Center for International Forestry Research

Medium-Term Plan for 2011-13

MTP

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CIFOR is an institute of the Consultative Group on International Agricultural Research (CGIAR)

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Introduction

Forests comprise a critical resource for the poor. Approximately 30% of the world's land area is covered by forests, which contain about 80% of the Earth's terrestrial biodiversity. Forests serve as a primary source of income for tens of millions of rural poor, and as an important supplementary income source for hundreds of millions more. Perhaps even more importantly, forests provide energy, construction materials, water purification, health benefits, environmental stability and innumerable other means of support to billions. Furthermore, the climate and biodiversity benefits of forests are vital to the welfare of the entire globe and have attributes of "international public goods" (IPGs).

It is imperative that the many important services that forests provide be preserved and enhanced. Crucial among these is carbon sequestration, as the risks posed by climate change are being increasingly recognised by the international community. However, at present there are many threats to the sustenance of critical forest resources, as tropical deforestation progresses at a rapid pace. Pressure from competing land uses and inappropriate institutions drive much of this loss of forest cover. In many areas of the world, control of forest resources is limited to an elite few due to restrictive and exclusive tenure regimes. Even where management modalities and rules may be appropriate, limited institutional capacity often results in unsustainable management and inequitable benefit distribution.

Opportunities for improved products and services to the poor are often missed by existing research and development efforts. While the bulk of tropical forestry research concerns silvicultural methods that are appropriate to large-scale timber plantations, there is persistent underinvestment in appropriate techniques and opportunities for the production of forest products by smallholders. As a result, there is inadequate attention to novel marketing and production methods that can make a difference to the lives of hundreds of millions of forest-dependant people. Moreover, there is a general lack of research-based, appropriate methods for governing the broader spectrum of environmental and social services that forests provide.

CIFOR, as the CGIAR's forest centre, is focused on identifying and exploiting opportunities for forest management that better serves the long-term interests of the poor. It does so by:

1. Identifying improved modalities, procedures, and tools for collective resource appraisal and management;
2. Identifying insights that can better target forestry-sector development interventions; and
3. Identifying and developing opportunities for the poor to derive improved incomes from the production of forest products.

CIFOR targets dissemination of research on these topics towards the main global forestry organizations and processes, other actors and arenas that are likely to have important influences on forests (such as the United Nations Framework Convention on Climate Change [UNFCCC] and regional trade bodies), international media, the international scientific community and the world's leading forestry decision-makers and practitioners, so as to ultimately influence decisions of national governments. We are progressing the further integration and prioritisation of rights-based approaches to our research to meet one of our core aspirations of "... analysing and communicating issues in ways that are reliably inclusive of the perspectives of less powerful stakeholders such as women, forest-dependent communities, and developing countries."

CIFOR's Context

Moving Forward with CIFOR's2008-2018 Strategy

Since the launch of CIFOR's first research strategy in 1996, the state and understanding of the world's forests has changed. To respond to these and other challenges, CIFOR's Board of Trustees (BoT) approved a new Strategy in May 2008 that defines new research directions and the Center's strategic positioning for the next 10 years. The Strategy was developed through extensive consultations with staff, the BoT and CIFOR's partners, including donors, policy makers, researchers, opinion leaders and non-governmental organisations (NGOs), and positions CIFOR for the emerging context of the 21st century.

The 2011-2013 Mid-Term Plan (MTP) is the third embodiment of CIFOR's new Strategy. As such, it includes a Project Portfolio consisting of six Projects, which follow the "Research Domains" presented in the Strategy. By aligning the research domains with MTP "Projects", CIFOR has simplified its internal reporting to management, the BoT and associated external reporting to the CGIAR and donors. CIFOR's BoT also approved an alignment plan that further consolidates the links between the Strategy, the MTP and External Programme and Management Review (EPMR) recommendations.

Regional and Project Offices

A network of research offices that establish regional presence remains a cornerstone in the implementation of CIFOR's global research agenda. Their strategic role remains to inform the nature and direction of CIFOR's global program so that our global research agenda is integrated, coordinated and relevant. Research offices also provide links to strategic partners and are critical in efforts to inform research design and disseminate findings. CIFOR currently has two regional offices, in Burkina Faso and Cameroon, project offices in Ethiopia, Zambia, Brazil (recently relocated from EMBRAPA in Belem to Rede de Desenvolvimento, Ensino e Sociedade in Rio de Janeiro), Bolivia, Vietnam, Guinea and Laos and a partner liaison office in Zimbabwe. In accordance with the recommendations of a recent External Review, opportunities are being explored for a project office in China, as well. Southeast Asian activities continued to be coordinated from its Indonesian headquarters.

Major Changes since the 2010-2012 MTP

1. Implementation of the 2008-2018 Strategy continues apace, with consolidation of research and outreach plans within each of the MTP projects through effective planning processes.
2. Membership of the MTP project teams and the responsibilities of those leading the MTP projects have been defined in more detail.
3. A total of 22 international & regional staff (including JPOs) have been recruited between January 2009 and June 2010.
4. The BoT has endorsed the direction and implementation of the new communication strategy targeted for completion in 2011.
5. Almost all of the recommendations of CIFOR's last EPMR have been fully implemented.
6. The full cost recovery budgeting system is in place and is being used in all proposals.
7. Africa continues to receive the same level of resources as in the previous MTP period, and needs for a regional office for Eastern and Central Africa are being evaluated.
8. The Research Agenda requirement for 2010 is projected at US$25.6 million, a 13% increase over 2009. The distribution of effort across the CGIAR System Priorities is projected to be relatively stable over the plan period.

9. Overall annual revenues are projected at US$28-30 million for the MTP period.
10. The Center projects a small (USD250,000) budget surplus for 2010.

Implementation of EPMR Recommendations

In 2006, CIFOR concluded its EPMR, which was endorsed by the CGIAR. The report draws very positive conclusions about the quality, relevance and impact of the Center's work, and 17 of the 20 "findings" are very positive. Notable positive observations include:

- "Overall the Panel finds that CIFOR is the leading international forest research center within its mandate and that it is highly appreciated for its credible and relevant high-quality research."
- "CIFOR's research and policy-oriented outcomes are significant and in many cases outstanding."
- CIFOR's communications strategy is "very successful and could serve as a model for other CGIAR centers."
- The Center "conducts its research through appropriate partnerships."
- CIFOR's management processes are generally "logical, thorough, appropriate to the business and programmatic needs, inclusive, flexible, adaptive, and transparent."
- CIFOR's Board of Trustees "exemplifies the expression 'high performing board.'"

The EPMR also noted a number of areas for potential improvement. The report supported CIFOR's previously stated intention to undertake a new strategy after the arrival of a new Director General in 2006. To better substantiate and implement the new strategy, the Review recommended that priority setting should be made more transparent and systematic. In addition, the review recommended that responsibilities of regional coordinators be clarified. With respect to gender, the Review recommended that CIFOR's programmes and Projects increase attention to gender, especially in regard to poverty alleviation. CIFOR accepted all of the EMPR recommendations, and is pleased to report that 16 of 17 have been fulfilled (see Annex 1 for more details).

Highlights of the 2011 Project Portfolio

Portfolio Composition

During the development of the 2008-2018 CIFOR Strategy, the Center attempted to make its selection of research priorities more transparent and systematic. Thus, five steps led to the portfolio presented in this MTP:

1. A preliminary long-list of 13 potential research topics was developed by CIFOR scientists on the basis of three inputs 1) articulation of CIFOR's mission and goals; 2) analysis of the external environment in which CIFOR operates (including the CGIAR and its System Priorities); and 3) suggestions elicited from stakeholders and partners through interviews and an on-line survey.
2. Teams of CIFOR scientists with requisite thematic knowledge were asked to write notional thematic descriptions using a common template. The narratives were shared among staff and were individually discussed and refined during CIFOR's 2007 Annual Meeting.
3. A Delphi approach was applied to rank an indicative list of key research projects. The process was moderated externally and comprised an iterative, anonymous process involving three separate panels (differentiated by expertise). Narratives

of the 13 projects and a set of selection criteria were provided to panel members, who performed scoring. Three iterations took place during which panel members scored, provided the rationales for their scores, and revised.

4. A structured scoring exercise was undertaken by members of the Strategy Steering Committee against criteria identified by CIFOR scientists and management. These included the scale of potential benefits, relevance to CIFOR's revised mission, fundability, and complementarity/spillover benefits to the rest of CIFOR's work.
5. Based on the first four steps six priority research Projects were selected for inclusion in CIFOR's future research agenda. These comprise the content of the present plan.

The resulting priorities are implemented through the Project Portfolio presented in more detail in Table 1, which has no major changes from that of the 2010-2012 MTP. This research portfolio is intended to capitalise on CIFOR's comparative advantage in interdisciplinary research by ensuring that each problem is addressed through multiple disciplines. Thus, each Project attempts to embed biophysical, socio-economic, and institutional expertise to offer real-world solutions to forest policy challenges.

Table 1. Structure of CIFOR's Project portfolio for 2011-2013.

Project 1: Enhancing the role of forests in climate mitigation	
Output 1:	Identification of policies and processes that lead to national-level REDD+ strategies that achieve outcomes that are effective, efficient, and equitable with co-benefits
Output 2:	Identification of institutional and technical arrangements that lead to implementation of REDD+ project sites which are effective, efficient, equitable, and with co-benefits
Output 3:	Improved procedures and practices for estimating and managing carbon stocks of tropical forest landscapes
Project 2: Enhancing the role of forests in adaptation to climate change	
Output 1	Identification of strategies for adapting sustainable forest use and management to the context of climate change
Output 2	Identification of roles and potentials of forests to contribute to reduced social vulnerability beyond the forestry sector
Project 3: Improving livelihoods through smallholder and community forestry	
Output 1:	Identification of enhanced technical practices that facilitate sustainable smallholder and community forestry and secure safety-nets from forests
Output 2:	Tools, guidelines and approaches that strengthen local organizations and forest enterprises to enhance outcomes from smallholder and community forestry
Output 3:	Recommendations for national and international policies and approaches that promote sustainable livelihoods through smallholder and community forestry
Project 4: Managing the tradeoffs between conservation and development at landscape scales	
Output 1:	Development of improved empirical basis and methods for assessing and monitoring environmental services at landscape levels
Output 2:	Identification of principles, methods and processes for optimizing conservation and livelihood values from the allocation of land use rights within forest landscapes
Output 3:	Identification of improved modalities and approaches to effectively support conservation in forest landscapes
Project 5: Managing impacts of globalized trade and investment on forests and forest communities	
Output 1:	Analysis of trends and drivers in globalized forest-related trade and investment
Output 2:	Analysis of the impacts and trade-offs of globalized forest-related trade and investment within specific forest landscapes
Output 3:	Assessment of governance options for managing the impacts and trade-offs of forest-related trade and investment
Project 6: Sustainable management of tropical production forests	
Output 1:	Identification and evaluation of public policies and market-based instruments to reduce the social and environmental footprints of production forest harvesting
Output 2:	Development of tools, methods and guidelines for better monitoring and management of tropical production forests
Output 3:	Tools and methods to resolve conflicts about land use, distribution of benefits and resource rights in the use of tropical production forests

System Priority Alignment

The Center's entire research portfolio aligns with one or more of the CGIAR System Priority (SP) topics identified by the CGIAR Science Council (defined in Annex 3). The Project Narratives and Financial Plan in subsequent sections report how individual Projects and Project Outputs align with System Priorities in terms of research content

and resource allocation. It should be noted that in this reporting, the System Priorities are not mutually exclusive, as research activities may fall under multiple Priorities simultaneously. In this plan, the "Specific Goal" statements of each SP were used to attempt to discern alignment by Output, as per the Science Council MTP guidelines. However, given that research may have multiple and nested goals, precise division of expenditures among these overlapping Priorities is not possible. As a result, some of the statistics presented should be interpreted with care. For example, while a majority of the research portfolio could be interpreted to align with System Priority 3D: "Sustainable Income Generation from Forests and Trees", a minority of the budget is reported to be allocated to this theme, due to division of expenditures with other SPs with which activities also align. To account for the multiplicity of possible alignments, other potential alignments for each Project are also flagged in the narratives.

Based on the Science Council specified procedures for appraising alignment, most of CIFOR's portfolio falls under SP 4A: "Integrated Land, Water and Forest Management at a Landscape Level" and SP 3D: "Sustainable Income Generation from Forests and Trees" (Figure 1). A small share is reported under 5B: "Making domestic and international markets work for the poor". SP alignment is projected to be relatively stable over the plan period.

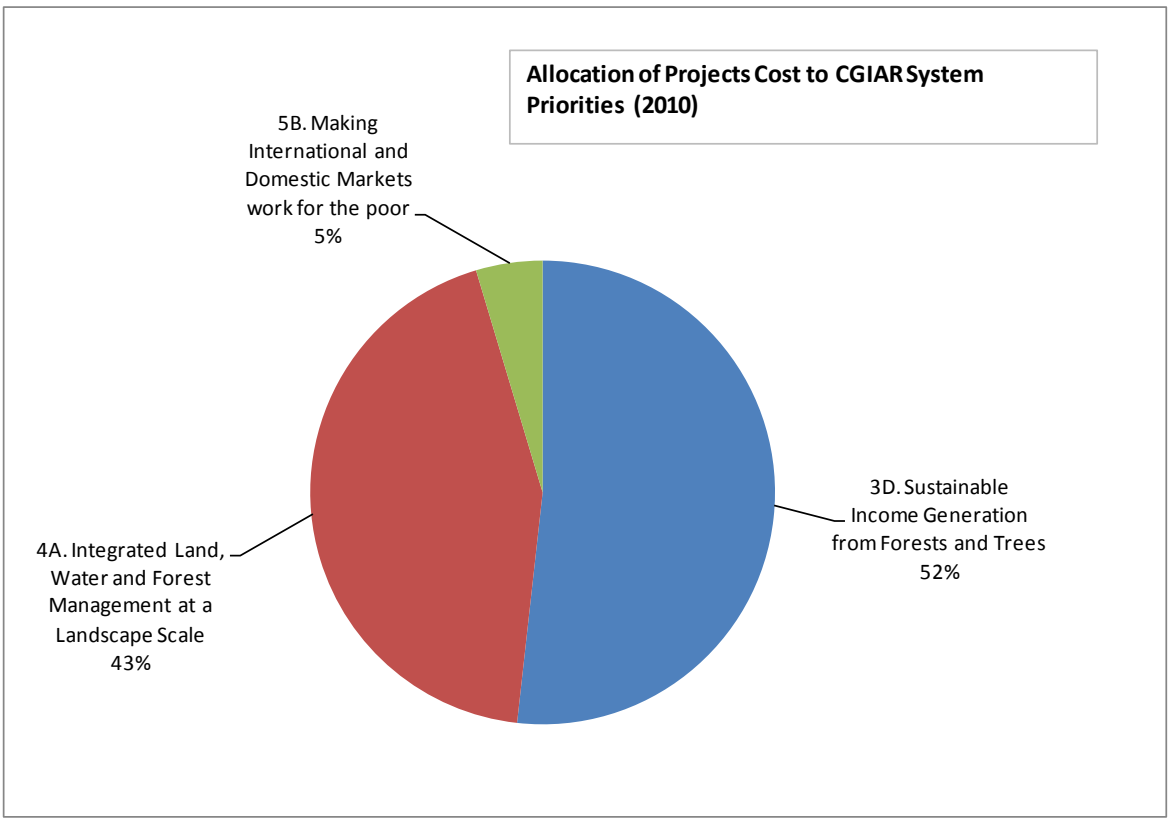


Figure 1. Proportions of proposed 2010 budget expended on specific CGIAR System Priorities.

