

Project Report

# Forest Certification for Ecosystem Services

## Business Strategies for the Forest Stewardship Council to Expand Its Scope to Ecosystem Services Markets

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Center for International Forestry Research  
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Project Reports

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Project Reports

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CIFOR advances human well-being, environmental conservation and equity by conducting research to help shape policies and practices that affect forests in developing countries. CIFOR is a member of the CGIAR Consortium. Our headquarters are in Bogor, Indonesia, with offices in Asia, Africa and South America.

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# Abbreviations

<b>CCBA</b>	Climate, Community & Biodiversity Alliance
<b>CCBS</b>	Climate, Community & Biodiversity Standards
<b>CDM</b>	Clean Development Mechanism
<b>CI</b>	Conservation International
<b>DOE</b>	Designated Operational Entities
<b>EPA</b>	Environmental Protection Agency
<b>ES</b>	Ecosystem services
<b>FSC</b>	Forest Stewardship Council
<b>GEF-UNEP</b>	Global Environment Facility- United Nations Environment Programme
<b>GS</b>	Gold Standard
<b>GS TAC</b>	Gold Standard Technical Advisory Committee
<b>IPBES</b>	Intergovernmental Platform on Biodiversity and Ecosystem Services
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>JI</b>	Joint Implementation
<b>MA</b>	Millennium Ecosystem Assessment
<b>PES</b>	Payment for ecosystem services
<b>RGGI</b>	Regional Greenhouse Gage Initiative
<b>TIES</b>	International Ecotourism Society
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VCS</b>	Verified Carbon Standard
<b>VER</b>	Voluntary emission reduction

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# Summary

Using business value models, three potential business strategies are identified for the Forest Stewardship Council (FSC) to expand its scope from timber products to intangible ecosystem services (ES), such as carbon storage, watershed protection, and biodiversity conservation services. These business strategies include: (1) developing a new FSC system that quantifies intangible ES, (2) incorporating ES quantification systems from other ES certification schemes, and (3) utilizing the current FSC system as a *status quo* strategy. *The first strategy* would reduce financial and administrative certification costs to ES sellers because they do not need an additional certification that quantifies ES. Of the three strategies, however, the first strategy would require the highest development cost to the FSC due to a new system development. *The second strategy* would reduce certification costs to ES sellers by aggregating elements of different systems, meanwhile incorporating available quantification systems would cost less to the FSC than developing a new one. On the other hand, the FSC would be less independent. *The third strategy* would require low system development costs to the FSC. However, ES sellers would face high certification costs because, in addition to the FSC certification, they would need another ES-quantifying certification to trade ES credits in the markets.

# 1. Introduction

Forest certification is a market-based policy instrument (Rametsteiner and Simula, 2003). Consequently, it requires business strategies in order to change its business scope like any other businesses in the market. This report<sup>1</sup> analyzes potential business strategies for the Forest Stewardship Council (FSC) to expand its scope from timber products to intangible services of ecosystems such as: carbon storage, watershed protection, and biodiversity protection services. These business strategies could vary. Among them, this report focuses on strategies to generate “business values” from intangible ecosystem services (ES) markets. The business values of ES certification are comprised of its benefits to ES buyers (e.g., carbon credit buyers), as well as to ES sellers (e.g., carbon credit sellers). If certification were to benefit buyers of carbon credits, for example, demand for certified credits would increase. It would also enable credit sellers to benefit from certification through increased credit sales or prices.

