the national or regional FM standards, which help to position FSC as the benchmark in forest certification. Network partners also have a crucial role in advocating on behalf of FSC, maintaining good relations with local social and environmental groups, and in introducing companies to the FSC system at every level of the supply chain.

As of December 2015, FSC had 30 national offices, 7 national representatives, and 1 national focal point (6 national focal points fewer than 2013). In addition, service provision by regional offices in Africa, Asia Pacific, China, Europe, Latin America, and Russia is coordinated through FSC International. Network procedures have been developed to ensure that all partners adhere to the FSC requirements for network partners.

Not all of these national offices offer membership options at national level (among the exceptions are China and Indonesia), and not all of those with national membership follow the FSC AC chamber system (exceptions include FSC in Canada, Japan, and The Netherlands). As with the

membership of FSC AC (cf. Table 6), the economic chamber has the highest and the social chamber the lowest number of members at national level, but, again like FSC AC, each of the chambers has the same voting power.

FSC AC members and membership at national levels: distinctions and overlap

Both FSC AC and most of the national FSC offices are open for individual and organizational membership. An individual or organizational representative can therefore hold more than one membership: of FSC AC as an 'international' member, and at national level, if there is an FSC network partner with membership options. In a few cases, membership of an FSC national organization (Canada, Mexico, United Kingdom, and United States of America) includes membership of FSC AC. As Figure 4 shows, in late December 2015, FSC AC had a total of 851 members, and 1,465 individuals or organizations were members of one of the 29 FSC network partners with national membership. Because the membership databases at national and internationals level are not aligned, we cannot currently evaluate how many of the FSC AC members are also members at national level, or vice versa.

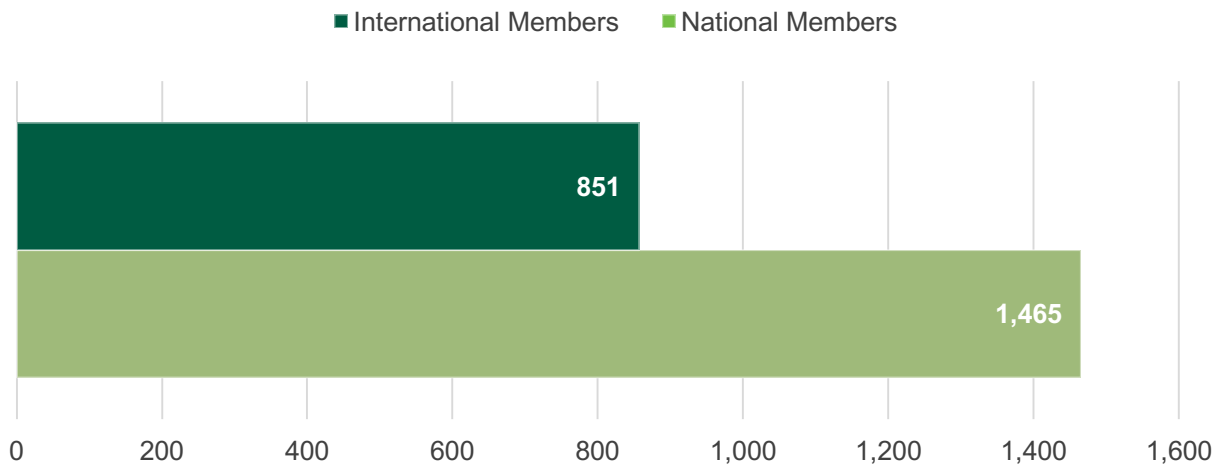

Figure 4. Number of FSC AC members and total membership of 29 FSC network partners

Sources: FSC Membership Program database, FSC Network database, as of December 2015.

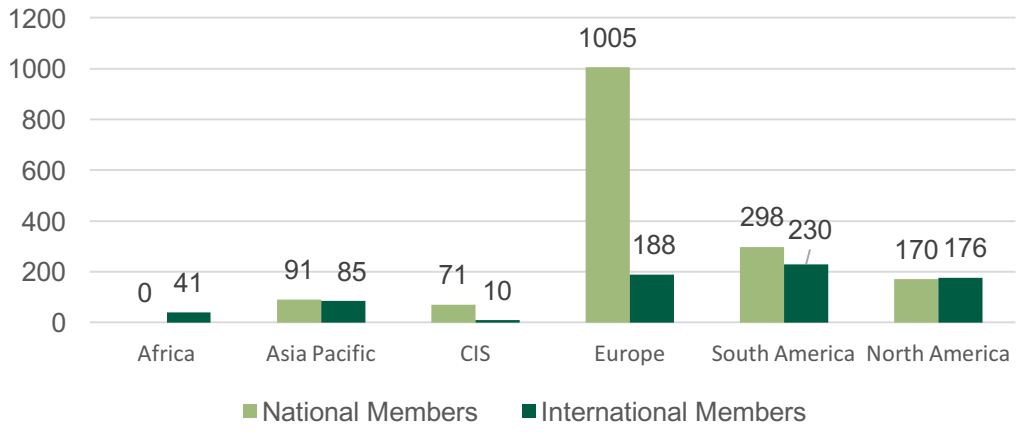

Figure 5. Regional distribution of membership in FSC AC and FSC network partner organizations

Sources: FSC Membership Program database, FSC Network database, as of 31 December 2015.

Figure 5 shows that Europe has the highest numbers of FSC network partner members, which reflects that the majority of the national offices (15 of 29) with membership options are based in Europe. South America has 298 national members, with slightly more members organized in the 11 FSC offices than FSC AC (230 South American members). There are no national membership options in African countries. The small difference for North America reflects the fact that membership in FSC Canada and FSC US includes membership in FSC AC, while there is no national membership in Mexico. Again, for all these figures it is not known how many people hold more than one membership.