Incorporating Gender into the Research Portfolio

CIFOR's acceptance of an EPMR recommendation that it increase attention to gender in the research portfolio has led to explicit efforts to ensure that the topic is not neglected. 'Gender' has been included on the checklist for internal approval of new proposals, and there has been collaboration with Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN). A review of CIFORs research reveals a rising trend in gendered research across most domains. For the development of the present MTP, scientists have ensured that gender is addressed where relevant. To socialize

gender consciousness, a number of steps have also been taken in 2009 and 2010, such as dedicated sessions at the 2009 annual meeting on the topic, initial training of scientists and managers to equip them with concepts and frameworks for gender analysis and the development and maintenance of an intranet site with links to relevant resources.

Capacity Building

Projects with significant capacity building elements managed by CIFOR in 2010 include:

1. The Poverty Environment Network (PEN);
2. A project to improve the forestry research capacity of the Democratic Republic of Congo;
3. A project to establish a forestry research network for Africa-Caribbean-Pacific (ACP) countries;
4. A project on building capacity for managing the effects of plantation expansion in Papua;
5. An effort to build capacity in participatory action research (PAR) for climate change adaptation in Africa;
6. Building capacity for REDD implementation in Indonesia;
7. Learning exchanges of practitioners active in conservation and development activities in the Lower Mekong region; and
8. The Advancing Conservation in a Social Context (ACSC), an initiative of a network of academic practitioners have developed a conceptual framework to assist in the identification and mitigation of conservation and development trade-offs.

These are supplemented by a number of other individual activities to disseminate novel methods and findings from the Center's research on topics ranging from payments for environmental services to enterprise development (one example is the training of dozens of practitioners and graduate students in the application of Multidisciplinary Landscape Assessment tools developed by CIFOR). In addition, CIFOR regularly offers secondment opportunities for staff from national forestry institutes, such as the Indonesian Forestry Research and Development Agency and the Zambian Forestry Department. CIFOR staff play important ongoing capacity building roles in terms of day-to-day mentoring of visiting students and interns, and providing advisory support for proposal, policy brief and article development.

Data from Domains 3, 4 and 6 indicates that 67 students are affiliated with these CIFOR components. The composition of this student body associated with CIFOR indicates a relatively good gender balance, given the demographic of contemporary forestry training (see Figure 2), a high level of representation from developing countries (Figure 3) and strong regional representation from Africa and Asia, while Latin America is underrepresented.

Figure 2 Gender Balance of students associated with CIFOR Domains 3,4,6 (n=67)

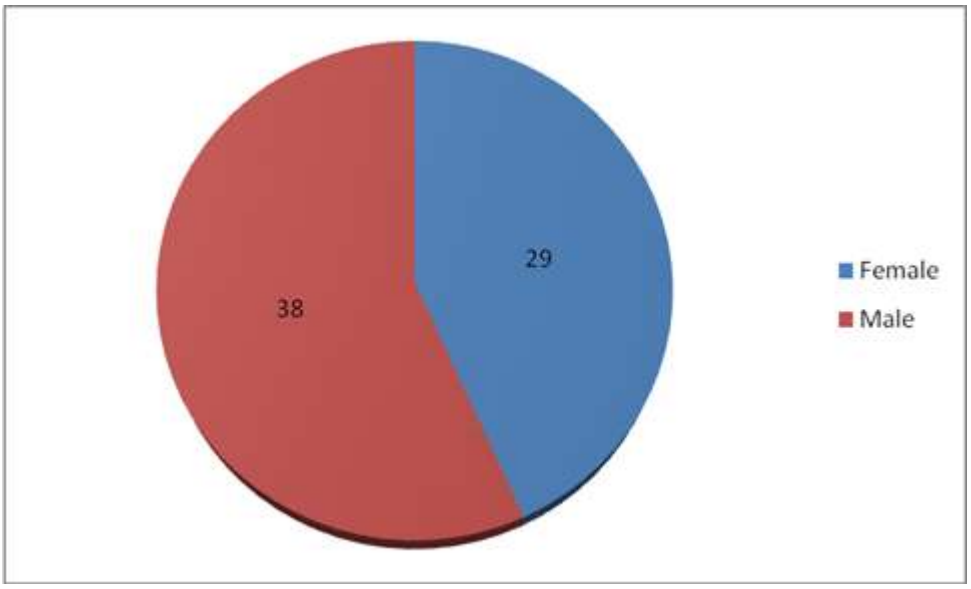


Figure 3 Developing country representation of students associated with CIFOR Domains 3,4,6 (n=67)

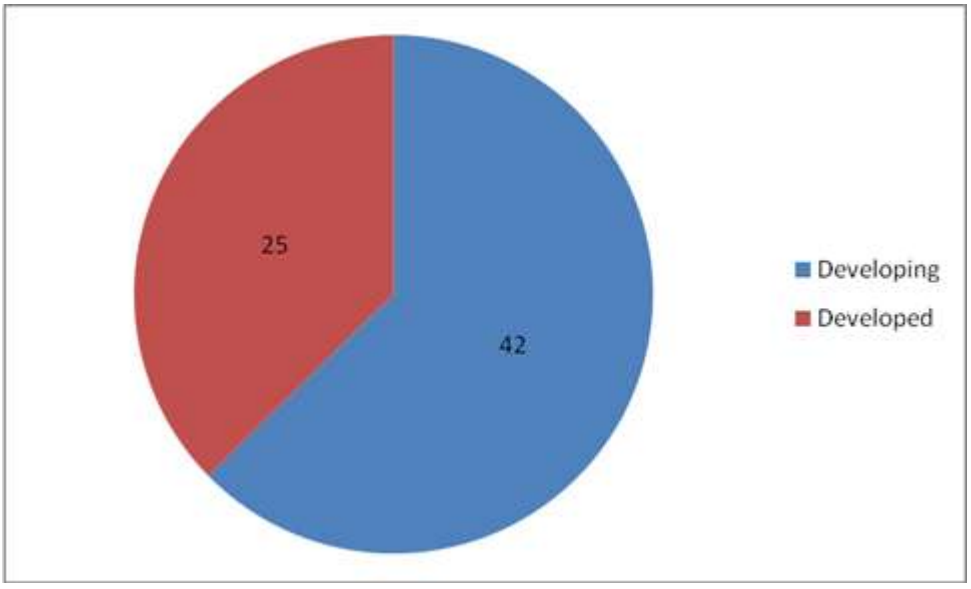
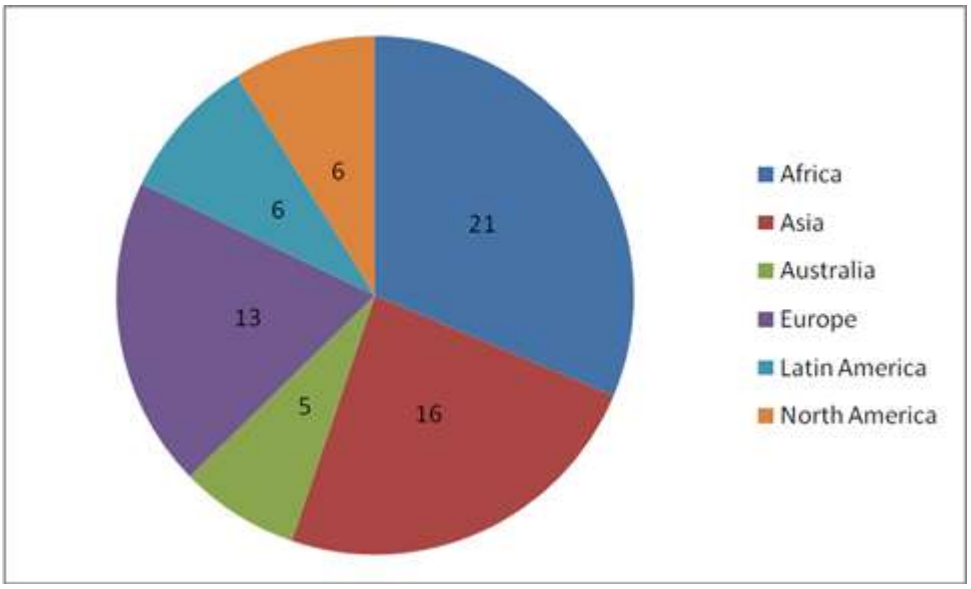


Figure 4 Regional representation of students associated with CIFOR Domains 3,4,6 (n=67)



1. PEN has assembled a group of partners and 36 PhD students from various universities to study the links between forests and poverty. It is not only training students – data management and analysis workshops have been conducted at meetings in Barcelona, Phnom Pehn, and Belem, as well as a scientific writing workshop in Bogor—but it is also developing a detailed panel data set that should be useful for many further studies of the topic. Data collection has now been completed. Two thirds of the datasets have undergone rigorous checking and are ready for analysis. The global dataset is now being assembled and preliminary analysis has begun.

2. In 2007 FAO, CIFOR and IITA started an EC funded project to rehabilitate the forestry and agricultural research capacity of the Democratic Republic of Congo (DRC). CIFOR is responsible for the forestry component of this project and to develop and implement with DRC partners a priority forestry research programme for the country. This is done through formal University training in DRC (MSc on biodiversity and forest management with 37 students having already graduated and another 40 to participate in the program during 2010-2013), a mechanism of competitive funds to support PhD for young scientists or students (14 grantees with another 15 planned for 2010-2013) and by ad-hoc sessions for hands-on training of existing scientific and technical staff (4 delivered in 2009). The project has been extended until 2013.

3. CIFOR and regional partners have run an EC funded project to establish a forestry research network for Africa-Caribbean-Pacific (ACP) countries since 2007. CIFOR is in charge of the overall coordination of the project. This project works through running several research programmes (1 cross-continental, 5 regional and 5 small-scale) – consistent with the research domains in our new strategy (climate change mitigation and adaptation, sustainable forest management) and by supporting a network of research teams in the three regions as well as MSc and PhD grants for young professionals.

4. A CIFOR project in Papua seeks to improve the capacity of civil society groups to assess the effects of plantation expansion and to mitigate conflicts that may result. This is complemented by training to forestry agencies, so that they can better quantify and disseminate data on forest cover changes and the consequences thereof.

5. CIFOR is coordinating an effort to build capacity in participatory action research (PAR) for climate change adaptation in Africa in collaboration with IDRC and DfID. Capacity building efforts in 2009 included: (i) in-field mentoring to 7 project teams funded by the CCAA programme; (ii) a final synthesis workshop to distil lessons learnt in the application of PAR in support of climate change adaptation and develop draft publications for sharing with a wider audience; (iii) distance mentoring in the development of a series of CCAA briefs and book chapters to enable teams to share experiences globally; (iv) a knowledge exchange workshop among a group of mentors to deepen mutual understanding of and consolidate methods being tested in the field; and (v) development of a draft facilitation guide for leading knowledge exchange workshops in PAR for CCA.

6. CIFOR is developing a Toolkit for Learning from REDD Demonstration Activities for the Program on Forests (PROFOR). One of the most critical design principles for effective assessment of, and learning from, demonstration activities is to be able to measure outcomes both 'before and after' and 'with and without' REDD. The Toolkit will identify practical means for implementing this principle.

7. CIFOR's learning networks: a project recently completed and funded by the MacArthur Foundation stimulated learning exchanges of practitioners active in conservation and development activities in the Lower Mekong region. CIFOR's research into "best practice" approaches facilitated a vibrant network of discussions and shared experiences that have had considerable influence on the ground in how conservation activities are implemented, especially in the context of new conservation mechanisms such as REDD+.

8. Partnership with the ACSC: The Advancing Conservation in a Social Context (ACSC), an initiative of a network of academic practitioners, and funded by the MacArthur Foundation, has developed a conceptual framework to assist in the identification and mitigation of conservation and development trade-offs. CIFOR's site level experience, particularly in the Lower Mekong region is supporting the ACSC process through the provision of site-based case studies for analysis. It is hoped this research will ultimately lead to a "best practice" framework for conservation implementation that will be readily adopted by the international community.

Collaboration with Other International Organizations

CGIAR Partnerships

As a "centre without walls," partnership is integral to the way that CIFOR conducts research. In 2009, there were approximately 280 research partners/consultants associated with CIFOR, of which 199 were from developing countries. This partnership approach enhances the effectiveness of CIFOR's research activities, improves the dissemination of research results and strengthens partner capacity. This section describes a set of examples of partnership with other international bodies, within and beyond the CGIAR, to illustrate the approach in practice.

In addition to the collaborative work described below, the ongoing CGIAR reform process has allowed CIFOR, ICRAF, Bioversity, CIAT and other centres (e.g., ICARD, IITA, ILRI) to build on the strength of existing collaborative actions to advance the design of a major Consortium Research Program 6 on Forests and Trees: Livelihoods, Landscapes and Governance. This process will position these organisations and their partners to collectively meet the needs of forest dependent communities, conserve forests and address threats to the global environment. Ideally this transformative program will be launched in late 2010.

Collaboration with the World Agroforestry Centre

The World Agroforestry Centre (ICRAF) and CIFOR have a strong partnership, as there are many synergies between forest-related research themes (CIFOR's focus) and research themes concerning tree cultivation and use on farms (ICRAF's focus). Thus the two centres coordinate research activities through a number of mechanisms and share a number of joint activities which are described below:

Shared Board of Trustee CIFOR's Board of Trustees (BOT) includes an ICRAF Board Member, Juan Mayr, who serves as a member of Programme Committee in his capacity as the representative of ICRAF's Board Chair. CIFOR's Programme Committee Chair, Hosny El Lakany represents the CIFOR BOT Chair on the ICRAF BOT.