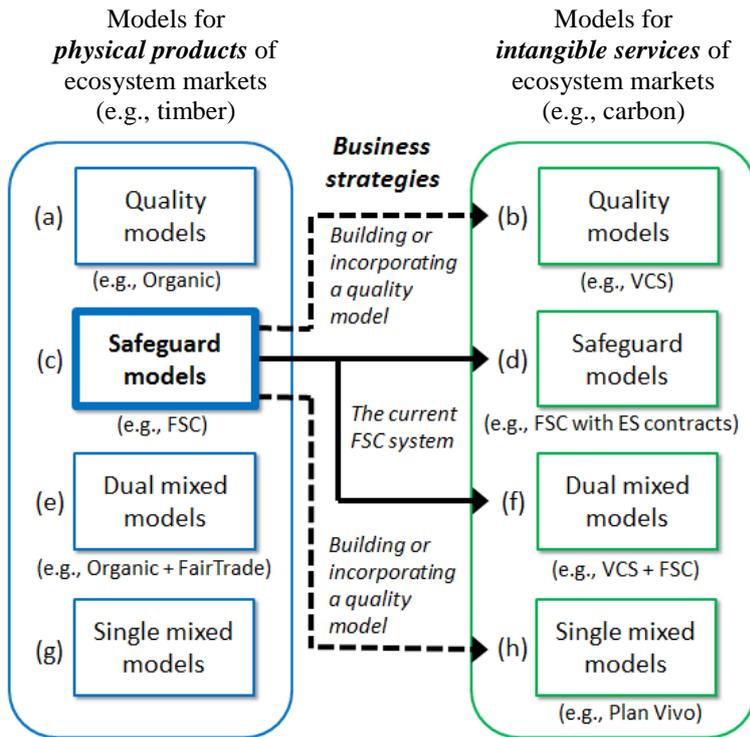
In this report, the business values of certification in intangible ecosystem services markets are examined by considering various business value models. These models provide three potential business strategies for the FSC: (1) developing a new FSC system for ES quantification, (2) incorporating ES quantification systems from other ES certification schemes, and (3) using the current FSC system as a *status quo* strategy. These strategies are also demonstrated by reviewing business strategies of other carbon certification schemes, including the Gold Standard (GS), and the Climate, Community & Biodiversity Standards (CCBS). The analysis of each of these strategies elucidates different opportunities and challenges for the FSC, as well as for ES buyers and sellers.

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<sup>1</sup> This report analyzes the FSC’s business strategies by applying the business value models from “Jaung, W., Putzel, L., Guariguata, M., & Savilaakso, S. 2013. Forest Certification for Ecosystem Services (ForCES): Business Model Analysis. Project report. Bogor: CIFOR, Indonesia”

## 2. Business value models

Certification business value models provide an analytical framework for the Forest Stewardship Council (FSC) to examine business strategies in expanding its scope to ecosystem services (ES) markets. According to the ecosystem services categories of the Millennium Ecosystem Assessment (MA) (MA, 2005) (Fig. 1), ES markets consist of “physical products markets” (e.g., timber and agricultural products) and “intangible services markets” (e.g., carbon and water quality credits). Both physical products and intangible services markets have four categories of business value models: quality model, safeguard model, dual mixed model, and single mixed model (Jaung et al., 2013). *Quality model* discloses quality information on physical products (e.g., the “organic” quality) and quantity information on intangible services (e.g., 100 metric tons of carbon). *Safeguard model* discloses information about how social, environmental, and economic values of forests are protected during production activities (e.g., coffee production in forests) and/or service provision (e.g., a watershed service). It is important to note that these safeguard models for intangible services markets have to take the form of dual mixed models (see below) in order to register intangible services credits in ES registries (e.g., Markit Environmental Registry). This is because most intangible services markets require quality models that quantify the intangible services (e.g., amounts of carbon, water quality, and biodiversity). Exceptional cases may include intangible services that are provisioned by contractual agreements between ES sellers and buyers (e.g., PES projects based on contractual agreements). *Dual mixed models* disclose both the quality and safeguard information via dual certification schemes. Examples are combining organic certification (a quality model) with FairTrade (a safeguard model) in physical products markets, and combining the Voluntary Carbon Standard (VCS) (a quality model) with the Climate, Community & Biodiversity Standards (CCBS) (a safeguard model) in intangible services markets. *Single mixed models* also disclose both quality and safeguard information of physical products and intangible services. Unlike the dual mixed models, however, the single mixed models are based on a single certification scheme.



**Figure. 1. Certification business value models and business strategies for the FSC**

The current FSC system is “a safeguard model for physical products markets (c),” whose main scope is the timber market (Fig. 1). The FSC would be able to target intangible services markets either by building or incorporating a new quality model for the FSC (models *b* or *h*), or by utilizing the current FSC system (models *d* or *f*). These four models illustrate potential business strategies for the FSC, and are the scope of this report. Examples of these models mainly come from the forest carbon markets because of the lack of comprehensive examples from other intangible services markets.