Consultation processes ⑫

FSC brings people together to jointly develop solutions

FSC engages with stakeholders on different levels: in FM certification, for standard development and revision, for long-term strategies through GAs, and for many other issues. Consultations enable the public and relevant organizations and members to help develop acceptable strategies and solve problems. The aim is to involve everyone who is affected by an issue to help find the best solution – for FSC this often relates to the multiple interests in forests and their management. FSC has standards and guidelines for such stakeholder engagement processes, in line with, or stronger than, ISEAL Alliance and International Standards Organization (ISO) requirements. Sometimes a consultation will not address a specific problem, but will simply seek feedback and opinions on a topic. In addition, more political documents (statutes, theory of change, global strategies, etc.) are also subject to consultation.

For most consultations, the FSC network, certification bodies, FSC members, and external expert groups are invited to comment. Ongoing consultation processes are promoted on the FSC consultations website (FSC, nd-a) as well as in newsletters, expert mailing lists, and other forums. We elaborated the Principles and Criteria review consultation in the 2013 report. We will evaluate the participation in consultations on the FSC Global Strategy process in a future M&E report.

FSC is working to reduce the number of documents by merging and streamlining them. In 2014, we reported the total number of documents of the FSC normative framework applicable at international level (52 documents, comprising 28 standards, 13 policies, and additional related normative directives, advice notes, and guidance documents). We will revisit and analyse these figures again for 2016. The full catalogue with, for example, information about document ownership, and approval and effective dates, is publicly available on the FSC website (FSC, nd-h).

National forest stewardship standards, and certified area

The development of indicators for FM at national level within the framework of the FSC Principles and Criteria for forest stewardship is, politically, a special case of standard development, although the requirements for working group composition and consultation processes are the same. National FM standards are at the heart of the FSC philosophy of forest stewardship. These processes usually take years of negotiation within country. In addition, many national standards have to go through harmonization processes with neighbouring countries. One of the countries that engaged very early in this process was Sweden, where WWF Sweden convened a group with balanced representation of economic, environmental, and social stakeholders to negotiate the standard in 1993. In 1997, Sweden was the first country to have its national forest stewardship standard approved by FSC.

Researchers say that these national processes facilitate participatory forest policy processes and better policy definition, and that they have strong impacts on the ability of civil society and stakeholders to bring issues to the table around workers' rights, tenure, and health and safety standards in FM (see Karmann and Smith, 2009).

No additional national standards were endorsed in 2015, but – due to the elaboration and phasing in of the international generic indicators – the national standard development groups (SDGs) initiated their work of developing or revising existing national standards, based on the gap analysis they conducted in 2014.

By the end of 2015, there were 26 countries with endorsed national standards and one regional standard covering six countries,[11] with a total certified area of 150.8 Mha held by 818 certified forest operations. These figures represent 80.5 per cent of the total 187.2 Mha FSC-certified forest area, and 60 per cent of the 1,372 certified operations in 80 countries. (In 2014, these were 141.2 Mha by 748 operations, covering 77 per cent of the total certified area, and 57 per cent of the certified operations, with very similar figures in 2013.) For three countries (Central African Republic, Democratic Republic of Congo [both under the regional standard], and Kosovo), national FM standards have been endorsed, but no FM certificate issued by the end of 2015 in these countries.

The list of all countries with their status – endorsed working group and/or endorsed national standards – is available on the FSC web page 'National forest stewardship standards' (FSC, nd-g).

Effects on community relations and forest work: Dispute resolution through FSC

Many conflicts related to FM are addressed and settled during certification processes. Before conflicts are brought to the attention of FSC International, they can be addressed between the complainant and the certificate holder or the certification body, using the dispute-resolution

[11] The Regional Standard for the Congo Basin Countries covers six countries: Cameroon, Central African Republic, Republic of Congo, Democratic Republic of Congo, Gabon, and Equatorial Guinea.

strategies required by FSC. If needed, FSC national representatives can be asked to mediate. Only a few cases related to the approximately 30,000 certificates granted by FSC have not been solved locally or at national level. At the highest level of FSC International, the FSC Dispute Resolution System has contributed to driving positive change for the benefit of marginalized people or the ecosystem in various cases.

Transformation of the forest sector in Portugal ④⑥⑩⑫

For 2014, we reported on the positive impacts related to the end of disassociation with the Danzer Group. In 2015, the FSC Dispute Resolution System Program conducted four case studies via interviews of stakeholders who work in the forest sector in Portugal. The aim was to understand whether and how FSC certification was generating improvements in the forest industry sector in Portugal through its stakeholder engagement processes for consultation and dispute resolution, and whether it was creating an overall positive impact in the country. Some results of these country- and context-specific case studies are summarized below. The study will be presented in more detail in a peer-reviewed Springer reader “Transforming the Sector” in 2016/17.

The case studies reveal that, when FSC was launched in Portugal in 2006, huge efforts were made to be as inclusive as possible. Processes for developing the FSC Portugal FM standards are voluntary, open, and transparent, allowing for active participation of all stakeholders. This inclusive approach has resulted in a high level of engagement in FSC from civil society, companies, and individual stakeholders around the country. At the same time, this approach has minimized conflicts and tensions when implementing FSC certification on the ground. The space created for communication has also benefitted companies themselves, which now use the opportunity to gather information (e.g. investigate river ecosystem impacts and how to reduce negative effects of FM interventions). This drives cooperation with NGOs and research on forest-related topics, which otherwise would not take place. The FSC system has made forestry companies spend resources to develop projects which are not their core business, such as investing in fauna and flora conservation projects. Portuguese pulp and paper companies collaborate with environmental specialists. Some companies contract birdwatchers who identify bird nesting areas, and continually monitor the presence of birds in their plantations and surroundings. In some cases, wolf and other key species are also monitored by specialists. In addition to the monitoring of fauna, it is now normal practice for FSC-certified forest companies in Portugal to have a network of specialists who are consulted when assessing and evaluating other environmental aspects. This was not the case before FSC certification was established. To further reduce negative effects of FM – such as mineral soil opening, erosion, and damage of remaining trees – advanced technologies are identified and applied. Conservation objectives are specified and met by certified forestry companies in Portugal. The case studies also show positive effects on working conditions (training, and salary increases after interventions through the FSC Dispute Resolution System).