Inter-Centre Coordination*:* At the management level, the ICRAF Southeast Asia Regional Coordinator and CIFOR management hold regular consultations to ensure that opportunities for enhanced inter-Centre collaboration are utilised. In addition, the Director Generals of the two centres meet bi-annually to monitor progress and identify new opportunities for collaboration. In 2008, a Centre Commissioned External Review also focused on enhancing coordination for Southeast Asian activities by the two centres, and led to a joint response.

Coordinated Strategic Planning: Scientists from the two centres have participated in each other's strategic planning processes, which were completed in 2008. The centres have also jointly brainstormed about how their activities can be most effectively organized, so as to capture synergies in the context of CGIAR Change Management. Scientists working on climate change issues in the two centres met in October 2008 to share lessons and experiences and to identify future areas of collaboration.

Shared Facilities: The two centres share substantial infrastructure, as ICRAF's largest regional office outside of headquarters is hosted by CIFOR. In Vietnam CIFOR is hosted by ICRAF in Hanoi.

Joint Project Implementation: The two Centres' collaboration on a range of research topics has also yielded several co-funded, ongoing projects, Improving Economic Outcomes for Smallholders Growing Teak in Agroforestry Systems in Indonesia, Assessing the Implications of Climate Change for USAID Forestry Programs, REDD-ALERT in Indonesia, Vietnam, Peru and Cameroon, the Carbon Benefits Project in Kenya and the Landscape Mosaic project in Cameroon, Indonesia, Laos, Madagascar and Tanzania. In Zambia CIFOR and ICRAF are collaborating to support the COMESA (Common Market for East and Southern Africa) Climate Initiative. CIFOR and ICRAF Philippines developed a proposal on ecosystem-based adaptation in coastal areas in Asia (submitted in March 2010 to the EC).

Joint Publications: ICRAF and CIFOR have produced 3 co-publications in 2009 and worked closely together in disseminating information such as policy briefs on issues dealing with fire and the Clean Development Mechanism.

Joint Centre-Commissioned External Review (CCER): CIFOR and ICRAF are developing Terms of Reference (TOR) for a joint CCER on "Systems and Metrics for Science Quality and Impact Orientation" scheduled for late 2010/early 2011.

Joint Biodiversity Platform: In March 2006 the CIFOR-ICRAF Biodiversity Platform was launched, and his since focused on collaboration on biodiversity issues in multifunctional landscape mosaics. In December 2007 the two institutions signed an MOU that clarifies roles and responsibilities. The two centres have each appointed a senior scientist to enhance collaboration and streamline biodiversity activities under the platform. Currently this collaboration is focusing on developing further joint projects

once the current collaboration under the SDC-funded project, Landscape Mosaics, is completed at the end of 2010.

Amazon Initiative (AI)

The AI works across the tropics to assess causes, consequences and possible solutions for natural resource degradation practices in the Amazon basin. The AI evolved from a subset of the cross-regional programme of the ASB, which has not been active in the Amazon Basin for the past few years. Research activities are now centered on the AI System Wide Eco-Regional Program that was approved in December, 2007 by the CGIAR Science Council, and became effective in September 2008. Lead by four CGIAR centres (CIAT, CIFOR, ICRAF and IPGRI) and National Agricultural Research Institutions (NARIs), the AI will design and implement projects based on four main themes: a) Mitigation and adaptation to climate change, b) Sustainable smallholder production on deforested and degraded lands, c) Enhanced benefits from forests for livelihoods and the environment, and d) Market chain development of Amazon products. CIFOR has been an active member of both the Scientific Steering Committee and the Technical Committee of the AI. Under the System-Wide Eco-Regional Program, CIFOR will coordinate the AI work on mitigation and adaptation to climate change.

Collaboration with Bioversity and Worldfish Centre

CIFOR is increasing its collaboration with Bioversity and Worldfish on sustainable management of forest resources in the Congo Basin. We jointly developed and submitted two project proposals to the Congo Basin Forest Fund, one with Bioversity (accepted) and one with WorldFish. CIFOR and the WorldFish Centre developed a proposal on ecosystem-based adaptation in coastal areas in Asia (submitted in March 2010 to the EC).

Corporate Services Collaboration with WorldFish, IRRI, ILRI and IWMI

CIFOR is collaborating with the International Water Management Institute (IWMI) and the WorldFish Centre in several HR projects, such as HR information systems, health insurance coverage for the national staff. CIFOR assists the International Rice Research Institute (IRRI) by administering the payroll of their Indonesian national staff. CIFOR was the host for ILRI (International Livestock Research Institute) Avian Flu Project until the first quarter of 2010 and assisted them in all of their administrative activities. In March 2010, CIP agreed to host a CIFOR office in Lima, Peru. CIP assists CIFOR in the administrative activities ((HR, Finance, Administration and ICT).

Host Country Collaboration

Headquarters
CIFOR has active and productive partnerships with agencies of its Indonesian government host. Selected examples of ongoing host country collaboration include assistance to the Indonesian Forest Climate Alliance, which provided support to the Indonesian government prior to the UNFCCC COP 13 in Bali, research on: improving teak productivity, methods for collaborative community forest management, participatory biodiversity appraisal techniques, modalities for decentralization of forest governance, climate change adaptation to reduce vulnerability, and enhancement of smallholder plantation productivity.

To further enhance host country collaboration, in 2008 CIFOR established a Liaison Office, which regularly interacts with key host country institutions to ensure that CIFOR responds to emerging opportunities and to enhance collaboration with key national and regional institutions. In early January 2010, CIFOR jointly managed the release of CIFOR's study on lessons learned for REDD from experience with Indonesia's Reforestation Fund. CIFOR held 1 "Roundtable Discussion" on 13 April 2010 with the

Ministry of Forestry to present the status of planning for the Global Comparative Study on REDD, and its relevance for Indonesia, as well as to discuss and exchange views and scientific findings on pertinent issues related to forests and to identify areas for partnership. CIFOR organized an "Open House" where the Mayor of Bogor and other important stakeholders including local communities participated in on-campus activities on 3 November 2009.

West African Regional Office
In Burkina Faso, CIFOR participates in the group Partenaires Techniques et Financiers sur l'Environnement together with all the other donors and technical agencies in the country. The forum aims to coordinate its activities and to supply support to the Ministry of the Environment.

Central African Regional Office
CIFOR actively participates in the CCPM (Cercle de Concertation des Partenaires), a informal coalition of partners who assist the Ministry of Forests and the Ministry of Environment of Cameroon with the implementation of the PSFE (Programme Sectoriel Forêts/Environment), the principal framework for the implementation of the forest policy in Cameroon.

CIFOR in International Policy Arenas

A dozen or so global institutions and processes strongly influence policies and programmes concerning tropical forests and those that depend on them. These include: the World Bank, the Global Environment Facility (GEF), the United Nations Framework Convention on Climate Change (UNFCCC), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Forum on Forests (UNFF), the Convention on Biodiversity (CBD), the International Tropical Timber Organization (ITTO), the World Wide Fund for Nature (WWF), the International Union for the Conservation of Nature (IUCN), and the International Union of Forest Research Organizations (IUFRO). Governments, NGOs and academics often look to these institutions for advice and leadership and some invest large amounts of money in forest activities.

One way a relatively small international institution like CIFOR can use its resources most efficiently and achieve substantial impact is by influencing these institutions and processes. CIFOR has clearly done this. It has worked with FAO, World Bank, ITTO, UNFF Secretariat, IUCN, IUFRO, UNFCCC, and the CBD both individually and through the Collaborative Partnership on Forests (CPF), an inter-agency task force on forests, to which all of them belong. Other international partnerships CIFOR has been actively involved in include the Millennium Ecosystem Assessment (MEA), Environment Task Force of the Millennium Project, the Poverty Environment Partnership (PEP), and the Amazon Initiative. CIFOR has also been involved in a growing number of joint activities with CARE International, TNC, Conservation International, and WWF in Cameroon, DRC, Indonesia and Peru.

FAO: CIFOR has a wide range of partnerships with FAO, including active participation in the Collaborative Partnership on Forests, which FAO chairs. CIFOR scientists regularly participate in FAO events and meetings, such as the FAO Commission on Forestry, and Regional forestry conferences. CIFOR also worked with FAO on forestry definitions, a code of practice for planted forests, Global Forestry Information Service (GFIS), Tsunami relief, and forestry research capacity building in Africa. We are currently operating two large projects in Central Africa with FAO under EC funding: one regional project on NTFP and small scale enterprises in partnership with ICRAF and one on the rehabilitation of forestry research capacity in DRC in partnership with IITA.

AFP: The forthcoming AFP event, the Ninth Meeting of the AFP and the Asia Forest Partnership Dialogue 2010: Forest Governance Challenges beyond Copenhagen: an Asia-Pacific Perspective, will be held in Bali from 4 to 6 August 2010. The regional dialogue is

organise by AFP, in collaboration with the Governments of Japan, Indonesia, and CIFOR, supported by the EU's European Forest Institute Forest Law Enforcement, Governance & Trade (FLEGT) Asia Regional Support Programme (FLEGT Asia), and The Nature Conservancy's Responsible Asia Forest and Trade (RAFT) Programme. The event is expected to be attended by 200 participants.

IUCN: Partnership with IUCN/CEESP: Following the publication of a book on "rights-based approaches to conservation" in 2009 IUCN and CIFOR have continued to collaborate in ensuring that the rights agenda is fully part of conservation NGOs, traditional protagonists in the rights and conservation debate. This work led to the adoption of two new IUCN resolutions on conservation and human rights. The principles and guidelines highlight in our joint 2009 publication have provided a framework for the Conservation Initiative on Human Rights (CIHR) to which the majority of the larger conservation NGO's are members. They have now adopted the new framework on human rights into their field implementation guidelines.

World Bank: CIFOR has extensive interaction with the World Bank. CIFOR has worked closely with the World Bank in Brazil, the Democratic Republic of Congo, India, and Indonesia and in several regional activities. In addition, CIFOR has provided input into the Bank's Indonesia Forest Strategy, and key World Bank reports frequently cite CIFOR research. Over the last year, CIFOR has been collaborating closely with the Bank's central forestry team in the design of the Forest Investment Program, and with the staff of the Forest Carbon Partnership Facility. At the regional level, CIFOR has worked with World Bank staff on research on the Miombo woodlands in Southern Africa, and has undertaken analysis on forest tenure for ProFor in Latin America. CIFOR has also initiated new work with ProFor on project design guidelines for REDD, and the development of a Toolkit for Learning from REDD Demonstration Activities.

UNFCCC: CIFOR has had a strong presence at meetings of the Conference of the Parties (COP) to the Climate Change Convention, as well as SBSTA meetings and expert consultations. To disseminate findings and widen recognition of the important linkages between forests and climate change, CIFOR together with the Collaborative Partnership on Forests (CPF) has convened two Forest Day summits as an international platform to not only support multi-stakeholder forests and climate discussions but also to directly inform climate change negotiations at COP 13 and COP 14. Building on the positive response to the first Forest Day held in Bali, Indonesia, during UNFCCC COP 13, Forest Day 2 brought together nearly 900 participants from a diverse range of forest stakeholders, academics and decision makers from around the world, to discuss key issues that link forests with climate change. Forest Day 3, held in conjunction with COP 15 in Copenhagen in collaboration with the Danish Government was a resounding success. Planning for Forest Day 4, to be held in conjunction with COP 16 in Cancun in collaboration with the Mexican Government is well underway. Additionally, five pre-conference workshops are being planned for the UN Year of the Forest (2011), the first of which on Forest Governance will precede the 13th International Association for the Study of the Commons conference in Hyderabad in January 2011.

IUFRO: CIFOR has worked with IUFRO on the Global Forestry Information System (GFIS), the science-policy interface, and in the IUFRO Special Project, "World Forests, Society and Environment." The CIFOR Director General provided a keynote address at an IUFRO conference on "Forest Research Management in an Era of Globalization," and CIFOR helped to convene the Fourth Congreso Forestal de Cuba in 2007. In 2008, CIFOR helped to organize a Symposium on Sustainable Forest Management in Africa. Four CIFOR scientists are currently participating in IUFRO's Global Forest Expert Panel on Adaptation of Forests to Climate Change. CIFOR will be heavily involved in this year's IUFRO conference in Seoul, with the Director General giving a keynote speech and a number of CIFOR scientists leading/participating in numerous official events. CIFOR scientists coordinate several important IUFRO Task Forces and groups, such as the IUFRO group on "Tropical and subtropical silviculture" and the Task Force on "Improving the lives of people in forests".

Rights and Resources Initiative (RRI): CIFOR is a founding partner for an international initiative to advocate for stronger community rights to forest resources. This Rights and Resources Initiative works in collaboration with a global network of organizations, including community groups, NGOs, research institutions and governments in developing countries. With the support of its secretariat, called the Rights and Resources Group, the Initiative conducts global analyses of tenure reform, pro-poor conservation approaches, investment models, global finance and subsidy reforms as inputs to decision-making in countries undergoing forest-related policy reform. To inform and facilitate use of these insights, the Initiative facilitates and convenes policy dialogues in selected countries and at global and regional levels. CIFOR is collaborating with RRI on a project called "Improving Equity and Livelihoods in Community Forestry" and on research on tenure in West Africa (Ghana and Burkina Faso) and Cameroon, as well as on outreach activities. In May 2009, CIFOR co-organized with RRI and other partners a conference in Cameroon to catalyze new and broader actions by government and civil society to secure tenure rights in Central and West Africa. In May 2010 CIFOR's MG decided to withdraw from the MOU with RRI (IUCN decided likewise). CIFOR will continue to collaborate with RRI and partners on an ad hoc basis, and to ensure that existing commitments are completed satisfactorily.