# 3. Business strategies

## 3.1 Three potential strategies for the FSC

In order to target intangible services of ecosystem markets, such as carbon storage and biodiversity conservation services, the FSC needs a quality model as a prerequisite of credit registries of intangible services markets. The FSC can acquire a quality model by: (1) building a new quality model, (2) incorporating other available quality models, or (3) utilizing the current FSC system (or a *status quo* strategy).

*The first business strategy* is to build a new FSC system that quantifies intangible ecosystem services. This strategy would allow the FSC to develop a “quality model (*b*)” or a “single mixed model (*h*)” (Fig. 1). Because the FSC is a safeguard model, it needs to develop the components of quality models for markets of intangible ecosystem services. By analyzing other certification schemes that quantify ES (EPA, 2004; Kollmuss et al., 2010), these components would like include: “a technical committee” which develops quantification methodologies (as a top-bottom approach) and approves of submitted methodologies from project developers (as a bottom-up approach); “a credit registry” that serializes and tracks ES credits; “an additionality protocol” that assures project impacts on forest ES; and “a quantification protocol” that defines methodologies for developing baseline and projected-line scenarios (Fig. 2).

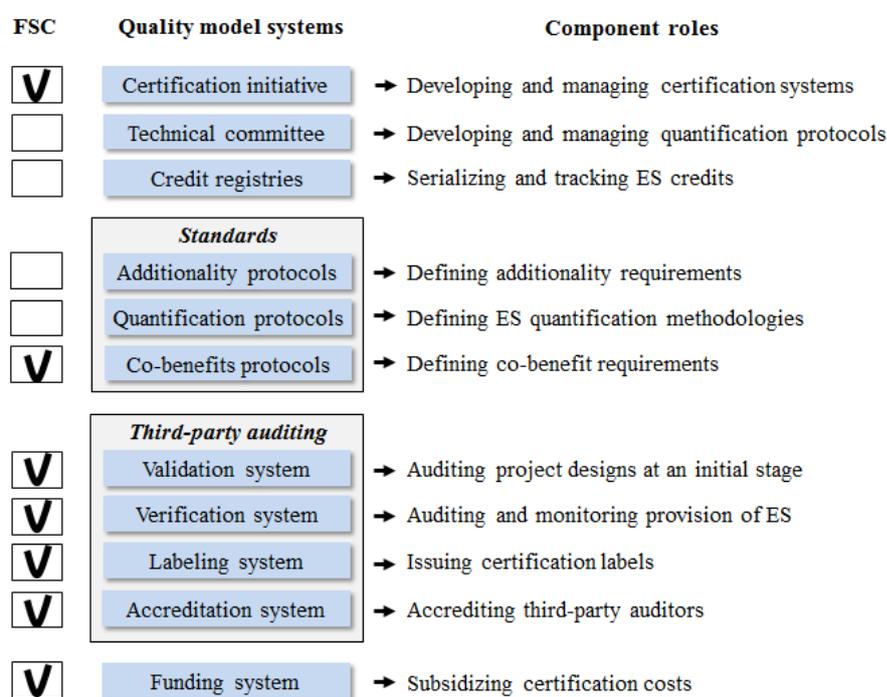


Figure. 2. Quality model systems of certification

The first strategy comes with both pros and cons. Its advantage is that the FSC will be able to reduce financial and administrative burdens of FSC certificate holders who plan to participate in intangible services markets. Once the FSC develops a quality model, the FSC certificate holders would not need to join an additional certification scheme to begin quantifying intangible services of ecosystems for certification. Also this option allows the FSC to operate as an independent scheme in ecosystem services markets because FSC will have its own quantification system. On the other hand, the disadvantage is that building a quality model requires enormous costs and times to the FSC, as the development of quality models for forest carbon markets demonstrate. The development of a quality model would need not only to achieve a consensus of various stakeholder groups, but also require the development of technical and scientific methodologies to quantify intangible services of ecosystems.