Certificate holders' perspective

Forest management recertification

The benefits of being certified are sometimes questioned, and the direct and indirect financial investments needed to comply with FSC requirements and for audit costs are reported to be challenging. Both benefits and challenges depend on many factors, including quality of FM, experience of foresters, size and location of operations, market demand, and market access. It is assumed that those forest managers who decide to invest in recertification at the end of the first term of certification do perceive benefits from being certified, which are at least equal to or higher than the costs of certification.

After a successful main evaluation, and subject to annual audits, in most cases an FM certificate is issued for a five-year period. After this period, the certificate holder can apply for recertification for a further five years.

FSC FM certification was tested before 1993, and the first FM certificate was issued in 1993 in Mexico, while the first CoC certificate was issued in the USA. Since 1996, independent certification bodies have been accredited to use the FSC standards, and the first certified and labelled FSC product (a wooden spatula, in the UK) went on sale that year.

FSC certificates are valid for five years, subject to annual surveillance audits to confirm compliance with the FSC FM standard. If certificate holders decide to apply for recertification, the procedure starts with a main evaluation.

Figure 6 illustrates the duration of the FM certificates from the early days of FSC to 2015. (We reported the 2013 figures with a different graphic design.)

From 1,415 certified FM operations with a valid FSC certificate in 2015, some 45 per cent (641) were certified for the first time, while more than half (774) were certified for at least[12] a second term. In other words, 55 per cent of the certified forest operations got their first FSC certificate more than five years ago (prior to 2011). Of these 774 recertified operations:

- more than half (444) were certified for a second cycle (first certified between 2006 and 2010)
- a third (253) were certified for a third cycle (first certified between 2001 and 2005)
- 70 were certified for a fourth cycle (first certified between 1996 and 2000)
- 7 of those valid at the end of 2015 have been certified since the very early days of FSC (first certificate issued 1995 or earlier).

[12] If the certificate had been terminated for any reason, the same FM entity applied for a new term of certification under a new name, or if the organization changed certification body, the older certificates do not show up in the figures. If the certificate was suspended it is included in the figures.

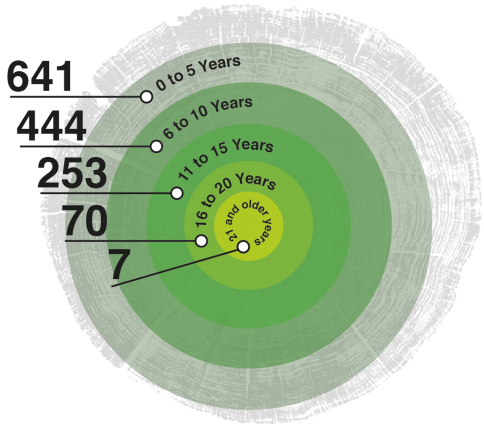

Figure 6. Duration / renewal of forest management certificates up to 2015

Reasons given for termination of forest management certificates

In 2015, some 142 FM certificates were issued the first time, and 98 FM certificates ended. Certification bodies have to report the reasons for termination of certificates. In some cases, the certificate holders give these reasons, in the others the auditors do:

- 14 of the 98 certificate holders became members of group certificates or changed their certification body, so their forest areas are still certified, but under different codes;
- 66 of the 98 decided not to continue with FSC certification, because they do not need the certificate (lack of demand), because the certificate is too expensive ④, or because the business closed;
- 18 of the 98 certificates terminated because the corrective action requests (CARs) were not implemented, or because the FM did not comply with other contractual commitments with the certification body (which might also be a way to 'voluntarily' end the certificate because they do not need the certificate or because they do not want to change their FM practices to comply with the standards)
    - 3 of the 18 simply disappeared from the FSC database via a data cleaning process.

FSC Global Market Survey and *Market Info Pack*

Since 2009, FSC has regularly surveyed all certificate holders (both FM and CoC) to seek their views, including a question on their motivation for applying for certification, and to obtain market information to guide FSC strategic development. The Global Market Survey is carried out every two years. The *Market Info Pack* (FSC, 2015d) also includes information about media coverage determined via media clipping analysis and findings from consumer awareness studies. In combination, the biannually updated *Market Info Pack* and the *Global Market Survey Reports* give a sound overview about FSC certification growth, market share, and indicators of the growth in supply and demand for FSC products, in the context of emerging trends within FSC and across various sectors. The next Global Market Survey will be conducted in the second half of 2016. Some results from the 2014 Global Market Survey are summarized in the 2013 M&E Report (FSC, 2014a).

FSC in the media

The *Market Info Pack 2015* (FSC, 2015d) is based on data collected up to June 2015, and includes a chapter on 'FSC in the media'. Based on analysis of media clippings, it finds that:

- over 25,000 news items mentioned FSC International in January–June 2015
- articles that mention FSC appeared in over 100 countries
- high-readership/circulation sources included *BBC News* online, *Times of India*, *El Economista*, *New York Times*, *The Guardian*, and *The Huffington Post*.

The vast majority (93 per cent) of media articles that referenced FSC were either positive or neutral; only 7 per cent were negative. On social media, as of June 2015, FSC International had 28,269 Facebook followers, and 10,400 followers on Twitter (FSC, 2015d).

Call for research

A large amount of information about FSC's impacts is generated within the FSC system through certification assessments of forests. Each FSC-certified FM operation must have an annual assessment, resulting in a report that describes the actions that the manager or owner has taken to gain, or maintain, their FSC certification. This information for the more than 1,350 (in 2015) certified operations is publicly accessible via the FSC Certificate database (FSC, nd-h) in summary reports.