UNFF: The United Nations Forum on Forests (UNFF) provides a mechanism for communicating the results of CIFOR's work to international audiences and for staying in touch with our major stakeholders. CIFOR co-organized in April 2008, a Country Led Initiative (CLI) in Durban, South Africa with the Department of Water Affairs and Forestry (DWAF), the Swiss Federal Office for the Environment (FOEN), Intercooperation and the Department for International Development (DFID). This CLI (Workshop on Forest Governance and Decentralization in Africa) brought together diverse stakeholders, policy makers and international experts to share experiences and explore opportunities for generating concrete gains from governance reforms and decentralized forest management. This provided a platform for bringing lessons from other international and national processes. It also facilitated the expression of voices of stakeholders at different levels and for sharing the experiences especially of local people in their struggle to manage locally important resources that are, at the same time, of global interest. The CLI provided key inputs for a plenary session on Regional Inputs as well as for a side event at the 8th Session of the UNFF in New-York in April 2009. Planning for a CLI in Mexico – Forest governance, decentralization and REDD in Latin America – to be held in Oaxaca during the period 30 August-4 September 2010 is well underway. The Mexican CLI will provide inputs for the 9th session of the UNFF in new York in January 2011.

CIFOR in National Policy Arenas

1. CIFOR research and capacity building enabled forest and land-use managers to implement strategies for addressing climate change mitigation in Latin America.

   Through the FORMA project ("Strengthening the CDM in Forestry Sectors in Latin America: 2006–2007"), CIFOR and CATIE together facilitated the design of climate change mitigation CDM (Clean Development Mechanism) projects in Latin America. The CDM provides funding opportunities for afforestation and reforestation (A/R) in developing countries, but project developers face many challenges because of the inherent complexity of the mechanism. Consequently, to date, only 14 of the 2,067 projects registered globally under CDM are on forestry.

FORMA aimed to remove barriers to the design of CDM forestry projects in Latin America. It did this by providing technical and financial assistance to the developers of 11 initiatives, selected from among 56 candidate submissions.

2. CIFOR research informed recommendations adopted by the Indonesian Central Bank in its policy and legal framework for preventing money laundering and terrorist financing funded by illegal logging and timber trade.

   This outcome was achieved through a project by CIFOR, the Australian Institute of Criminology, the ELSDA Institute and the Royal Bank of Scotland (formerly ABN AMRO), titled "Combating Illegal Timber Trade and Associated Crimes in Indonesia through Financial Intelligence – The Potential Role of Commercial Banks".

3. CIFOR research contributed to a revised edition of the "Manual of Procedures for attribution and norms for the management of community forests" (Cameroon Ministry of Forestry and Wildlife), which will directly assist forest communities in Cameroon.

   This new, simplified, more community-friendly manual will directly facilitate the work of the 177 established Community Forests (total 632 000 ha) that will soon need to revise their management plans and (b) the 70 newly requested Community Forests for 2009.

Financial Highlights

During 2009, CIFOR's revenues were US$ 23.85 million and expenditures were at US$ 22.65 million, resulting in a surplus of US$ 1.20 million. CIFOR's liquidity and reserve levels continue to remain above the Board approved and the CGIAR recommended levels, reflecting an ability to comfortably meet our short-term and long-term obligations. Revenues in 2009 increased over 2008, due mainly to increases in funding from certain donors and new restricted project activities contracted during the year.

Revenues for 2010 are currently projected at US$25.85 million and expenditures are projected at US$25.60 million, leading to a small projected surplus of US$ 0.25 million.

CIFOR expects to continue expanding at a reasonable pace in the 2011-2013 period, in line with the growth experienced in the prior years, indicating continued donor commitment to CIFOR's work.

The level of funding for 2011 is expected to be US$27.89 million. CIFOR has received a multi-year donor grant for the REDD-Global Comparative Study and also has a number of proposals in the final stage of negotiations. The budget includes US$0.67 million for restricted projects where donors are yet to be determined. The proportion of the budget from restricted funds is expected to be around 64% in 2011.

Personnel costs continue to be below 50% of total costs in the MTP period. Partnership activities comprise about 21% of costs. The Center proposes to expand its work delivered through regional offices in Central, East and Southern Africa, while continuing to work in West Africa.

The Center conducted a facilities audit in 2008/09. Based on the results of the audit, the Center has begun to invest in upgrading physical infrastructure in 2009 and expects to continue such investments through 2010-11. To meet the additional capital needs to replace/renew the ageing infrastructure the Board of Trustees approved moving $0.6 million of the 2009 budget surplus into the Capital fund, to ensure that adequate capital funds are available.

Financial Health Indicators

The CGIAR short term solvency indicator was 210 days at end of 2009 compared to 213 days in 2008. The long term financial stability was 175 days at the end of 2008 compared to 176 days at end of 2008. The indicators are expected to remain above the CGIAR recommended range over the MTP period.

Indirect costs for 2009 were computed at 28% (2008 – 20%). The rate has gone up, but reflects the costs at the Center– in line with the full cost recovery system of budgeting. The recovery rate has continued to remain around 10%, similar to that of 2009.

Risk Management

The Board of Trustees annually approves the updated risk assessment and the internal control and risk policy of the Center based on the framework developed by the CGIAR Internal Audit Unit. The Board continually monitors the implementation of CIFOR's risk mitigation strategies.

Project Narratives

Project 1: Enhancing the role of forests in climate mitigation

Project Overview and Rationale

Land-use change including tropical deforestation is a significant source of carbon emissions and an active contributor to global warming. Deforestation is estimated to have contributed on average 1.6 gigatonnes of carbon per year[1]. This represents about one fifth of current global carbon emissions, which is more than what comes from the fossil fuel-intensive global transport sector. Emissions from deforestation in Brazil and Indonesia alone are equivalent to the entire emission reduction target of the industrialized countries during the first commitment period (2008-2012).

Deforestation results from various causes, most of which originate outside the forest sector. Understanding these causes is crucial to identifying appropriate incentives to curb deforestation, while at the same time benefiting people whose livelihoods depend on forests. Forests provide a number of valuable goods and services to society. However, the returns from alternative land uses and the lack of remuneration for forests' intangible benefits sets the protection of forest ecosystems at a disadvantage and promotes deforestation.

Finding ways to maintain terrestrial carbon pools and to reduce carbon emissions from land-use change will be key elements in the future negotiations under the UN Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol - first commitment period ending in 2012. This could have large-scale implications for the forestry sector, land-use and rural livelihoods in many developing countries. The Stern Review, an analysis of the economics of climate change published by the UK Government, emphasizes avoided deforestation as one of four "key elements" of future international climate frameworks[2].

The political negotiations on the post-2012 climate regime have begun and the approach to stimulate action to reduce emissions from deforestation in developing countries was facilitated. It is focused on relevant scientific, technical and methodological issues, and the exchange of relevant information and experiences, including policy approaches and positive incentives.

The Project will address key issues that include (i) policy interventions in national REDD+ schemes that are more effective in terms of reduced emissions from deforestation and reduced risks to vulnerable communities. It is also expected that this research contributes to the formulation of policies and national REDD+ programs that produce pro-poor and pro-biodiversity co-benefits: (ii) lessons learned from first generation REDD+ demonstration activities at selected sites in terms of effective, efficient, and equitable outcomes – taking into consideration land ownership and access rights, equity and benefit sharing, rights of indigenous peoples and local communities, and institutions; and (iii) developing standardized, widely accepted, credible, and scientifically sound methodologies for managing, estimating and monitoring forest carbon pools in a way that leads to real reductions of emissions from deforestation and degradation. In

[1] IPCC. 2007. Climate Change 2007. Synthesis Report.

[2] Stern, Sir Nicholas. 2006. Stern Review: The Economics of Climate Change. Cambridge University Press, Cambridge, UK.

addition, it is expected that reduced transaction costs will lead to increased adoption of REDD+ and other mitigation schemes.

In response to calls from a number of Parties to revisit deforestation in the climate agenda, the Eleventh Session of the Conference of Parties (COP11) to the UNFCCC in December 2005 initiated a two-year process for the consideration of a policy for reduced emissions from deforestation (RED) in developing countries. Furthermore, it was decided in Bali COP13 that demonstration activities on reduced emissions from deforestation and forest degradation (REDD) in developing countries should be encouraged. The Copenhagen Accord recognised the crucial role of reducing emissions from deforestation and enhancing removal of greenhouse gases from the atmosphere by forests, and called for the immediate establishment of a REDD+ mechanism.

There is a need to further reinforce measures aimed at managing and expanding forest carbon pools by sustainable forest management, reduced forest degradation, and management of tropical peatlands. There are also possible synergies between managing forest carbon and other ecosystem services and climate change adaptation measures.

Goal
The Project's goal is to help improve the international post-2012 climate regime and national level REDD+ schemes so as to ensure emissions reductions that are more effective, efficient, and equitable, and provide benefits to affected communities in developing countries.

Objectives
The objectives of the Project are:

1. To identify policies and processes that lead to national-level REDD+ strategies that achieve outcomes that are effective, efficient, and equitable while also producing co-benefits
2. To identify institutional and technical arrangements that lead to implementation of REDD+ demonstration activities which are effective, efficient, equitable, and with co-benefits
3. To improve procedures and practices for estimating and managing carbon stocks of tropical forest landscapes

Overall Alignment with CGIAR System Priorities
This work falls completely within the CGIAR System Priorities. To comply with the Science Council MTP Guidelines, each Output is reported as aligned with one System Priority area based on alignment with Specific Goal statements (under the description of each Output). Under these instructions, the Project aligns with SP 3D "Sustainable Income Generation from Forests and Trees", and its specific goal: "to improve opportunities for the market exploitation of a range of forest products and services by the poor, as it is intended to help improve new potential markets for the carbon services of forests". This work is also aligned with the goal and objectives of the planned CGIAR Challenge Program on Climate Change, Agriculture and Food Security and with the CGIAR's Climate Change Initiative.

However, because the System Priorities are not mutually exclusive, and our research has multiple and nested goals, the Project is actually also well aligned with the following:

SP 4A (Integrated Land, Water and Forest Management at Landscape Level).

- Specific goal 1: to develop analytical methods and tools for the management of multiple use landscapes with a focus on sustainable productivity enhancement
- Specific goal 2: to enhance the management of landscapes through changing stakeholder awareness and capacity for social-ecological planning at landscape and farm levels

- Specific goal 3: establish effective rights and opportunities to ensure that the poor profit equitably from forest and tree resources
- Specific goal 5: creating multiple benefits and improved governance of environmental resources through the harmonization of inter-sectoral policies and institutions.

Project 1, Output 1: Identification of policies and processes that lead to national-level REDD+ strategies that achieve outcomes that are effective, efficient, and equitable with co-benefits

Output Description
Research under this Output aims at improving the design of REDD+ schemes and interventions through new information on options for policies, institutional arrangements, and reward mechanisms that lead to effective implementation of national REDD+ schemes. An expected outcome of this research is that the policy interventions in national REDD+ schemes are more effective in terms of reduced emissions from deforestation and reduced risks to vulnerable communities. It is also expected that this research contributes to the formulation of national policies and REDD programs that produce pro-poor and pro-biodiversity co-benefits.

The research starts with the development of an analytical framework that can be used to inform the design of a significant portion of the first generation REDD+ demonstration activities. In the second phase, CIFOR is planning to establish a global research network with national and international partners for a comparative analysis across several first generation REDD+ demonstration projects. This research will focus on the efficiency, effectiveness and equity of different policy measures, REDD+ regimes, and specific activities (such as payments for environmental services as a tool for promoting REDD+). This would also include an analysis of trade-offs among efficiency, effectiveness and equity, and analysis of apportionment of risk of national REDD+ schemes.

As an early step of this global comparative analysis, a "lessons learned' studies will be carried out analyzing existing policies, institutional arrangements, and reward mechanisms in selected case study countries. These analyses are expected to provide concrete options or solutions for the design and management of carbon-based funding schemes.

Changes from Previous MTP
The 2012 target adds work on benefit sharing mechanisms based on the results generated from comparative analysis in the previous years.

Alignment to CGIAR System Priorities
This Output falls completely within the CGIAR System Priorities, notably SP 3D "Sustainable Income Generation from Forests and Trees", and its specific goal: to improve opportunities for the market exploitation of a range of forest products and services by the poor, as it is intended to help improve new potential markets for the carbon services of forests.

Research Approach to International Public Goods
This Output will develop a global research network with national and international partners for a comparative analysis across several first generation REDD+ demonstration projects. For the moment, the countries that will be included in this research are not known, but most likely will include several countries in Latin America, Africa, and Asia.

This Output can generate at least two types of IPGs:
- Generic tools and methods for analyzing different aspect of policies under national REDD+ schemes

- Scientific understanding of trade-offs among efficiency, effectiveness and equity, and analysis of apportionment of risk of national REDD+ schemes.

Impact Pathways
As a general impact, it is expected that this research contributes to the formulation of national policies and REDD+ schemes that are effective and efficient in reaching the objective of the climate convention, and at the same time produce pro-poor and pro-biodiversity co-benefits.

At the global level, CIFOR's main impact pathway will be through direct and indirect engagement with global climate policy processes, including the IPCC and UNFCCC/SBSTA, and by influencing institutions, including the World Bank's Forest Carbon Partnership Facility. CIFOR will offer to these policy processes and institutions the results of global comparative studies (across REDD+ demonstration activities) on the implications of different policy measures and specific activities (such as payments for environmental services) developed under national REDD+ schemes. Another global impact pathway would be through scientific publications.

In at least nine countries, CIFOR will seek impact on national REDD+ schemes and policies through collaborative research and partnerships with research institutes, advocacy groups, relevant governmental partners and NGOs to support informed engagement in national level policy arenas. Content will be derived from specific case studies of national REDD+ schemes, as well as the implications of global comparative research for challenges faced in those countries.

Both global comparative studies and national level work will be carried out seeking collaboration and complementarity with research institutions and other relevant partners and through networks strengthening South-South cooperation in research.

Partner Roles
As CIFOR is a 'centre without walls', all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 2. Partners' roles in Project 1, Output 1.

	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
Research partner name and country	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminate or advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	15	15	15	10	15	10	10	10	Y	Y
Indonesian Center for Environmental Law (ICEL), Indonesia	0	5	5	50	10	0	15	15	N	N
Lembaga Studi Pers and Pembangunan (LSPP), Indonesia	0	5	5	80	0	0	0	10	N	N
Rede de Desenvolvimento Ensino e Sociedade (REDES), Brazil	0	40	5	25	10	0	10	10	N	N
Centro de Estudios para el Desarrollo Laboral y Agrario (CEDLA), Bolivia	0	5	5	50	10	0	15	15	N	N
Central Institute for Economic Management (CIEM), Vietnam	0	40	5	25	10	0	10	10	N	N
Centre of Research and Development in Upland Areas (CERDA), Vietnam	0	5	5	50	10	0	15	15	N	N
Charles-Darwin University, Australia	0	0	0	50	25	0	25	0	N	N
Universitetet for miljø- og biovitenskap (UMB), Norway/Norwegian University of Life Sciences, Norway	5	5	10	20	30	0	30	0	N	N

Project 1, Output 2: Identification of institutional and technical arrangements that lead to implementation of REDD+ demonstration activities which are effective, efficient, equitable, and with co-benefits

Output Description

Research under this Output will contribute towards informing first-generation REDD+ demonstration activities by synthesizing existing knowledge about "what works", and to generate new knowledge by analysing their design and implementation. The results of this analysis and the tools to be developed will maximise learning about how to achieve outcomes from REDD+ demonstration activities that are effective, efficient, and equitable. In addition, lessons learned and best practices derived from the detailed assessments of first-generation REDD+ demonstration activities will inform and improve second-generation REDD+ demonstration activities.