*The second business strategy* is to incorporate systems developed for other quality models. Examples of these models in the carbon market include the Clean Development Mechanism (CDM) and the Verified Carbon Standard (VCS). Depending on how much of these models are incorporated, this strategy would end up following either the models *b* or *h* using FSC's own quality model, or models *d* or *f* which collaborates with other quality models (Fig. 1). Incorporation of these systems can take place at various degrees, including: incorporating quantification protocols only (e.g., ISO 14064), incorporating quantification methodologies of other available quality models (e.g., methodologies of the CDM or the VCS), incorporating third-party auditing systems of other quality models (e.g., Designated Operational Entities accredited by the CDM), or incorporating other quality models in their entirety (e.g., approving of the CDM or the VCS, as the FSC system) (Fig. 1). Of course, this business strategy needs to consider whether quality models contain their own safeguard models or not. If these quality models already include safeguard models, the business value of the FSC certification would be redundant to forest owners. In the forest carbon markets, for instance, some quality models have already built safeguard models in their systems as co-benefit requirements (Table 1).

The second strategy also has pros and cons. Its advantage would be less cost to the FSC compared to developing a new quality model (or the first strategy). Also if the quality models selected and incorporated by FSC are based on sufficiently robust quantification systems, the FSC would save the efforts otherwise required to establish these systems and associated reputations. Despite these advantages, this strategy would still require certain degrees of times and resources for the FSC to incorporate systems of other models, owing to potential adjustments of the current FSC system.

*The third business strategy* is to use the current FSC system. This strategy lets forest owners to apply their own quality models in certification markets, in addition to FSC certification. It is a *status quo* strategy for the FSC and is connected with the "safeguard models (*d*)" or the "dual mixed models (*f*)" (Fig. 1). With this strategy, (1) FSC needs to demonstrate that the FSC system can benefit forest owners when they are trading intangible services in ecosystem markets, and (2) FSC also needs to reduce the financial burden on these forest owners associated with obtaining dual certification (e.g., a quality model + FSC).

**Table 1. Co-benefit requirements of forest carbon markets**

	<b>Quality models in the forest carbon markets</b>	<b>Market types</b>	<b>Co-benefit requirements</b>
1	The Clean Development Mechanism (CDM)	Mandatory	Required, depending on policies of project-hosting countries (or Designated National Authorities)
2	The Regional Greenhouse Gage Initiative (RGGI)	Mandatory	Not required
3	Canada' Offset System for Greenhouse Gases	Mandatory	Not required, unless environmental regulations require co-benefits
4	Alberta-Based Offset Credit System	Mandatory	Not required
5	Climate Action Reserve	Voluntary	Required
6	Voluntary Carbon Standard	Voluntary	Required in a limited way via ISO 14064-2 requirements
7	VER+	Voluntary	Required by either following national legislation or VER+ requirements
8	American Carbon Registry	Voluntary	Not required
9	Plan Vivo	Voluntary	Required

(Data source: Kollmuss et al., 2010)

First, considering the FSC's current specialization, the business value of the FSC is verifying "co-benefits" of ecosystem services (ES) projects. Therefore, the FSC should be able to demonstrate how it can support safeguarding social, economic, and environmental values of forest ecosystems (or co-benefits) in the context of ES markets, and to demonstrate its strengths compared to other safeguard models in intangible services markets.

Second, reducing the financial burden of forest owners would be possible if the FSC scheme can generate sufficient price premiums for certified ES, and/or subsidize the FSC costs via funding programs. If the FSC costs outweigh its benefits, it will be highly challenging for the FSC to attract forest ecosystem owners, whose main interests remain to obtain economic benefits from certification.

This *status quo* strategy also has its pros and cons. Its advantage is that since it is a *status quo* strategy, no significant system adjustment would be required for the FSC, such as collaborating with or incorporating another certification system. However, its disadvantage is that the FSC would have limited options to reduce administrative and financial costs to forest owners without adjusting its own system. Consequently this strategy would increase the financial burden on forest owners obtaining both the FSC certification and another quality model.