FSC both promotes and follows independent research and case studies carried out by universities, research institutions, and other organizations. These studies include a wide variety of information types: analyses of certification reports and corrective action requests; ecological field studies; socio-political case studies; and economic analyses of timber markets.

There are a number of specific areas in which FSC would welcome external research inputs and collaboration. Together with the FSC Social Policy Programme, the M&E Program has identified the following priority areas for research:

- Direct and indirect cost-savings experienced by operations that switch from normal to SLIMF (small and low-intensity management forests) certification
- Potential synergies between FSC certification for smallholders and REDD+ (reducing emissions from deforestation and forest degradation)
- Costs and benefits of dual-certification schemes (e.g. FSC and Fairtrade) and their success in the marketplace
- Costs and benefits of contractor certification and its potential impact on the certification system.

We also encourage case studies on:

- Impacts of certification on the safety of forest workers
- Impacts of certification on Indigenous Peoples' land rights
- Impacts of certification on economic diversification (e.g. incorporating other revenue streams from forests, e.g. non-timber forest products)
- Social, financial, environmental, and institutional impacts of certification on SLIMFs and communities.

Figure 2 in the first chapter of this report, and Annex 1 to the 2014 M&E Report (FSC, 2015a) give an overview of FSC's intended impacts and related indicators, and invites researchers to support our research, especially related to our 'aspirational' M&E areas.

The FSC M&E Manager welcomes the submission of any research papers related to FSC certification and processes. Please contact m.karmann@fsc.org.

References

Acharaya, R.P., Bhattarai, B.P., Dahal, N., Kunwar, R.M., Karki, G., and Bhattarai, H.P. (2015) Governance in community forestry in Nepal through forest certification. *International Forestry Review* 17(1). doi: 10.1505/146554815814725077.

Breukink, G., Levin, J., and Mo, K. (2015) *Profitability and Sustainability in Responsible Forestry: Economic Impacts of FSC Certification on Forest Operators*. World Wide Fund for Nature, Gland, Switzerland. (Also available at http://wwf.panda.org/wwf_news/?250330, accessed 17 May 2017).

Cashore, B., Gale, F., Meidinger, E., and Newsom, D. (eds) (2006) *Confronting Sustainability: Forest Certification in Developing and Transitioning Countries*. Yale F&ES Publication Series Report No. 8. Yale School of Forestry & Environmental Studies, Newhaven, CT. (Also available at http://environment.yale.edu/publication-series/documents/downloads/o-u/report_8.pdf, accessed)

Cerutti, P.O., Tacconi, L., Nasi, R., and Lescuyer, G. (2011) Legal vs. certified timber: preliminary impacts of forest certification in Cameroon. *Forest Policy and Economics* 13(3): 184–190.

Cerutti, P.O., Lescuyer, G., Tsanga, R., Kassa, S.N., Mapangou, P.R., Mendoula, E.E., Missamba-Lola, A.P., Nasi, R., Eckebil, P.P.T., and Yembe, R.Y. (2014) *Social Impacts of the Forest Stewardship Council Certification: An Assessment in the Congo basin*. Occasional Paper 103. Center for International Forestry Research, Bogor, Indonesia. (Also available at http://www.cifor.org/publications/pdf_files/OccPapers/OP-103.pdf)

FAO (2010) *Global Forest Resources Assessment 2010. Main Report*. Food and Agriculture Organization of the United Nations, Rome. (Also available at http://www.fao.org/docrep/013/i1757e/i1757e.pdf, accessed 18 May 2017).

FAO (2015a) *FRA [Forest Resources Assessment] 2015: Terms and Definitions*. Forest Resources Assessment Working Paper 180. Food and Agriculture Organization of the United Nations, Rome. (Also available at http://www.fao.org/docrep/017/ap862e/ap862e00.pdf, accessed 17 May 2017).

FAO (2015b) *Global Forest Resources Assessment 2015. Desk reference*. Food and Agriculture Organization of the United Nations, Rome. (Also available at http://www.fao.org/3/a-i4808e.pdf, accessed 17 May 2017).

FAO (2015c) *Global Forest Resources Assessment 2015. How are the World's Forests Changing?* http://www.fao.org/resources/infographics/infographics-details/en/c/325836/ (accessed 17 May 2017).

FAO (2016) *Global Forest Resources Assessment 2015. How are the World's Forests Changing?* Second edition. Food and Agriculture Organization of the United Nations, Rome. (Also available at http://www.fao.org/3/a-i4793e.pdf, accessed 17 May 2017).

FSC (2012) *Report on the FSC Stakeholder Outreach on Principles and Criteria Version 5*. Forest Stewardship Council, [Bonn]. (Also available at http://igi.fsc.org/download.fsc-stakeholder-outreach-survey.62.pdf

FSC (2013) Resolute Forest Products' FSC forest management certificates to be suspended. https://ca.fsc.org/newsroom.239.219.htm

FSC (2014a) *FSC Monitoring & Evaluation Report: Context, Figures, Effects and Impacts. Public Report 2013 (Revised version March 2014)*. Forest Stewardship Council, Bonn. http://ic.fsc.org/download.fsc-context-figures-effects-and-impacts-report-2013.1455.htm

FSC (2014b) *FSC Theory of Change: FSC Intended Impacts and their contribution towards broader sustainability goals 2014-01* (VERSION 3) https://ic.fsc.org/en/what-is-fsc/what-we-do/demonstrating-impact

FSC (2015a) *FSC Monitoring & Evaluation Report: Context, Figures, Effects and Impacts. Public Report 2014*. Forest Stewardship Council, Bonn.