CIFOR and its partners will conduct research on 20 to 30 REDD+ demonstration activities in nine countries. Initially, the target countries are Bolivia, Brazil, Cameroon, Tanzania, Indonesia, and Vietnam. Knowledge generated from this research will assist first-generation REDD+ practitioners to improve their performance in attaining relevant outcomes, provide guidance to design second-generation (post-2012) REDD+ activities, and will serve as one reference point for evaluating the success of national REDD+ policies and practices.

The research involves collecting data before and after implementation of study interventions to measure changes in carbon stocks, human welfare and other relevant outcomes. Where feasible, the research design will include comparisons between specific REDD+ demonstration activities and comparable sites that are not part of the REDD+ initiatives ("control sites"). The research will include not just impact evaluation (on the outcomes of REDD+) but also process evaluation (how REDD+ is implemented). In-depth (intensive) research at the 20 to 30 sites will be complemented by less detailed (extensive) data-gathering at a larger number of sites. A global database on REDD demonstration activities will be created and posted at a website for public access.

Changes from Previous MTP
The focus of this Outcome has considerable changed for the previous MTP. Analysis of barriers to REDD+ adoption at national level is now under Outcome 1, and this Outcome focuses solely on REDD+ demonstration activities at sub-national (local) level. There is increased emphasis on the livelihood consequences anticipated from REDD+ under different local or sub-national governance arrangements.

Alignment to CGIAR System Priorities
This Output falls completely within the CGIAR System Priorities, notably SP 3D "Sustainable Income Generation from Forests and Trees", and its specific goal: to improve opportunities for the market exploitation of a range of forest products and services by the poor, as it is intended to help improve new potential markets for the carbon services of forests.

Research Approach to International Public Goods
The IPGs pursued by CIFOR and its partners would take various forms. Global comparative study of REDD+ demonstration activities regimes analyses sub-national (local) initiatives put forward by diverse actors (countries, NGOs, advocacy organizations, and others) as a part of "readiness" phase of the international REDD+ architecture. Project-level as well as comparative studies across sites and countries will give the opportunity to reveal national REDD+ policy processes and outputs (specific policies and/or measures) and their implications for achieving effective, efficient and equitable outcomes from REDD+ at local

level, including livelihood benefits for forest-dependent poor. The research design and methodology will ensure that the data collected are comparable, so that generalisable conclusions can be reached.

Impact Pathways

At the international level, CIFOR will engage a group of opinion leaders and representatives of organizations drawn from among climate negotiators, the Collaborative Partnership on Forests, advocacy organizations, and the private sector. Strategic engagement with these actors in the design and dissemination phases for the global comparative analysis of proposed REDD+ architecture will help to inform the design of the analytical effort, as well as to cultivate them as key target audiences for the uptake of results. Specific efforts will be made to engage those in critical negotiation and decision roles for key policy processes (e.g. UNFCCC COPs). The expected outcome of this research is that the decisions on global REDD+ regime are informed by the best scientific knowledge, so that greater real reductions in carbon emissions are achieved in a manner that benefits local communities.

At national and sub-national levels, key decision makers shaping national policies on REDD+ design will be engaged in critical reflection of design options that are and are not likely to be effective in the context of different political-economic drivers, based on research findings.

Partner Roles

As CIFOR is a 'centre without walls', all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 3. Partners' roles in Project 1, Output 2.

	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
Research partner name and country	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter / tester	Disseminate or advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	15	15	15	10	15	10	10	10	Y	Y
University of North Carolina, USA	22.5	10	22.5	22.5	22.5	0	0	0	Y	N
Duke University, USA	22.5	10	22.5	22.5	22.5	0	0	0	Y	N
Rede de Desenvolvimento Ensino e Sociedade (REDES), Brazil	15	10	25	30	20	0	0	0	Y	N
Centro de Estudios para el Desarrollo Laboral y Agrario (CEDLA), Bolivia	10	20	20	30	20	0	0	0	Y	N
University of Melbourne, Australia	0	20	40	0	0	0	0	40	Y	N
Universitetet for miljø- og biovitenskap (UMB), Norway/Norwegian University of Life Sciences, Norway	0	25	10	25	30	0	0	10	N	N

Project 1, Output 3: Improved procedures and practices for estimating and managing carbon stocks of tropical forest landscapes

Output Description
This part of the Project will examine methodological issues related to measuring and monitoring forest carbon pools and setting the baselines for REDD+ implementation. It also includes research on managing and expanding forest carbon stocks by sustainable forest management and reduced forest degradation. The research is aimed at producing (i) better knowledge on the role of tropical forests in the global carbon and nitrogen cycles; (ii) cost-efficient methods for REDD+ baselines and for monitoring changes in forest carbon stocks; and (iii) sustainable forest management concepts inclusive of methods for managing and expanding forest carbon stocks, including specific issues related to tropical peatlands. CIFOR's work will focus on two areas for improvement: (i) landscape scale, project level carbon monitoring systems and (ii) improved approaches for estimating the effects of conversion of forests on the net greenhouse gas balance of the management system. Within this latter area, CIFOR will focus on improving the understanding of effects of forest conversion to fertilized production systems on soil N_2O emissions and the impacts of deforestation and forest degradation on soil carbon stocks. Peatlands will be a particular focus of the work.

Changes from Previous MTP
A manual on developing reference emission levels (REL) is planned for 2012, which draws on the 2010 Target on carbon estimation methods and the 2011 Target on decision support tools, as well as work on baseline scenarios.

Alignment to CGIAR System Priorities
This Output falls completely within the CGIAR System Priorities, notably SP 3D "Sustainable Income Generation from Forests and Trees", and its specific goal: to improve opportunities for the market exploitation of a range of forest products and services by the poor, as it is intended to help improve new potential markets for the carbon services of forests.

Research Approach to International Public Goods
Research under this Output will contribute to the development of standardized, widely accepted, credible, and scientifically sound methods for measuring and monitoring carbon emissions from deforestation and forest degradation as a basis for compensating reductions in such emissions from developing countries. CIFOR will contribute to the development of best practice methods for establishing baselines against which progress can be measured, and cost-effective systems for tracking the changes in the carbon pools of different types of forests, including peat forests. Research on this topic will include both analysis of existing data and modelling of forest carbon pools under different land use and forest management scenarios. New data collection and field-based research is planned to be carried out in Indonesia, Vietnam and Peru.

This Output can generate at least two types of IPGs:
- Generic tools and methods for measuring and monitoring forest carbon pools that have applicability beyond one nation's borders
- Scientific understanding of the role of forests in global carbon cycle, and the principles of managing this ecosystem service (carbon sequestration) across spatial and temporal scales for climate change mitigation.

Impact Pathways
CIFOR aims at informing and influencing national, regional and global policy processes and ensure that stakeholders have access to the best available science-based knowledge and

information on improved procedures and practices for measuring and monitoring forest carbon pools and managing carbon stocks of tropical forest landscapes. Thus, when carrying out inventories of forest carbon pools (e.g. for REDD+ schemes or for national reporting to UNFCCC), national entities, project developers, and other involved bodies can produce more accurate estimations of forest carbon pools than by just using global default values taken from the literature. This will help to better target climate change mitigation efforts, with attendant climate benefits as a result.

At the global level, CIFOR's main impact pathway will be through direct and indirect engagement with global climate policy processes, including the IPCC and UNFCCC/SBSTA, and by influencing institutions, including the World Bank's Forest Carbon Partnership Facility, the European Commission, and donor governments. CIFOR has also established a strategic partnership with the Division of Early Warning and Assessment of UNEP through a GEF grant on landscape scale carbon measuring and monitoring. Another global impact pathway would be through the publication of tested methods for measuring, monitoring, and managing forest carbon pools.

The impact pathway at national and local levels is through governments, forest managers, logging companies, scientific community and local stakeholders using specific tools and methods for measuring, monitoring, and managing forest carbon pools. In this respect, CIFOR will seek collaboration and complementarity with research institutions and other relevant partners such as ICRAF (focusing on mitigation in agricultural landscapes) and FAO (in the context of national forest programs and forest resources assessment) and through networks strengthening South-South cooperation in research.

Partner Roles

As CIFOR is a 'centre without walls', all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 4. Partners' roles in Project 1, Output 3.

	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
Research partner name and country	Problem / priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator or advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	15	15	15	10	15	10	10	10	Y	Y
University of Twente, Netherlands	15	15	20	10	15	0	10	15	Y	Y
Wageningen University, Netherlands	15	15	20	10	15	0	10	15	Y	Y
Institut Pertanian Bogor (IPB)/Bogor Agricultural University, Indonesia	15	0	15	10	15	10	15	20	N	N
University. of Palangkaraya, Indonesia	15	0	15	10	15	10	15	20	Y	N
University of Helsinki, Finland	0	0	30	40	30	0	0	0	Y	Y
University of Leicester, UK	0	0	30	40	30	0	0	0	Y	N
Global Environment Centre (GEC), Malaysia	10	0	10	10	10	20	20	20	Y	N
Institute of Pacific Islands Forestry (IPIF), United States Forest Service (USFS), USA	0	0	30	40	30	0	0	0	Y	Y
Macaulay Land Use Research Institute, UK	15	15	20	10	15	0	10	15	Y	Y
WRI, USA	0	0	30	40	30	0	0	0	N	N
World Agroforestry Center (ICRAF), Kenya	15	15	15	10	15	10	10	10	Y	Y
Wetlands International, Indonesia	0	0	30	40	30	0	0	0	Y	N
WWF Indonesia	0	0	30	40	30	0	0	0	Y	N
Instituto do Homem e Meio Ambiente da Amazônia (IMAZON), Brazil	0	0	30	40	30	0	0	0	Y	N
Winrock International, USA	0	0	30	40	30	0	0	0	Y	Y
Ministry of Forestry (MoF), Indonesia	0	0	15	50	15	0	20	0	N	N
Soil Research Institute, Indonesia	0	0	15	50	15	0	20	0	N	N
Center for Climate Risk and Opportunity Management in South East Asia and Pacific	0	0	30	40	30	0	0	0	N	N

(*CCROM-SEAP*), Indonesia										
SEKALA Foundation, Indonesia	0	0	30	40	30	0	0	0	N	N
Instituto Nacional de Investigacion y Extension Agraria (INIA), Peru	0	0	30	40	30	0	0	0	N	N
Research Centre for Forest Ecology and Environment (RCFEE), Vietnam	0	0	30	40	30	0	0	0	N	N
Universitetet for miljø- og biovitenskap (UMB), Norway/Norwegian University of Life Sciences, Norway	15	20	20	15	30	0	0	0	N	N
Instituto Boliviano de Investigación Forestal (IBIF), Bolivia	0	20	0	30	30	20	0	0	N	N

Project 2: Enhancing the role of forests in adaptation to climate change

Project Overview and Rationale

Forests, natural resources and people's livelihoods are all being adversely affected by global climate change. In addition to gradual change in precipitation and temperature patterns, the amplitude and frequency of weather-related disturbances, such as hurricanes, droughts and accompanying fires, and pests and diseases, are likely to increase. Weak institutional, political and economic conditions limit the adaptive capacity of developing countries, making their populations vulnerable to climate change, which threatens to undermine many of their livelihoods[3].

In many countries, climate change is predicted to undermine economic development and the ability to achieve the Millennium Development Goals (MDGs). The major challenge is to reduce the vulnerability of climate sensitive sectors, including forestry, energy and water resources to today's climate variability and to ensure that future development activities are appropriate to future climate contexts. Currently, many countries already have defined adaptation plans or projects but few are considering forests in adaptation.

Forests should be included in adaptation policies for two reasons, first because of their vulnerability and second because of their potential to help reduce the vulnerability of society to climate change. Many socioeconomic sectors are highly vulnerable to climate change and dependent on forest ecosystem services (e.g. hydropower or drinking water). Thus, an option to help maintain these sectors is the conservation and adaptive management of forests providing relevant ecosystem services. Forests have not been considered in most adaptation policies to date; as the sectors prioritized in adaptation (e.g. water, energy, or health) define strategies without considering the linkages with other sectors.

Reducing the vulnerability of forests and other sectors that depend on forests will require both mainstreaming adaptation into forest management (so that forest managers consider climate change threats on forests) and mainstreaming forests into wider adaptation strategies (so that non-forest stakeholders dealing with adaptation consider forests as potential adaptation measures). This will require developing guidelines for appropriate strategies in climate sensitive sectors, and then integrating climate concerns into national and sectoral economic planning.

Goal

The goal of the Project is to enhance the adaptation of tropical forests and forest-dependent livelihoods and economic sectors to the adverse effects of climate change, by improving methods used for assessing the impacts and costs of climate change on tropical forest goods and ecosystem services, and influencing policies to reduce vulnerability of human and forest ecosystems.

Objectives

1. To define and promote forest management practices that decrease the vulnerability of forest ecosystems and production systems to climate change.
2. To promote intersectoral planning that harnesses the potential of forest to help reduce the vulnerability of other sectors to climate change.

[3] IPCC, 2007. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry et al. (eds.), Cambridge University Press, Cambridge, UK.

Overall Alignment with CGIAR System Priorities
To comply with the Science Council MTP Guidelines, each Output is reported as aligned with one System Priority area based on alignment with Specific Goal statements (under the description of each Output). However, because the System Priorities are not mutually exclusive, and our research has multiple and nested goals, the Project is actually also well aligned with other SPs, particularly:

SP 3D (Sustainable Income Generation from Forests and Trees).
- Specific goal: to improve opportunities for the market exploitation of a range of forest products and services by the poor

Project 2, Output 1: Identification of strategies for adapting sustainable forest use and management to the context of climate change

Output Description
This Output focuses on how climate change will impact forests, the provision of forest-related goods and services, and forest people. It also focuses on how to facilitate the adaptation of forest and forest people by adapting forest management practices and policies. To do this, tools and methods for assessing the impacts of climate change on forest will be developed, as well as adaptive management strategies. This Output identifies the forest areas and forest communities most vulnerable to climate change and climate variability, with special attention given to effects on women and children. Related research will identify external interventions that work to strengthen adaptive capacity under different contexts. Exploring synergies between mitigation and adaptation in forests will help to identify win-win practices for people, forests and the climate.