## 3.2 Lessons from the Gold Standard

The Gold Standard (GS) provides lessons to the FSC about incorporating and creating a quality model, corresponding to the first and second business strategies for the FSC (Section 3.1). The GS is a standard for renewable energy and energy efficiency projects (Kollmuss et al., 2010), and demonstrates two strategies to generate quality models: (1) incorporating the systems of the Clean Development Mechanism (CDM), and (2) establishing the GS's technical committee, also known as the Gold Standard Technical Advisory Committee (GS TAC), and the Gold Standard Registry.

First, the GS has successfully incorporated parts of the CDM. Based on this strategy, the GS has built a dual mixed model, where the CDM quantifies carbon, and the GS safeguards co-benefits of carbon projects (GS, 2012b). Therefore, the GS can be considered as an "add-on" certification scheme to the CDM, resulting in an "add-on" dual mixed model<sup>2</sup>. The CDM systems, incorporated by the GS, include "the CDM methodologies," governed by the CDM Methodologies Panel, and "the CDM verification system," called Designated Operational Entities (DOE). The GS has realized four benefits from this adaptation. The first benefit is that the GS has been able to utilize the CDM methodologies and verification system, officially recognized by the United Nations Framework Convention on Climate Change (UNFCCC), without putting in the enormous effort of building them. The second benefit is that carbon project developers can reduce the administrative and financial costs of obtaining both CDM and GS credentials, due to the GS's integrated system to the CDM. The third benefit is that the CDM has allowed the GS to successfully target the international carbon market, since the CDM has been the major international carbon market, officially enforced by the Kyoto Protocol. In 2008, for example, it represented about 90% of the market share of the entire carbon market, whereas the Joint Implementation (JI) represented only 5%, and the voluntary carbon market took 5% of the market share (Kollmuss et al., 2010). The fourth benefit is that, as a voluntary certification scheme, the GS has been able to target the compliance carbon market, or the CDM.

Second, the GS has been operating its own quality model for voluntary carbon projects by establishing the Technical Advisory Committee (GS TAC) and the Gold Standard Registry. The GS TAC evaluates and approves new methodologies for voluntary carbon projects, and the Gold Standard Registry tracks carbon credits, or Voluntary Emission Reduction (VER), issued by the GS (GS, 2012b). These systems enable the GS to be independent from other voluntary quality models, such as Verified Carbon Standard (VCS). Consequently, voluntary carbon project developers can avoid obtaining another certification model, in addition to the GS, and can reduce additional certification costs. These two systems are key certification systems to establish a quality model, and safeguard models are capable to create their own quality models with these systems, since safeguard models already built other certification systems, such as a system for third-party auditing (Fig. 1). Establishing certification systems for ES quantification methodologies and ES registries is by no means an easy task. However, it is simpler than establishing the entire certification systems of a quality model, and it illustrates what are key required systems to obtain for safeguard models to expand its scope to quality models.

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<sup>2</sup> The details of the add-on dual mixed model are described by Jaung et al. (2013).

### 3.3 Lessons from the CCB Standards

The Climate, Community & Biodiversity Standards (CCBS) provide lessons to the FSC about incorporating the entire systems of other quality models, or the second business strategy for the FSC (Section 3.1). Like the FSC, the CCBS are a safeguard model, focusing on co-benefits of carbon projects. Even though the CCBS are a project design standard, they still require field audits by third-party auditors (CCBA, 2010). Although they are a safeguard model lacking a carbon quantification system, in 2012 the CCBS obtained about 16 % of the voluntary carbon standard markets (Peters-Stanley and Yin, 2013). This achievement was possible by their incorporation of the dominant quality models: the Verified Carbon Standard (VCS) and the Clean Development Mechanism (CDM).