FSC (2015b) *FSC's Theory of Change*. (Factsheet). FSC International, Bonn. https://ic.fsc.org/download.fscs-theory-of-change.a-3976.pdf

FSC (2015c) *Global Market Survey Report 2014*. Forest Stewardship Council Global Development, Bonn. (Also available at https://ic.fsc.org/preview.fsc-global-market-survey-report-2014.a-6181.pdf).

FSC (2015d) *Market Info Pack 2015*. Forest Stewardship Council, Bonn. (Also available at https://ic.fsc.org/preview.2015-fsc-market-info-pack.a-5067.pdf)

FSC (2015e) *FSC Monitoring & Evaluation System Report. Public Report April 2015*. Forest Stewardship Council, Bonn.

FSC (nd-a) Current consultations. https://ic.fsc.org/en/what-is-fsc-certification/consultations

FSC (nd-b) Facts & figures. https://ic.fsc.org/en/facts-figures

FSC (nd-g) National forest stewardship standards. https://ic.fsc.org/en/what-is-fsc-certification/national-standards

FSC (nd-h) Requirements & guidance. https://ic.fsc.org/en/what-is-fsc-certification/requirements-guidance

FSC (nd-j) Smallholder news & updates. https://ic.fsc.org/en/news/smallholders-news-updates

FSC and IUCN (2014) Assessment and interview of FSC certified protected areas. Presentation by FSC ForCES to the FSC General Assembly, September 2014, Sevilla, Spain. (Also available at http://forces.fsc.org/download.assessment-and-interview-of-fsc-certified-protected-areas.29.pdf,

Heilmayr, R., and Lambin, E.F. (2016) Impacts of nonstate, market-driven governance on Chilean forests. *PNAS* 113(11): 2910−2915. doi: 10.1073/pnas.1600394113.

Hodgdon, B.D., and Sandoval, C.H. (2015) *Developing Indigenous Community Forestry Enterprises: Where Tradition Meets the Market. A Case Study of Moskibatana (Muskitia, Honduras)*. Rainforest Alliance and Multilateral Investment Fund. (Also available at http://www.rainforest-alliance.org/sites/default/files/2016-10/Moskibatana.pdf

Hontelez, J. (2015) Deforestation-free forest products from 187 million hectares globally. Forest Stewardship Council, Bonn. http://www.tfa2020.org/wp-content/uploads/2016/05/FSC-forest-certification-addressing-deforestation-December-2015.pdf

ISEAL [Alliance], the Sustainable Food Lab, and WWF (2016) Sustainability Impacts Learning Platform. http://www.sustainabilityimpactslearningplatform.org/

Kalonga, S.K., Kulindwa, K.A., and Mshale, B.I. (2014) Equity in distribution of proceeds from forest products from certified community-based forest management in Kilwa District, Tanzania. *Small-scale Forestry* 14: 73–89. doi: 10.1007/s11842-014-9274-6.

Kalonga, S.K., Midtgaard, F., and Eid, T. (2015) Does forest certification enhance forest structure? Empirical evidence from certified community-based forest management in Kilwa District, Tanzania. *International Forestry Review* 17(2): 182–194. doi: 10.1505/146554815815500570.

Karmann, M., and Smith, A. (eds) (2009) *FSC Reflected in Scientific and Professional Literature. Literature Study on the Outcomes and Impacts of FSC Certification*. FSC Policy Series No. 2009 – P001. Forest Stewardship Council, Bonn. (Also available at https://www.hcvnetwork.org/resources/folder.2006-09-29.6584228415/Impacts_report_-_Karmann_2009.pdf/view

Mo, K., and Khan, H. (2015) *The Impact of Forest Stewardship Council® (FSC) Certification.* WWF Global Forest and Trade Network (GFTN), [Gland, Switzerland]. (Also available at http://d2ouvy59p0dg6k.cloudfront.net/downloads/fsc_research_review.pdf)

Meier-Dörnberg, J., and Karmann, M. (2015) FSC certification: a solution for smallholders and community managed forests. *ETFRN News* 57: 164–171. (Also available at www.etfrn.org/file.php/316/etfrn-57.pdf)

Nierenberg, J. (2016) Cooperation between companies and environmentalists reduces deforestation, Stanford researchers say. *The Stanford Daily* 2 March. http://www.stanforddaily.com/2016/03/02/cooperation-between-companies-and-environmentalists-reduces-deforestation-stanford-researchers-say/

Price, F. (2010) The Nature Conservancy and tropical forest certification. In: Sheil, D., Putz, F.E., and Zagt, R.J. (eds) *Biodiversity Conservation in Certified Forests*. ETFRN News 51, pp. 105–111. Tropenbos International, Wageningen. (Also available at http://www.etfrn.org/publications/biodiversity+conservation+in+certified+forests)

Quaedvlieg, J., García Roca, M., and Ros-Tonen, M.A.F. (2014) Is Amazon nut certification a solution for increased smallholder empowerment in Peruvian Amazonia? *Journal of Rural Studies* 33: 41–55. (Also available at https://www.researchgate.net/publication/259132348_Is_Amazon_nut_certification_a_solution_for_increased_smallholder_empowerment_in_Peruvian_Amazonia)

Ruslandi, Klassen, A., Romero, C., and Putz, F.E. (2014) Forest Stewardship Council certification of natural forest management in Indonesia: Required improvements, costs, incentives, and barriers. In: Katila, G., Galloway, G., de Jong, W., Pacheco, P., and Mery, G. (eds) *Forests Under Pressure: Local Responses to Global Issues*, pp. 255–273. IUFRO World Series, Vol. 32. International Union of Forest Research Organizations, Helsinki. (Also available at http://www.cifor.org/library/5106/forest-stewardship-council-certification-of-natural-forest-management-in-indonesia-required-improvements-costs-incentives-and-barriers/

Tysiachniouk, M., and Henry, l.A. (2015) Managed citizenship: global forest governance and democracy in Russian communities. *International Journal of Sustainable Development & World Ecology* 22(6): 476–489. doi: 10.1080/13504509.2015.1065520.