This Output also assesses how forest communities are able to respond to climate induced changes. The tools and methods should assist those directly and indirectly involved in forest management and conservation with efforts to change practices to adapt to climate change.

Changes from Previous MTP

This Output has evolved from CIFOR's previous MTP with an increased focus on three aspects. First, more attention has been given to the incorporation of gender issues in analyzing vulnerability and defining adaptation of forest-dependent communities. Second, the analysis of forest adaptation has been placed into the broader framework of forest and conservation planning processes, as landscape approaches are relevant for forest adaptation and many conservation organizations are starting to incorporate climate change adaptation into their agendas. Third, more attention has been given to the linkages between adaptation and mitigation in the forestry sector because of the potential synergies between them: well-designed mitigation projects can contribute to adaptation and adaptation can increase the success of mitigation projects. However, there is presently insufficient understanding of the potential for synergies or conflicts between mitigation and adaptation at local, national, and international levels.

Alignment with CGIAR System Priorities
This Output falls within the following CGIAR System Priority:

SP 4A (Integrated Land, Water and Forest Management at Landscape Level).
- Specific goal 2: to enhance the management of landscapes through changing stakeholder awareness and capacity for social-ecological planning at landscape and farm levels.

Research Approach to International Public Goods

This Project can generate at least two types of IPGs (from to the typology given by Harwood et al., 2006[4]):

- Tools and methods for research or development that have applicability beyond one nation's borders.
- Scientific understanding of the nature of ecosystem problems, their driving factors, their consequences/interactions with poverty and productivity; and the principles of managing ecosystems (across spatial and temporal scales).

To achieve the generation of these IPGs, tools, methods and scientific results are made available to the international scientific community and policymakers through publications in international journals, policy briefs and training materials.

Research on the climate change threats to ecosystems and their consequences are conducted in different biomes and socioeconomic contexts but with similar approaches, for allowing comparisons and synthesis relevant for the international community. Research sites will be located across Africa, so as to ensure that derived insights are broadly applicable to the continent's forests.

Impact Pathways

The research aims at influencing national forest policies in selected countries, companies, and forest stakeholders at local level. The anticipated shift in policies will be towards the integration of adaptation in forest policies, in a way that leads to improved benefits for forest communities and the local and global environment.

The impact pathway to national and local governments, forest managers, logging companies, scientific community and local stakeholders is through specific tools and methods and policy reforms in selected countries to support stakeholders change their management practices. In this respect, CIFOR will seek partnerships with relevant forest communities, forest managers, donors, scientific community, governmental partners and NGOs to provide critical information for mainstreaming adaptation into forest management.

Another impact pathway is through the publication of tested methods for vulnerability assessment, and criteria and indicators for adaptive management of forests.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

[4] R. R. Harwood, F. Place, A.H. Kassam and H. M. Gregersen. 2006. International Public Goods through Integrated Natural Resources Management Research in CGIAR Partnerships. *Experimental Agriculture,* 42:375-397

Table 5. Partners' roles in Project 2, Output 1.

	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
Research partner name and country	Problem / priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator or advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	15	15	15	10	15	10	10	10	Y	Y
CATIE, Latin America	15	15	20	10	15	10	10	15	Y	Y
CIRAD, France	15	10	20	10	20	0	10	15	Y	Y
IUFRO	15	10	15	15	15	15	5	10	N	N
ICRAF, Indonesia and Philippines	15	10	15	15	15	15	5	10	N	N
The WorldFish Centre, Malaysia	15	10	15	15	15	15	5	10	N	N
IRD, France	15	10	15	15	15	15	5	10	N	N
University of East Anglia, UK	15	10	15	15	15	15	5	10	N	N
University of Marburg, Germany	15	10	15	15	15	15	5	10	N	N
Humboldt University, Germany	15	10	15	15	15	15	5	10	N	N
SEI Oxford, UK	15	10	15	15	15	15	5	10	N	N
University Guelph, Canada	15	10	15	15	15	15	5	10	N	N
INIA, Spain	15	10	15	15	15	15	5	10	N	N
University Paris 6, France	15	10	15	15	15	15	5	10	N	N
University Bangui, CAR	5	0	25	30	25	0	5	10	N	N
University Kisangani, DRC	5	0	25	30	25	0	5	10	N	N
CILSS, West Africa	5	0	10	10	15	15	25	25	N	N
Network of INIAs, Latin America	5	0	25	30	25	0	5	10	N	N
The Nature Conservancy, Latin America	5	0	15	25	15	15	20	5	N	N
WWF, Indonesia	5	0	15	25	15	15	20	5	N	N
COMIFAC, Central Africa	15	0	5	10	20	15	25	10	N	N

Project 2, Output 2: Identification of roles and potentials of forests to contribute to reduced social vulnerability beyond the forestry sector

Output Description

This Output contributes towards developing effective tools and methods for identifying the most critical forest ecosystem goods and services to reduce vulnerability of other sectors (agriculture, energy, water) in the context of climate change and assessing the vulnerability of other sectors and stakeholders dependant on forest ecosystem services. In addition, the Output will assess effective approaches for fostering cross-sectoral adaptation planning involving the forest sector and other economic sectors. It aims at fostering the development of ecosystem-based adaptation, i.e. a set of adaptation policies or measures that consider the role of ecosystem services in reducing the vulnerability of society to climate change using a multi-sectoral and multi-scale approach.

In order to harness the potential of forests to reduce vulnerability, land-use planning and governance arrangements (regulatory policies, incentives and decision processes) often need to change. Thus the research contributes towards addressing current deficiencies in land-use planning and governance and developing approaches for fostering cross-sectoral planning in adaptation policies. The research explores how to involve national and regional governments, local communities, private companies and NGOs in managing ecosystems for reduced vulnerability of people and economic sectors to climate change.

The research deals with financial mechanisms for adaptation, especially payments for ecosystem services, which can be an effective mechanism for reducing vulnerability related to the provision of forest ecosystem services. The research identifies effective governance approaches for empowering forestry organizations to influence national and international decision-making on adaptation.

Changes from Previous MTP

The evolution of this Output has been characterized by an increased focus on three aspects. First, increased attention has been given to the concept of Ecosystem-Based Adaptation and its implementation in vulnerability assessment and adaptation planning. This is in line with recent developments in international negotiations on climate change, where several countries have started to propose ecosystem-based approaches to adaptation. Second, more analysis of governance systems across scales and proposals for adaptive governance have been incorporated in this Output. Third, economic analysis of ecosystem-based adaptation and financial mechanisms have become increasingly important within this Output, because economic valuation is a powerful tool for demonstrating the efficiency of investment in forest ecosystem services for mitigating social vulnerability.

Alignment with CGIAR system priorities

This Output falls within the following CGIAR System Priority:

SP 4A (Integrated Land, Water and Forest Management at Landscape Level).

- Specific goal 1: to develop analytical methods and tools for the management of multiple use landscapes with a focus on sustainable productivity enhancement.
- Specific goal 2: to enhance the management of landscapes through changing stakeholder awareness and capacity for social-ecological planning at landscape and farm levels.

- Specific goal 5: creating multiple benefits and improved governance of environmental resources through the harmonization of inter-sectoral policies and institutions.

Research Approach to International Public Goods

This Output can generate the same two types of IPGs (from to the typology given by Harwood et al., 2006) as denoted for Output 1. Case studies on intersectoral linkages, policy making and financial mechanisms for adaptation are compared among sites to produce conclusions that are relevant for the international community. A common methodological framework has been developed to ensure that specific cases can be integrated and compared, so as to generate broadly applicable insights about how local environmental services from forests can help to ensure the reliance of other sectors.

To achieve the generation of these IPGs, tools, methods and scientific results are made available to the international scientific community and policymakers through publications in international journals, policy briefs and training materials.

Impact Pathways

The research under this Project aims at influencing global policy processes and funding for climate change (including adaptation funds), national policies in selected countries, civil society and companies beyond the forestry sector, and other stakeholders at the landscape level. The anticipated shift in policies will be towards improved integration of forests in adaptation strategies, so that vulnerability beyond the forestry sector is more effectively reduced. In the process, it is anticipated that greater co-benefits for the forest dependant poor may be generated from investment in forest based adaptation than in alternative adaptation strategies.

An impact pathway at the global policy level will contribute to mainstreaming forests into adaptation. This will be achieved through comparative studies on the cost-effectiveness of different policy measures and on specific adaptation measures, such as payments for ecosystem services. The results of these studies will then feed into the global policy process through IPCC and UNFCCC/SBSTA, or by influencing the development of several emergent adaptation funding facilities.

The impact pathway to national and local governments, civil society, companies, and other stakeholders will be through specific recommendations on adaptation policy in selected countries to support the integration of forest in adaptation.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 6. Partners' roles in Project 2, Output 2.

	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
Research partner name and country	Problem / priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator or advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	15	15	15	10	15	10	10	10	Y	Y
CATIE, Latin America	15	15	20	10	15	10	10	15	Y	Y
CIRAD, France	15	10	20	10	20	0	10	15	Y	Y
IUFRO	15	10	15	15	15	15	5	10	N	N
ICRAF, Indonesia and Philippines	15	10	15	15	15	15	5	10	N	N
The WorldFish Centre, Malaysia	15	10	15	15	15	15	5	10	N	N
IRD, France	15	10	15	15	15	15	5	10	N	N
University of East Anglia, UK	15	10	15	15	15	15	5	10	N	N
University of Marburg, Germany	15	10	15	15	15	15	5	10	N	N
Humboldt University, Germany	15	10	15	15	15	15	5	10	N	N
SEI Oxford, UK	15	10	15	15	15	15	5	10	N	N
University Guelph, Canada	15	10	15	15	15	15	5	10	N	N
INIA, Spain	15	10	15	15	15	15	5	10	N	N
University Paris 6, France	15	10	15	15	15	15	5	10	N	N
University Bangui, CAR	5	0	25	30	25	0	5	10	N	N
University Kisangani, DRC	5	0	25	30	25	0	5	10	N	N
CILSS, West Africa	5	0	10	10	15	15	25	25	N	N
Network of INIAs, Latin America	5	0	25	30	25	0	5	10	N	N
The Nature Conservancy, Latin America	5	0	15	25	15	15	20	5	N	N
WWF, Indonesia	5	0	15	25	15	15	20	5	N	N
COMIFAC, Central Africa	15	0	5	10	20	15	25	10	N	N

Project 3: Improving livelihoods through smallholder and community forestry

Project Overview and Rationale

Approximately 400 million people live in or adjacent to tropical forested regions, of whom many are poor and depend on forests for income[5]. Forest-based activities in developing countries provide about 30 million jobs in the informal sector, as well as 13-35 percent of all rural non-farm employment[6]. Developing countries produce $30-40 billion worth of timber and processed wood products each year, although only a small portion of this currently benefits poor households.

At the same time, there is rising global demand for the products that smallholder forestry can provide. With rising prices for high value species, such as teak and mahogany, the potential returns to small scale forestry are becoming an attractive option for small scale foresters. In addition, there is rapid growth of domestic markets for forest products for fuelwood and charcoal, poles, construction timber, low-cost furniture, medicinal plants and other non-timber forest products. However, appropriate silvicultural techniques are often lacking for small scale cultivation of these species, so as to meet the quality demands of premium markets. In particular, there is a need for the development of silvicultural systems that offer good returns, reasonable lags to first harvest, manageable risks, and acceptable asset liquidity on a small scale. This needs to be accompanied by research on markets and institutional arrangements, so as to help reduce transaction costs, utilise opportunities for economies of scale and ensure that the products produced meet the demands of potential buyers.

Forests also offer important subsistence contributions to the well-being of the poor. The World Bank estimates that 90 percent of the 1.2 billion people living in extreme poverty depend on forest resources for some part of their livelihood. Approximately two billion people depend primarily on fuelwood, charcoal and other biomass fuels for their energy. The World Health Organization (WHO) estimates that two billion people rely on traditional medicines for their health, most of which come from forests. Hunting and fishing provide over 20% of household protein requirements in 62 developing countries, and much of this takes place in forests. There are marked differences between males and females in forest use, both in terms of consumption products and marketed products[7]. There is need to better understand whether and how international investments can enhance these contributions.

Widespread changes in forest governance are occurring that favour strengthened local rights over forest resources and more secure land tenure with positive impacts for access, sustainable resource use and management, and intensification of production. It is estimated that at least a quarter of the forest estate in developing countries is now under community control, and this is likely to expand. These changes may enable the adoption of enhanced management practices in a manner not previously possible.[8]

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[5] Chomitz K. et al. 2006. At Loggerheads? Agricultural Expansion and Poverty Reduction in Tropical Forests. World Bank Policy Research Report http://go.worldbank.org/TKGHE4IA30

[6] World Bank 2003. *World development report 2003.*Washington, D.C.: The World Bank.

[7] Perez, M.R., Ndoye, O., Eyebe, A., Ngono, D.L. 2002. A gender analysis of forest product markets in Cameroon. Africa Today. 49: 97-126.

[8] White, A. and Martin, A. 2002. Who owns the world's forests? Washington D.C.: Forest Trends.

Underlying the focus on smallholder and community forestry is the assumption that production and marketing of forest products can be efficient, sustainable and competitive with alternative returns to the assets and skills of rural populations. Thus, a key overall research question is: what interventions offer the greatest potential to improve the contribution of smallholder production practices to local livelihoods?

Goal

This Project's goal is to inform a new global understanding of the potential for enhancing the contribution of smallholder and community forests to the well-being of the rural poor. It is intended that CIFOR's research will improve the way smallholder and community forestry concerns are supported by extension programmes and rural development initiatives, thereby improving opportunities for smallholder and community producers.

Objectives

1. To identify enhanced technical practices that facilitate sustainable smallholder and community forestry and secure safety-nets from forests
2. To propose tools, guidelines and approaches that strengthen local organizations and forest enterprises to enhance outcomes from smallholder and community forestry
3. To recommend policies and approaches that promote sustainable livelihoods through smallholder and community forestry

Overall Alignment with CGIAR System Priorities

This Project largely aligns with System Priority 3D: Sustainable income generation from forests and trees. To comply with the Science Council MTP Guidelines, each Output is reported as aligned with one System Priority area based on alignment with Specific Goal statements. However, because the System Priorities are not mutually exclusive, and our research has multiple and nested goals, the Project is actually also well aligned with other SPs. Much of the research is focussed on markets (especially Outputs 2 and 3) and thus is aligned with system priority 5B, "Making international and domestic markets work for the poor". Output 2 has a focus on rural producer organisations, and thus the research also addresses 5C, "Rural institutions and their governance".