The CCBS have incorporated the VCS and the CDM, and have increased their compatibility with these quality models. Consequently, about 50% and 25% of the CCBS holders are willing to obtain the VCS and the CDM respectively (Kollmuss et al., 2010). This incorporation is possible for the CCBS not only by allowing carbon project developers to use project design templates of the CDM and the VCS, but also by incorporating auditing systems of the CDM and the VCS (CCBA, 2010). For this reason, carbon project developers are able to reduce administrative and financial burdens to obtain dual certification, such as the CDM plus the CCBS, or the VCS plus the CCBS, since this dual certification procedure allows project developers to use identical project design templates and auditors. Time efficiency is another advantage from this incorporation (CCBA, 2010). In turn, the CCBS can be considered as an “add-on” scheme which can be achieved by extra efforts of the carbon developers when they plan to obtain the VCS or the CDM. This relationship between a safeguard model (e.g., the CCBS) and a quality model (e.g., the VCS and the CDM) is defined as an “add-on” dual mixed model (Jaung et al., 2013). Furthermore, the CDM and the VCS are the most dominant standards in compliance and voluntary carbon markets respectively (Kollmuss et al., 2010; Peters-Stanley and Yin, 2013), having provided opportunities for the CCBS to obtain the recognizable market share in the forest carbon markets.

### 3.4 Lessons from the current carbon market

A review of the current carbon markets offers lessons to the FSC about taking the *status quo* strategy, or the third business strategy for the FSC (Section 3.1). In order to target intangible services markets, the FSC needs rebrand itself for ecosystem services (ES) markets. Most of the FSC certificate holders participating in the carbon markets are forest companies who run timber production businesses. In addition to the FSC, they acquired the Verified Carbon Standard (VCS) or the CarbonFix standard. It implies that the FSC is still strongly recognized as “timber” certification rather than certification for “ES,” even though FSC principles and criteria focus on forest safeguards potentially applicable to ES projects for their forest safeguards. Thus, the FSC needs rebrand to signal to ES sellers and buyers that the FSC can benefit them in intangible services markets. This branding may be possible by intensive marketing and campaign, but the more effective strategy would be to demonstrate the FSC’s net-positive benefits in intangible services markets via real ES project cases. Since the FSC is a safeguard model, in addition to the FSC, these pilot projects need to obtain additional other quality models (e.g., VCS) in order to participate in ES markets such as offset programs and PES. In this way, these pilot projects would be able to demonstrate potential benefits of the FSC in ES markets. Therefore, a successful pilot case should be able to demonstrate that (1) the FSC is compatible with other quality models or a PES scheme; (2) the benefits of the FSC outweigh its costs in ES markets, considering both monetary and non-monetary dimensions; and (3) there are possible ways to make the FSC affordable to ES owners, whose business scales are expected to be smaller than timber companies. Inversely, these factors illustrate challenges for the current FSC scheme to target ES markets.

### 3.5 Brief review of ecosystem services markets

In order for the FSC to target intangible services markets, various market dimensions should be considered. These markets are not static. Rather, they rapidly evolve and vary from region to region. To briefly review the current conditions of these dynamic markets at international level, four criteria were employed: (1) market size, (2) global market infrastructures, (3) potential collaborators with the FSC (or available quality models), and (4) potential competitors to the FSC (or available safeguard models) (Table 2). As of 2013, the main intangible services markets based on “forest ecosystems” are markets for carbon, watershed, and biodiversity services. Although ecotourism is not a pure intangible service market, it is still included in this review. These four selected markets also include non-forest sectors, which are beyond a business target of the FSC (e.g., energy or margin sectors), so that the review focuses on “forest-based” sectors.

**Table 2. Market comparisons of forest-based intangible services markets**

	<b>Intangible services markets</b>	<b>Market sizes</b>	<b>Global market infrastructures</b>	<b>Quality models (collaborators)</b>	<b>Safeguard models (competitors)</b>
1	Forest carbon markets	Small	Available	Several	Some
2	Forest watershed markets	Small	Not available	A few	Limited
3	Forest-based biodiversity markets	Small	Not available	A few	Limited
4	Forest-based ecotourism	Large	Available	None	Enormous