WWF (2015) WWF Certification Assessment Tool (CAT). http://wwf.panda.org/wwf_news/?246871/WWF-Forest-Certification-Assessment-Tool-CAT

WWF and IIASA (International Institute for Applied Systems Analysis) (2011) *WWF Living Forests Report*. Chapters 1–3. World Wide Fund for Nature, Gland, Switzerland. (Also available at http://wwf.panda.org/about_our_earth/deforestation/forest_publications_news_and_reports/living_forests_report/

Forest Stewardship Council®



September 2014

FSC'S THEORY OF CHANGE

A Theory of Change (ToC) is regarded as the basis from which organizations can identify their intended impacts and therefore as a basis for systematic impact assessments. Developing FSC's ToC helped to articulate FSC's intended impacts, their contribution to wider sustainability goals for the forest sector, and the related pathways and supporting strategies required to achieve FSC's **mission** of "**promoting environmentally appropriate, socially beneficial, and economically viable management of the world's forests**".

Three documents make up FSC's full ToC[1]: the description, the graphic visualization showing the pathways FSC chooses to achieve its impacts, and a table showing FSC's intended impacts and related indicators. FSC's Monitoring and Evaluation (M&E) System Report explains in detail how we measure progress against these impact indicators.

FSC's ToC identifies four mutually reinforcing **pathways** and a set of **supporting strategies** and inspiring concepts**,** to facilitate and increase FSC desired impacts contributing to our mission:

1. From stakeholder conflict to engagement and consensus

The central "**Engagement pathway** – transparency based on stakeholder dialogue and consensus" explains that FSC brings people with conflicting interests in forests together to identify risks, opportunities and solutions related to forest management (FM). Dialogue and consensus among the full range of stakeholders leads to broadly supported, high standards of best practices, enabling the implementation of an innovative concept of responsible FM, triggering relevant improvements in certified forestry operations and the broader marketplace, and changing attitudes toward forestry and forest products.

2. From unknown practices to demonstrated performance

The **Standards pathway** – FSC standard development is governed by strict rules for stakeholder engagement and consultation. Changing current FM practices by reducing negative impacts caused by conventional FM, applying relevant safeguards to avoid such impacts, and requiring the maintenance or enhancement of the social and economic well-being of forest workers and local communities are the most obvious improvements targeted by certification and constituting the overall impact of FSC FM standards.

3. From self-declaration to third party verification

The **Assurance pathway** follows a set of accreditation standards, agreed by multiple stakeholders, and relies on a system of checks and balances by specialized staff, accredited and trained third-party institutions, public stakeholder consultations and transparent reporting. It ensures that FSC delivers credible certification claims.

4. From unspecified sources to responsible origin

The **Market pathway** enables market advantages, because the FSC logo helps consumers to identify and to give preference to products that come from responsibly managed forests. It connects the consensus-based Standards and Assurance pathways (the "push" function of marketing) with the demand side. The FSC supply chain is a tool for companies to demonstrate their commitment to the principles of sustainable FM.

FSC implements a set of **Supporting strategies** and **inspiring concepts** to strengthen the main impact pathways and increase the use of standard-compliant practices, for example in:

- Investing in capacity and competence of FSC's National Offices
- Advocacy at political levels to make FSC more visible, and help decision makers better understand the opportunities that the FSC system offers
- Investing in FSC's own institutional capacity, e.g. in a legal system to better protect the use of the FSC logo, in M&E or in improving Accreditation Services International's capacity to monitor the performance of certification bodies.

From FSC certification to a better understanding of responsible forest management:

Some **concepts** of the FSC system have inspired others: FSC's three chamber governance model and its High Conservation Value (HCV) concept have been adopted by other schemes. **Knock-on effects** of FSC, often based on the fact that FSC triggers and facilitates dialogue beyond the FSC scheme, indirectly contribute to the FSC mission. An example is that the work of FSC auditors functions as "soft law", a form of market-based enforcement, particularly in countries with weak governance structures. Some forest management units with FSC certification can be seen as proof, for the relevant government, that it is indeed feasible to balance economic, ecological and social interests, and to achieve sustainable FM. These lessons are sometimes directly reflected in revised forest legislation of such countries.

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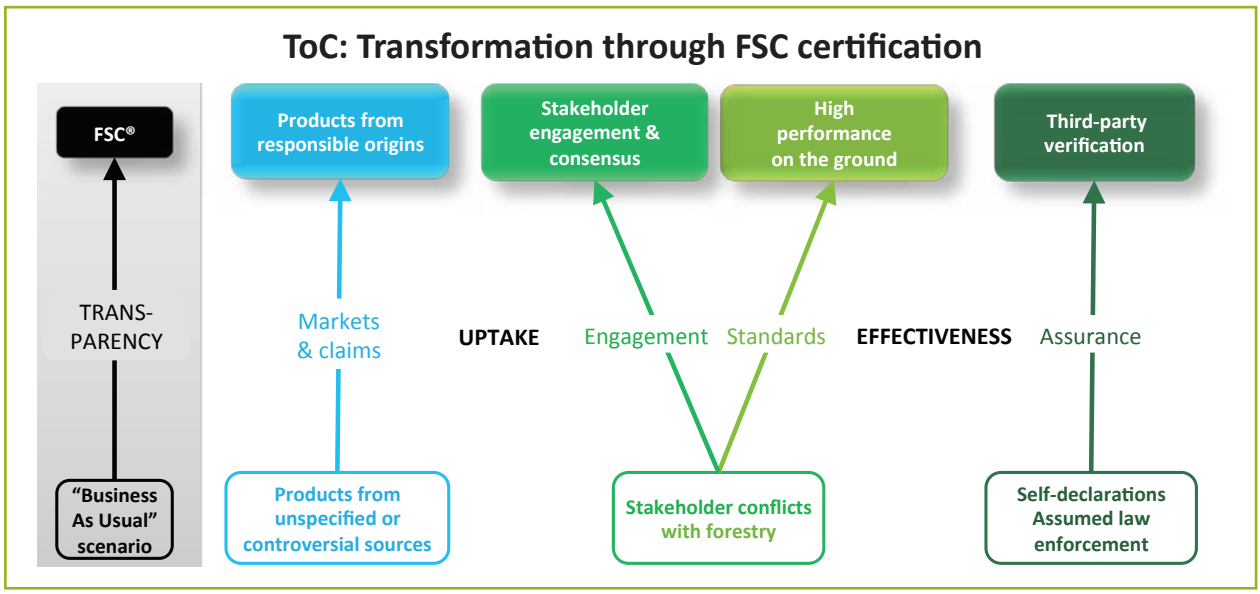