Project 3, Output 1: Identification of enhanced technical practices that facilitate sustainable smallholder and community forestry and secure safety-nets from forests

Output Description

This Output is concerned with productive and sustainable smallholder and community forest management to improve income and secure safety-nets from forest resources. Therefore, the research is designed to identify technical and management practices and innovations that improve overall productivity and sustainability. The research will then identify suitable 'recommendation domains' so as to target opportunities for replication. Given the dependence of women and other marginalised groups on forests for their sustenance, and the important role women often play in managing forest resources, the research explicitly recognises the gender dimensions of forest use and management.

The planned research will identify enhanced silvicultural practices for smallholder and community management of high value products from natural forests and plantations. An important research dimension is how the trade-offs amongst these different forest products

and services such as fuelwood, high value timber and honey production should be managed. Finally the research will analyse market and non-market incentives that can help support identified improvements to management of smallholder and community forests.

Changes from Previous MTP

In general, the output remains largely unchanged from the previous MTP.

Alignment to CGIAR System Priorities

This Output largely aligns with System Priority 3D, in particular specific goal 1 to "improve opportunities for the market exploitation of a range of forest products by the poor".

Research Approach to International Public Goods

Detailed case studies will be conducted on technical practices in a number of target countries: Brazil, Bolivia, Burkina Faso, Cambodia, Cameroon, Ethiopia, Indonesia and Zambia. Research will enhance local practices by making management and technical information on how rural people can benefit more from forest resources available to extension and development officials. Through cross-country comparative analysis the results and lessons will be of more general use, and fed into international and regional processes for technical guideline development that consider both productivity and environmental dimensions (e.g. global certification bodies regularly update their guidelines for certification).

Key research questions include: (a) How should high value timber be managed on smallholdings? (b) How can the trade-offs amongst different forest products and services be managed? (e.g. between fuelwood and honey production; between products favoured by different social groups or genders) (c) What technical management innovations have been successfully applied in smallholder and community production systems, and where can they be replicated? (d) In what way can scientific knowledge complement local ecological knowledge to improve smallholder and community forest management strategies?

Many technical practices are better suited to large timber operations, and the bulk of the world's technical forestry research is directed towards such operations. CIFOR, with its emphasis on smallholders and its long history of work on non-timber forest products is ideally placed to lead these global research efforts on technical practices for smallholders.

Impact Pathways

At the global level, CIFOR research will influence the way major players in technical guideline development think about the way smallholder and community foresters can meet international standards (e.g. through certification) and can enhance their operations in terms of productivity and sustainability. Target audiences include those players involved in international and regional processes of guideline development (e.g. via WWF, EU, industry associations, ITTO, IUFRO, and certification bodies). The outreach to these global players will include articles in influential academic journals, keynote presentations on CIFOR research at the major forestry congresses, and background papers for the FAO State of the World's Forests Report and UNFF. Certain guideline changes at the international level may help to influence what happens on the ground. For instance, once new certification guidelines are in place, all certifiers working with local producers would need to apply the guidelines. Many guidelines are better suited to large players rather than smallholders, so part of the research would result in making guidelines more applicable to smallholders.

At the country level, CIFOR research and outreach will target the intermediaries (e.g., government extension staff and NGOs) who work with smallholders and communities. In these situations, the research would be aiming at improved management practices, as many non-timber forest products have had very limited research focus, and as many management practices are not focussed on smallholder production.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 7. Partners' roles in Project 3, Output 1.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ Tester	Disseminator/ advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	10	15	15	20	25	5	5	5	Y	Y
CIRAD	30	20	10	5	10	5	10	10	Y	N
CFA	20	30	10	25	5	0	5	5	Y	N
ANAFOR, Cameroon	0	0	10	40	30	0	0	20	Y	N
ICRAF, Cameroon	20	10	20	10	10	10	10	10	Y	N
FAO, Cameroon	15	15	10	10	20	0	30	0	Y	Y
CATIE, Costa Rica	20	20	30	0	30	0	0	0	Y	N
ICRAF, Indonesia	20	10	20	10	10	10	10	10	Y	N
Forestry Socio Economic and Policy Research & Development, Indonesia	10	10	20	20	10	10	10	10	Y	N
Seed Technology Research Institute, Indonesia	0	0	10	40	30	0	0	20	Y	N
Forestry and Nature Conservation Research & Development Center, Indonesia	20	20	30	0	30	0	0	0	Y	N
Forestry Research Institute, Banjarbaru, South Kalimantan, Indonesia	20	10	20	10	10	10	10	10	Y	N
Forestry Research Institute, Indonesia	0	0	10	40	30	0	0	20	Y	N
Biotechnology Research Center, Indonesia	20	10	20	10	10	10	10	10	Y	N
Swedish University of Agricultural Sciences, Sweden	10	10	10	30	30	0	0	10	Y	Y
FSIV, Vietnam	20	20	30	0	30	0	0	0	Y	N

Project 3, Output 2: Tools, guidelines and approaches that strengthen local organizations and forest enterprises to enhance outcomes from smallholder and community forestry

Output Description

Limited access to credit, appropriate technical assistance and inability to utilise economies of scale in forestry operations are key constraints to the viability of improvements in the productivity of smallholder forestry. In community forestry, improved management is dependent upon effective methods for collective decision making. Thus, a key focus of this research will be to investigate institutional models to identify approaches that are effective in addressing these necessary conditions for management improvements.

This Output will identify effective interventions that enhance smallholder access to information and markets and will illustrate how producers can capture a greater portion of the forest product value chains (in terms of value added, certification, fair trade, greater negotiating power, use of modern technology such as cell phones and internet). Special attention will be paid to how the situation of women in the forest market chain can be improved.

Research under this Output will examine how smallholder and community producers can overcome constraints to gains in efficiency, reduce costs, and capture higher price for their products. Policy recommendations and guidelines should offer real possibilities for small-scale entrepreneurs to move from informal, ad hoc activities to efficient, productive small-scale forest enterprises and a greater portion of the value chain. Limited financing for smallholder and community forestry enterprises is a major constraint hence the need for comparative analysis of rural financing mechanisms.

Changes from Previous MTP

This Output is almost the same as in the previous MTP except that two of the 2011 Output Targets have been revised to form three specific output targets, in 2012 one generic Output Target related to a synthesis of organizational development has been replace by two specific papers on beekeeping associations and furniture producer networks.

Alignment to CGIAR System Priorities

This Output largely aligns with System Priority 3D, in particular specific goal 1 to "improve opportunities for the market exploitation of a range of forest products by the poor". Increased market opportunities are being sought through strengthened local organisations, improved financing mechanisms and enhanced quality control, amongst other means.

Research Approach to International Public Goods

Research under this Project will help strengthen local organizations and forest enterprises by making information available to service providers for such organisations and enterprises on how markets can be better accessed by smallholders and communities and how non-market values can be maintained and enhanced. The work will help smallholders and communities improve their partnerships with forest industries.

Detailed case studies are being conducted in a number of target countries: Brazil, Bolivia, Burkina Faso, Cameroon, Ethiopia, Guinea, Indonesia, Vietnam and Zambia. Through cross-

country comparative analysis the results and lessons are generalisable, with a focus on access to markets, market information, rural financing, value chain benefit distribution and improved co-ordination amongst producers.

Key research questions include: (a) What types of organizations, institutional arrangements and business models are likely to optimize benefits (both market and non-market) for smallholder and community producers? (b) Under what conditions can small-scale and community producers achieve gains in efficiency, reduce costs, and capture a higher price for their products? (c) What is required to assist small-scale entrepreneurs make the transition from mainly, informal ad hoc activities to well-organized, productive small-scale, forest-based enterprises in which there is an incentive for reinvestment?

CIFOR is well placed to work on this Project since it builds on previous research on forest product markets, but now with a focus on market organisations and enterprises.

Impact Pathways

At the global level, CIFOR research will influence the way that major stakeholders and opinion leaders in the forestry sector support the role of organisations (e.g. producer groups, community organisations) in improving outcomes for poor smallholders and communities. The outreach to these global forestry players (e.g. UNFF, World Bank, IUFRO, key international NGOs) will include articles in influential academic journals, presentations on CIFOR research at major congresses, and direct engagement with a select number of global players. At the national level, target audiences include the organisations themselves. But wide-scale impact will be sought through targeting the networks and the agencies that deal with such organisations: development and conservation NGOs (e.g. including global players such as CARE, WWF), national extension agencies and private companies. Research results are expected to change the information and approaches used by the networks and agencies, which in turn is expected to change the way local organisations function and/or change the information they disseminate. Changes at the local level could include: use of novel market information systems; improved negotiating power vis-à-vis more powerful market actors; better approaches to quality control and reduced transaction costs.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

In each of the sites where we are operating, we have local partners who, in general, are working on specific cases. CIFOR works on the global products in conjunction with some of the local partners.

Table 8. Partners' roles in Project 3, Output 2.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	10	15	15	20	25	5	5	5	Y	Y
Australian National University	30	30	10	5	5	5	10	5	Y	Y
UGPPK (Union des Groupements de Productrices de Produits de Karite), Burkina Faso	5	30	20	40	5	0	0	0	Y	N
Tree Aid, Burkina Faso	5	20	5	0	10	10	25	25	Y	N
SNV Netherlands Development Organisation, Cameroon	20	10	10	10	10	30	5	5	Y	N
Wondo Genet College of Forestry, Ethiopia	10	10	15	25	10	5	10	15	Y	N
IRD, France	20	10	10	30	10	0	0	20	Y	N
Inter-Cafe IPB, Indonesia	10	10	20	10	20	10	10	10	Y	N
Pokja Hutan Rakyat Lestari - Gunung Kidul, Indonesia	10	20	10	10	10	20	10	10	Y	N
Faculty of Forestry IPB, Indonesia	10	20	20	10	10	10	10	10	N	N
University of Lampung, Indonesia	10	10	10	30	30	0	0	10	Y	N
NAFRI, Lao PDR	10	10	5	30	20	5	10	10	Y	N
SNV, Zambia	20	10	10	10	10	30	5	5	Y	N
Shanduko, Centre for Agrarian and Environmental Research,Zimbabwe	10	10	10	30	30	0	0	10	N	N

Project 3, Output 3: Recommendations for policies and approaches that promote sustainable livelihoods through smallholder and community forestry

Output Description

Successful involvement of smallholders and communities in forestry depends on appropriate institutional and legal frameworks and supportive national policies. Research will focus on identifying the policy conditions under which pro-poor and sustainable outcomes emerge. The research aims to get poverty alleviation strategies, programmes and policies to take into account forests and forestry in ways that promote rural livelihoods, especially those of marginalised people including women and children. The role of forest products in helping people meet subsistence and safety-net needs has been documented but rarely well quantified. Research under this Output will generate data to move beyond generalities about the importance of forests to the specific evidence required to get forest-related issues incorporated into mainstream poverty reduction strategies and policies.

Research under this Output will attempt to improve understanding of the role of forests in human well-being and their contribution to overall household livelihood strategies in terms of income diversification, gender, safety nets and seasonal gap filling, and the policy conditions best suited for enhancing smallholder and community forestry benefits. The bulk of this work involves analysis of a global data set compiled from micro-economic household surveys by a cohort of PhD students with a broad household livelihoods focus. These results will be analysed, so as to identify potential points of intervention, where rural development investment may help to improve forest contributions to poverty alleviation goals.

Related research will focus on specific forest product markets and the policy and regulatory impediments that limit such markets for smallholders and communities. The research will also propose policies to support better smallholder and community partnerships with private purchasers. In an era of community-based and decentralised forest management approaches, the research will also offer a better understanding of the way tenure enables improved forest and tree management and livelihood outcomes. There will also be analyses of the impacts (in terms of local incomes, community rights and environmental conditions) of different models of community forestry (e.g. those facilitated by NGOs, autonomously-developed schemes; those based on community ownership, others based on community-state joint management)

Changes from Previous MTP

This Output is almost the same as in the previous MTP except two generic papers have been replaced by four specific papers on cover the same topics. There is also greater specificity in the outputs targets for 2012.

Alignment to CGIAR System Priorities

This Output largely aligns with System Priority 3D, in particular specific goal 1 to "improve opportunities for the market exploitation of a range of forest products by the poor".

Research Approach to International Public Goods

The key questions tackled under this Output are likely to result in broadly applicable insights. Such questions include: (a) What is the contribution of smallholder and community forestry to rural livelihoods? (b) What are the costs posed by regulatory impediments to smallholder and community commercialization, and how can these be reduced? (c) How do forest-tenure and management regimes influence the outcomes from smallholder and community forestry? (d) How can policies be tailored to improve livelihoods of marginalised groups, in particular Indigenous people, women and children?.

PhD studies have been facilitated in 20+ countries, and case studies on policy constraints and opportunities to pro-poor forestry are being conducted in a number of target countries: Bolivia, Burkina Faso, Cameroon, Ethiopia, Indonesia, Vietnam and Zambia. Through cross-country comparative analysis the results and lessons are generalisable, and provide information on the forest-poverty nexus that can be widely applied in other humid forest and dry forest sites.

CIFOR is well placed to work on this Project since it builds on previous research on the relations between forests and poverty. In establishing the PhD network and numerous case studies across the globe in the last few years, CIFOR is in an excellent position to make significant advances in understanding. CIFOR is already widely recognised as an authority in the arena of forests and poverty.

Impact Pathways

At the global level, CIFOR research will influence the way that major stakeholders and opinion leaders support the role of forests for poverty alleviation, in the context of smallholder and community forestry. Target audiences include the World Bank, the major bilateral donors (via such forums as the Poverty and Environment Partnership – PEP), the Collaborative Partnership on Forests (CPF), the United Nations Forum on Forests (UNFF) through its objective on 'forests for people, livelihoods and poverty eradication', and academic audiences, so that the next generation of forest-livelihood courses are heavily reliant on CIFOR research. The outreach to these global players will include articles in influential academic journals, keynote presentations on CIFOR research at the major forestry congresses, and background papers for the FAO State of the World's Forests Report, PEP and UNFF.