First, *the market sizes* of these intangible services markets imply theoretical maximum market sizes for the FSC. The actual markets would be determined by many other factors, such as market demands from each market. Although theoretical, these maximum market sizes show the sizes of potential pies for the FSC. Estimating precise market sizes for these markets is challenging due to the lack of data. Therefore, these market sizes are roughly compared. Among the four markets, forest-based ecotourism has the largest market size. Even though market data for forest-based ecotourism are incomplete, ecotourism data corroborate this fact. Before the year of 2000, the market size was roughly estimated to be 7% of international travel expenditure (TIES, 2000), and even in developing countries, tourism earns more than \$2.4 billion each day, capturing 10% of the global economy (CI, 2008). Afforestation/reforestation watershed markets had a market size of about \$1.7 billion, which were transacted in 2011 (Watershed Connect, 2013). The forest carbon markets had a market size of about \$ 237 million in 2011 (Peters-Stanley et al., 2012). Market data for forest-based biodiversity markets are not available. In 2011, however, the entire biodiversity market was between \$2.4 to 4.0 billion, which also included biodiversity projects based in aquatic areas and non-forest lands (e.g., wetlands) (Madsen et al., 2011).

Second, *global market infrastructures* of intangible services markets are vital for the FSC to scale up its certification to a global level. These infrastructures include international laws that secure international property rights of these services, market registries, and business operators. The lack of these infrastructures will greatly challenge the FSC to scale up its certification scheme to a global level. Of the four markets, the forest carbon markets and forest-based ecotourism have global market infrastructures. The forest carbon markets are supported by an international law (the Kyoto

Protocol) and several voluntary carbon registers (e.g., VCS). The forest-based ecotourism obtains international markets, operated by various international travel agents all over the world. However, the forest watershed markets and forest-based conservation banking do not yet have international laws that support global market transactions. Their international markets only exist as bilateral contracts or agreements (Madsen et al., 2011; Bennett et al., 2013), even though the international community constantly attempts to build global market infrastructures of these markets. An example includes the attempt to establish the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), which is an organization equivalent to Intergovernmental Panel on Climate Change (IPCC) (Perrings et al., 2011).

Third, *quality models* are certification schemes that provide opportunities for the FSC to collaborate in intangible services markets. In other words, if a few quality models exist, the FSC has fewer opportunities to collaborate with other schemes, and the FSC might need to develop a new quality model in order to enter intangible services markets. Of the four markets, only the forest carbon markets have a sufficient number of quality models, including the CDM and the VCS. The watershed and biodiversity markets have limited numbers of quality models. These quality models are mainly regulatory tradable permit programs, such as the water quality trading program and conservation banking in the US (EPA, 2004; Mead, 2008). Ecotourism has no quality models that quantify the provision of scenic beauty, biodiversity experience, or cultural experience. However, the academics have researched methodologies to measure scenic beauty (Daniel, 1990).

Fourth, *safeguard models* are certification schemes potentially in a competitive relationship with the FSC, since the FSC is a safeguard model. These models become competitors when their scope of co-benefits overlaps with the FSC's scope that focuses on social, economic, and environmental safeguards of forests. The watershed and biodiversity markets have a limited number of safeguard models, especially in their voluntary markets. The forest carbon markets have some safeguard models, such as the CCBS and Plan Vivo (Table 1). Ecotourism has enormous competitors, having more than 70 similar ecotourism certification schemes (Font et al. 2003), such as International Ecotourism Standard, and EcoCertification in Australia (Bien, 2008).

## 4. Conclusion

This report examines three potential business strategies for the Forest Stewardship Council (FSC) to expand its scope from timber products to intangible ecosystem services (ES) by analyzing certification business values. These strategies are intended to generate different certification business values for intangible ES markets, including quantifying intangible ES, safeguarding forest values, or both. These strategies also have different challenges and opportunities for the FSC, as well as for ES sellers.

These business strategies, however, represent only a part of business models since generating business values is only one element that need to be considered in building business models (Shafer et al., 2005). Building business models for ES certification also needs to analyze other elements. Therefore, future studies on ES certification would need to include analyses of certification characteristics preferred by ES buyers and sellers, certification demands with different ES, and ES market conditions for certification.