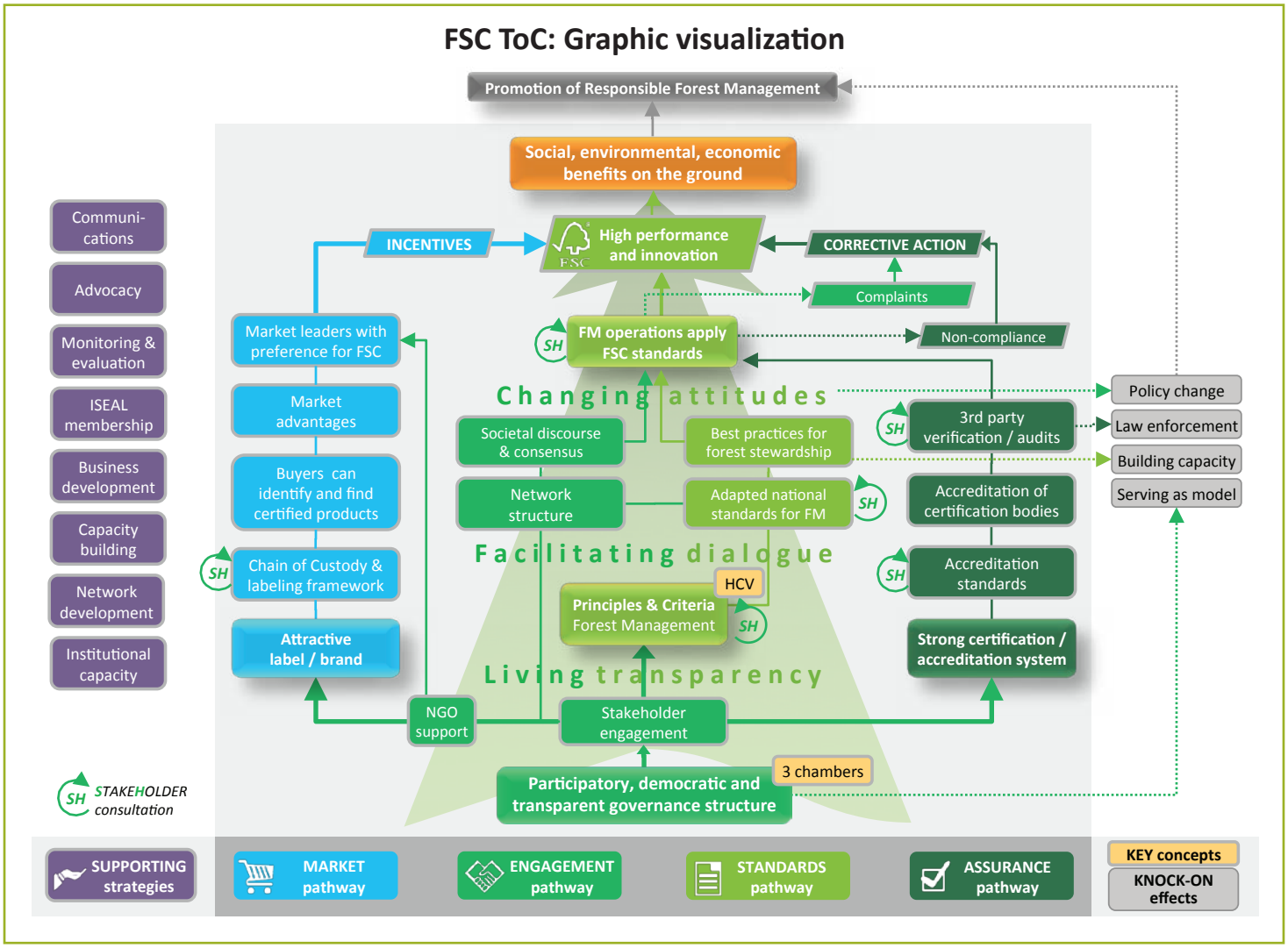

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FSC MONITORING & EVALUATION SYSTEM

August 2014

Gaining insight into the impacts of the FSC scheme is crucial for learning and for improving our work. FSC reports publicly about the status and improvements of each certified forest operation. In addition, FSC invests in a monitoring & evaluation (M&E) program. This M&E program serves two main purposes.

1. Organizational learning: to provide information to better understand the effectiveness of the organization and its strategies, and to identify issues, trends and areas for improvement

➔ FSC senior management and the Board of Directors can use this information for impact-oriented management

➔ FSC staff, FSC members and FSC expert panels (e.g. standard development working groups) can integrate lessons learned from M&E into the development of FSC standards, policies and strategies.

2. Communication of outcomes and impacts: to provide information about FSC-related research findings

➔ FSC offers a platform for researchers and other partners for communicating research findings on the outcomes and impacts of the FSC system, and for networking on impact-related research topics and methodologies

➔ The impact-related stories can incentivize other FSC stakeholders to actively engage in the FSC system and to promote responsible forest management.

To systematically monitor and evaluate 'changes' triggered by FSC, the M&E program established an M&E system. With this M&E system FSC aims to continuously capture the most important changes, i.e. developments of the management of the certified forests and of conditions for supply chain actors. In compliance with the requirements of the ISEAL 'Impacts Code',[1] the full M&E System Report spells out in detail the scope of the FSC M&E framework – for example, which indicators will be used to measure the change and improvements in forest management facilitated by FSC, and who in the FSC systems collects which type of data. Indicators are derived from FSC's M&E framework: FSC's Theory of Change, Intended Impacts and related indicators.

Many actors contribute information for the evaluation of FSC's impacts. Public forest management certification reports are full of relevant information, and various FSC units, national offices and independent researchers (among others) collect pertinent information for impact evaluations. The M&E program in FSC's quality assurance unit compiles and evaluates the information for regular reporting. FSC stakeholders have been and will be consulted in the process of building and using the M&E system.[2]

The other side of this document gives examples from the FSC M&E System Indicators with parameters, frequency of reporting and sources of data, related to FSC's intended impacts. Some reporting can start with the introduction of an aligned, electronic reporting format for forest management certificates. For the full version please see the M&E System Report. FSC will report the first evaluation results in the second quarter of 2015.

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FSC M&E System Indicators – Examples from the M&E System Report of intended impacts, parameters for evaluation, and frequency of reporting

PROMOTION OF RESPONSIBLE FOREST MANAGEMENT: HIGH PERFORMANCE AND INNOVATION – SOCIAL, ECONOMIC AND ENVIRONMENTAL BENEFITS ON THE GROUND			
ECONOMIC	**SOCIAL**	**ENVIRONMENTAL**	**GENERAL**
1. Forest management (FM) operations gain market advantages through certification. **1a.** Number (no.) and area of certified operations is growing in all climate zones and regions, for natural and plantation forests, for all ownership structures and sizes of operations. No. of re-certified operations increases. ➔ **Data, frequency and sample:** No. and area of certified and re-certified operations. Trends from previous years compared to current. For all FM certificates, annual reports.	**4. FM operations have good and fair relations with indigenous and other local communities, and maintain or enhance fair access to resources and economic benefits.** **4c.** Aspirational: No. and quality of additional social services delivered by FSC-certified management. Access to forest resources and mechanisms for sharing benefits are perceived locally to be fair. ➔ E.g. No. and area of certified operations with solved CARs related to legal issues. Reports on case studies.	**7. Minimized degradation of natural forests, no conversion of forests to other land use in certified areas.** **7a.** Area of certified FM operations managing natural forests increasing. ➔ Minimized degradation of forests, no conversion of natural forests to plantations and other land uses: Area of natural forests in certified natural, plantation and mixed forests operations increases. ➔ Aspirational: Sample sites show evidence that after five years defined priority areas are not significantly degraded.	**10. FM operations develop strategies to diversify their portfolio of forest products, and manage a broad portfolio to increase environmental and economic resilience.** **10a.** Aspirational: Portfolio of products incl. lesser known timber species, non-timber forest products and ESS offered as certified is maintained or growing. ➔ No. of such products offered per certified operation. Trends of product range over time per region and operation type. Annual reports.
2. Harvesting activities are based on the principle of sustained yields: there is a balance of growth and yields of specific species. **2a.** Aspirational[3]: The actual harvest of each species does not exceed allowable harvesting rates over defined timeframes. ➔ Relations between annual allowable and actual harvest rates; for selected sites with counterfactuals.	**5. Forest-dependent, forest-managing certified communities improve their livelihoods as well as their forest management and marketing skills.** **5b.** Aspirational: No. of people obtaining an income through FSC is increasing. ➔ Regular interviews of members of the smallholder support and of the modular approach (MAP) programs.	**8. FM operations maintain or enhance biodiversity. High conservation values (HCV) of forests are identified with stakeholder input and maintained or enhanced through appropriate management.** **8b.** Area of HCV classes, set asides, representative samples compared to entire certified area is maintained or growing. ➔ Annual reports about such areas.	**11. Legal compliance by FM operations and exclusion of illegal activities within the forest management units.** **11c.** No. and quality of CARs issued and implemented in relation to criteria addressing legal compliance, illegal activities. ➔ E.g. Analysis of CARs related to human rights, protected areas, rare species within and in relation to the certified operation. Annual reports.
3. FM operations gain increased competence, e.g. in planning, impact assessment & evaluation, silviculture, health & safety, marketing. **3c.** E.g. Corrective action request (CAR) analyses over economic, social, environmental criteria show lessons learned. ➔ For all FM certificate holders annually.	**6. FM operations improve workers' living and working conditions, especially with respect to occupational health and safety.** **6a.** Aspirational: No. of male / female forest workers (incl. contractors) trained in safe working techniques increases. ➔ For all MAP candidates, qualitative case studies for some large-scale operations.	**9. FM operations identify and maintain the forests' manifold ecosystem services from forest soil, water, biodiversity.** **9b.** Aspirational: Areas certified as managed for ecosystem service (ESS) provision are maintained or increasing. ➔ E.g. No. and areas of forests offering certified ESS. Trends, annually.	**12. FSC brings together diverse groups of people to craft policy; with local and international consistency; empower marginalized stakeholder groups.** **12c.** E.g. No. of FSC members per chamber and level of FSC awareness growing. ➔ No. and structure of membership; statistics about prompted recognition of "FSC," users of FSC websites. Annual reporting.

1 ISEAL Alliance's Code of Good Practice for Assessing the Impacts of Social and Environmental Standards.
2 Stakeholder engagement in the process of developing FSC's "Theory of Change" (in 2013) and identifying intended and unintended effects of FSC (at the FSC General Assembly in 2014).
3 Indicators we are aiming toward, but are not yet available.