## 5. References

- Bennett, G., Carroll, N., & Hamilton, K. (2013). *Charting New Waters: State of Watershed Payments 2012*. Washington D.C.: Forest Trends.
- Bien, A. (2008). *A Simple User's Guide to Certification for Sustainable Tourism and Ecotourism*. Stanford: Center for Responsible Travel.
- [CCBA] The Climate, Community & Biodiversity Alliance. (2010). Rules for the Use of the Climate, Community & Biodiversity Standards. Arlington.
- [CI] Conservation International. (2008). Sustainable Tourism Program Overview. Available at: [http://www.conservation.org/Documents/CI\\_ecotourism\\_program\\_factsheet\\_5-08.pdf](http://www.conservation.org/Documents/CI_ecotourism_program_factsheet_5-08.pdf)
- [EPA] Environmental Protection Agency. (2004). *Water Quality Trading Assessment Handbook: Can Water Quality Trading Advance Your Watershed's Goals?* Washington, DC.
- Daniel, T. C. (1990). Measuring the quality of the natural environment: A psychophysical approach. *American Psychologist*, 45(5), 633-637.
- Font, X., Sanabria, R., & Skinner, E. (2003). Sustainable Tourism and Ecotourism Certification: Raising Standards and Benefits. *Journal of Ecotourism*, 2(3), 213-218.
- [GS] Gold Standard. (2012a). Annex A: Gold Standard Structure and Governance. Available at: [http://www.cdmgoldstandard.org/wp-content/uploads/2012/05/v2.2\\_ANNEX-A.pdf](http://www.cdmgoldstandard.org/wp-content/uploads/2012/05/v2.2_ANNEX-A.pdf)
- [GS] Gold Standard. (2012b). Carbon Offset Handbook. Available at: <http://www.cdmgoldstandard.org/wp-content/uploads/2012/09/Offset-Handbook-lo-res.pdf>
- Jaung, W., Putzel, L., Guariguata, M., & Savilaakso, S. (2013). *Forest Certification for Ecosystem Services (ForCES): Business Model Analysis (Project report 3)*. Bogor: CIFOR.
- Kollmuss, A., Lazarus, M., Lee, C., LeFranc, M., & Polycarp, C. (2010). *Handbook of Carbon Offset Programs: Trading Systems, Funds, Protocols and Standards*. London: Earthscan.
- [MA] The Millennium Ecosystem Assessment. (2005). *Ecosystems and Human Well-being: Synthesis*. Washington, DC.: Island Press.
- Madsen, B., Carroll, N., & Moore Brands, K. (2011). *State of Biodiversity Markets. Offset and Compensation Program Worldwide*. Washington DC: Ecosystem Marketplace.
- Mead, D. L. (2008). History and Theory: The Origin and Evolution of Conservation Banking. In N. Carroll, J. Fox & R. Bayon (Eds.), *Conservation and biodiversity banking: a guide to setting up and running biodiversity credit trading systems* (pp. 9-31). London: Earthscan.
- Perrings, C., Duraiappah, A., Larigauderie, A., & Mooney, H. (2011). The biodiversity and ecosystem services science-policy interface. *Science*, 331(6021), 1139-1140.
- Peters-Stanley, M., Hamilton, K., & Yin, D. (2012). *Leveraging the Landscape: State of the Forest Carbon Markets 2012*. Washington, DC: Ecosystem Marketplace.
- Peters-Stanley, M., & Yin, D. (2013). *Maneuvering the Mosaic: State of the Voluntary Carbon Markets 2013*. Washington, DC and New York: Forest Trends and Bloomberg New Energy Finance.

Rametsteiner, E., & Simula, M. (2003). Forest certification-an instrument to promote sustainable forest management? *Journal of Environmental Management*, 67(1), 87-98.

Shafer, S. M., Smith, H. J., & Linder, J. C. (2005). The power of business models. *Business Horizons*, 48(3), 199-207.

[TIES] The International Ecotourism Society. (2000). Ecotourism Statistical Fact Sheet. Available at: [www.active-tourism.com/factsEcotourism1.pdf](http://www.active-tourism.com/factsEcotourism1.pdf)

Watershed Connect. (2013). Watershed project data were retrieved in December 2013 from <http://www.watershedconnect.com/projects/>



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