At the country level, CIFOR research and outreach will aim to influence the national policy environment. Policy engagement will be with the key analysts and advisors, both in government and civil society, and with the in-country multi- and bi-lateral actors that have policy influence.

The specific policies that will be considered will be those related to poverty alleviation strategies (e.g. as captured in PRSPs), sectoral forestry polices (e.g. those that deal with forest product transport), and extra-sectoral policies that impinge on forest-based poverty alleviation (e.g. land tenure and trade policies). CIFOR research is expected to lead to, for example, greater consideration of beneficial conditionalities regarding forests and forestry in poverty alleviation strategies, reduced transaction costs in marketing forest products as a result of simplified regulations, and more secure access to forest products as a result of tenure reform.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the

contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

In each of the sites where we are operating, we have local partners and/or PhD students and their supervisors. CIFOR works on the global products in conjunction with some of the local partners, as well as with some strong leading academic institutes (e.g. University of East Anglia, Purdue University, Norwegian University of Life Sciences).

Table 9. Partners' roles in Project 3, Output 3.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	10	15	15	20	25	5	5	5	Y	Y
Charles Darwin University, Australia	10	10	10	30	20	0	0	20	Y	Y
Embrapa Amazonia Oriental, Brazil	20	10	10	10	10	30	5	5	Y	Y
INDEFOR, Equatorial Guinea	0	0	10	40	30	0	0	20	Y	N
Université Marian Ngouabi, Brazzaville, Congo	0	0	10	40	30	0	0	20	Y	N
University Kisangani, DRC	0	0	10	40	30	0	0	20	Y	N
IRET- CENAREST, Gabon	0	0	10	40	30	0	0	20	Y	N
IRAD, Cameroon	0	0	10	40	30	0	0	20	Y	N
University Bangui, CAR	0	0	10	40	30	0	0	20	Y	N
University of Dschang, Cameroon	0	0	10	40	30	0	0	20	Y	N
University of Yaounde I & II, Cameroon	0	0	10	40	30	0	0	20	Y	N
University of Alberta, Canada	10	10	10	30	30	0	0	10	Y	Y
Norwegian University of Life Science, Norway	10	10	10	30	20	0	0	20	Y	Y
Rhodes University, South Africa	0	0	10	40	30	0	0	20	Y	N
University of East Anglia, UK	20	10	20	20	20	0	0	10	Y	Y
Forestry Department, Zambia	20	10	10	10	10	30	5	5	Y	N
UNZA, University of Zambia, Zambia	0	0	10	40	30	0	0	20	Y	N
World Bank	20	10	10	10	10	0	40	0	Y	Y

Project 4: Managing trade-offs between conservation and development at landscape scales

Project Overview and Rationale

The future flows of forest ecosystem services will depend upon today's decisions about forest management, utilisation and conservation. While conservation efforts continue to develop and optimise the management of protected areas (PAs), most of the world's biodiversity occurs outside PAs, primarily in fragmented landscape mosaics often representing a range of land use categories. In developing countries the non-market values present in the mosaics are often accorded little priority, and the sustainable productive potential of different land areas are often inaccurately assumed during land use planning. This results in an inability to adequately assess, ultimately leading to an excessive loss of, environmental services, as well as reduced productivity of marketed agricultural and forestry products. To better optimise sustainable utilisation and conservation requires explicitly managing the inherent trade-offs between the two through effective land use allocation practices, as well as improved modalities for assessing and managing environmental services.

The delivery of forest services is increasingly supported through innovative incentive mechanisms such as payments for environmental services (PES), and, more recently, REDD+. Payments are often concentrated in four areas: carbon, watershed protection, aesthetic landscape value, and biodiversity protection. The core idea of PES is to use compensation as a tool to reconcile hard trade-offs between the interests of landowners (as actual or potential service providers) and service users. While the approach is logical, there remains considerable uncertainty about its efficacy in the field and whether implementation is equitable in that the primary beneficiaries will be the rural poor. The effectiveness and actual potential of PES can be assessed through comparisons to alternative conservation approaches such as integrated conservation and development projects (ICDPs) or community-based natural resources management (CBNRM).

Effective conservation is often dependent on clear access and management rights and responsibilities over land and natural resources. To facilitate this, attention should be given to the levels and extent of devolution for resource management authority, prior informed consent, just and timely compensation for appropriated land and resources, public debate and representation of environmental concerns, transparency and accountability in decision-making (including mechanisms for democratizing key decisions), and the relationship between conservation, human rights, and property rights.

Given the limited success thus far in establishing effective strategies for managing landscape mosaics and in conservation implementation that does not further compromise rural livelihoods, there is an urgent need for new approaches. This Project seeks to provide sound science to investigate alternative conservation approaches, develop methods for better prioritising locations for conservation activities, as well as appropriate incentives for the maintenance of conservation services.

Goal

The Project's goal is to shift policy and practice toward conservation and development approaches that are more effective, efficient and equitable in process and outcome. The research is intended to improve the conservation modalities of international conservation organizations and donor agencies, and to help foster land use allocation practices that better

incorporate non market values, productive potential and local subsistence uses of forest resources.

Objectives

1. To develop an improved empirical basis and methods for assessing and monitoring environmental services at a landscape level

2. To identify principles, methods and processes for optimizing conservation and livelihood values from the allocation of land use rights within forest landscapes.

3. To identify improved modalities and approaches to effectively support conservation in forest landscapes

The activities in this Project contribute to CIFOR's goal through the capture and analysis of information on biodiversity in fragmented landscape mosaics for better problem diagnosis, priority setting and decision-making. The contribution of integrating biodiversity conservation leads to improved land use principles and management practices for managed natural forests. Capacity building is central to the Project. It uses research activities to build capacity in several countries, particularly as the research involves young researchers from host countries.

Overall Alignment with CGIAR Strategic Priority areas

This work falls completely within CGIAR System Priorities, notably (SP 4a) – Integrated Land, Water and Forest Management at a Landscape Scale, based on the selection of only one System Priority per Output. However, if overlaps among priorities are recognized, in addition, it is aligned with the Priority 3d – Sustainable Income Generation from Trees and Forests, Priority 5c – Rural Institutions and Their Governance and with the Priority 5d - Improving research and development options to reduce rural poverty and vulnerability.

Project 4, Output 1: Development of improved empirical basis and methods for assessing and monitoring environmental services at landscape levels

Output Description

Research under this Output will focus on developing tools and approaches for assessment of ecosystem services (provisioning, regulating, cultural and supporting) provided within a landscape. Additionally, the Output will include a synthesis of how scientific and local knowledge can be adapted and integrated into more efficient environmental service monitoring methods in forest landscapes. Work under this Output will develop methods such as participatory interpretation of satellite images for reliably and rapidly assessing the linkages between land use changes and a wide range of ecosystem services provision, especially water and pollination services. A key area of research is the question of the impact of accessibility (physical and institutional) on patterns of exploitation, availability of forest resources and livelihood security. An important component of this Output is to assess how scientific and local knowledge can be integrated in more efficient environmental service monitoring methods in forest landscapes with a particular reference to gender and how women's knowledge and perceptions can be solicited and integrated.

Changes from Previous MTP

This Output remains essentially unchanged from the previous MTP. However, research into how REDD+ architecture and design that rely on such ecosystem services has been

integrated into this MTP, building on research undertaken in 2010-2011. This will ultimately result in a global review on effectiveness of regulation services provided by ecosystems and the fundamental utility of reward mechanisms that compensate for their sustained provision.

Alignment to CGIAR System Priorities

As this Output is mainly focusing on producing environmental services at landscape scale, it is primarily aligned with System Priority 4a – Integrated Land, Water and Forest Management at a Landscape Scale. It fits within Specific Goal 1: "To develop analytical methods and tools for the management of multiple use landscapes with a focus on sustainable productivity enhancement."

Research Approach to International Public Goods

The Project will develop methods for integrated assessment of environmental goods and services in forested catchments in several countries, including countries in Latin America, Sub-Saharan Africa and South East Asia (Columbia, Ecuador, South Africa, Laos and Indonesia). Key questions include: (i) What is the influence of landscape configuration on the provision of environmental services (ES - water, local climate, pollination, etc.) and forest products; (ii) How can scientific and local knowledge be used and adapted in defining and monitoring ES of forests; (iii) What is the effect of accessibility (physical and institutional) on patterns of exploitation, the availability of forest resources, and livelihoods security; (iv) How can spatially explicit linkages between land use changes and watershed service provision be rapidly and reliably assessed as well as compensated for?

The work will produce new generic tools that can be used to rapidly assess and monitor environmental services, to assist implementing agencies better design PES and REDD+ schemes. An understanding of service delivery is essential if one of the key features of such reward mechanisms is to be implemented: the payment based on conditional service delivery. The work will also yield fundamental understanding on the relationships between land cover characteristics and the maintenance of environmental services – such understanding, apart from being needed for practical implementation, will be suitable for publication in the international literature.

Impact Pathways

The main target groups are: local and national organizations involved in developing and implementing forest management guidelines, national governments, developers of PES/REDD+ schemes and international policy processes on forested watersheds and climate change adaptation and mitigation. Major direct beneficiaries and end users of the results and findings of this Project are extension services, farmer groups, forest enterprises, and NGOs working with farmers and communities. The Project will collaborate with national and local governments, industry, donors, and NGOs in the development of appropriate policies, strategies, and guidelines. It is expected that land use and forest planners involved with the analysis and research will have greater understanding of the cause-impact chains at landscape scales and the ecological and socio-economic variables affecting land-use.

CIFOR's work on biodiversity can influence major governmental and non-governmental conservation and development agencies by providing useful recommendations on institutional mechanisms and tools for analysing, monitoring and evaluating biodiversity in rural land-use strategies. Through scientific publications and active input to key events such as CBD, COP and major congresses, the role of landscape patches and diverse mosaics for biodiversity conservation will be demonstrated to influence international environmental

actors so that they will better invest and integrate protected areas as a part of their surrounding bio-cultural matrix (CBD, IUCN, WWF, WCS, CI, etc.).

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 10. Partners' roles in Project 4, Output 1.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination		In kind (Y/N)	Financial (Y/N)
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder		
CIFOR	10	15	15	20	25	5	5	5	Y	Y
Fundación Natura, Bolivia	10	15	5	15	10	15	15	15	Y	N
Forest Research and Development Agency (FORDA), Indonesia	20	20	5	5	5	5	10	30	Y	Y
Indonesian Institute of Science (LIPI), Indonesia	10	20	20	10	10	10	10	10	Y	Y
CIDIAT, ULA Mérida, Venezuela	5	10	10	60	10	5	0	0	Y	N
FSIV, Vietnam	10	10	10	20	10	30	10	0	Y	N
NAFRI, Laos	5	25	15	25	15	5	10	0	Y	N
NASA, USA	10	10	15	20	20	0	10	15	Y	N
People & Plants International, USA	0	15	15	15	15	10	15	15	Y	Y

Project 4, Output 2: Identification of principles, methods and processes for optimizing conservation and livelihood values from the allocation of land use rights within forest landscapes

Output Description

This Output will include research into on-going negotiation mechanisms and land tenure reforms in forested landscapes that can contribute to improved landscape management. The research will provide tools that facilitate clearer recognition of the trade-offs between conservation and development, and improve prioritisation of land use. CIFOR research will develop collaborative decision-making and monitoring tools for strengthening community involvement and meaningful participation in conservation and land use planning, especially by women and other disadvantaged stakeholders. Research will illuminate how governance processes and institutions at local and landscape levels can be reformed to become more legitimate, increase the security of rights, and balance customary norms and formal policy. The work will yield insights related to what kinds of land use rights lead to win-win situations for conservation and development, and will produce tools and approaches for assessing trade-offs, mitigating conflicts and conducting multi-stakeholder negotiations.

Changes from Previous MTP

The Output remains essentially unchanged from the previous MTP. However, as a large SDC-funded project, Landscape Mosaics, has recently been completed, a number of project outputs related to tenure, equity and monitoring are anticipate for 2011. A 2012 Output Target will carry forward the work through an assessment of the implementation of land use planning tools and approaches and consequent equity effects within local communities.

Alignment to CGIAR System Priorities

This Output is primarily aligned with System Priority 4a – Integrated Land, Water and Forest Management at a Landscape Scale. It fits within Specific Goal 1: "To develop analytical methods and tools for the management of multiple use landscapes with a focus on sustainable productivity enhancement." It also fits within Specific Goal 3: "To establish effective rights and opportunities to ensure that the poor benefit equitably from forest and tree resources". Finally, it helps to satisfy Specific Goal 4: "Creating multiple benefits and improved governance of environmental resources through the harmonization of inter-sectoral policies and institutions".

Research Approach to International Public Goods

CIFOR's previous work on water services, rights-based approaches, biodiversity assessment, multidisciplinary landscape surveys and forest restoration make it well placed to work in this area. The Output will also develop pragmatic generic approaches to help managers plan and implement more 'biodiversity-friendly' land use guidelines, and management activities, with reference to securing access and more optimised tenure rights for local communities. Key research questions include: (i) What kinds of governance processes (transparency, participation, accountability and capacity) in managing trade-offs at local and landscape levels lead to effectiveness and sustainable outcomes? (ii) What collaborative planning and monitoring tools can be used to identify trade-offs and promote community empowerment and participation in conservation? (iii) How do different interest groups perceive the legitimacy of customary norms and formal policies on resource access and management; (iv) What kinds of tenure regimes lead to positive outcomes for forests and marginalised people, including women? Work will be conducted throughout the humid tropics (Brazil,

Bolivia, Cameroon, Tanzania, Laos and Indonesia) in diverse policy settings. The research should lead to insights on land tenure and collective action that will change the way scientists and implementers think about forests and tenure, and about the role of collective action in shaping conservation and development outcomes.

Impact Pathways

At the country level, engagement will be with the key landscape planning agencies (both national and local government officials, NGOs and social movements), and policy analysts and advisors at the national level, both in government and civil society.

Furthermore, concepts of participatory negotiation mechanisms and examples of revised land use and land access models will be disseminated to development agencies and other key actors (UN agencies and processes, the World Bank, the regional development banks, the European Commission). The provided information will serve to demonstrate the necessary role of farmers for biodiversity-oriented landscape management and provide elements to reward them by different channels (especially the State, the private sector and environmental NGOs in corridor areas). More effective biodiversity conservation will allow environmental services of importance to the poor to be sustained longer into the future. In addition, enhanced *in situ* conservation will avert potential losses of important future use values for biodiversity in activities that benefit the poor, such as medical research and crop genetic improvement. More effective land use allocation practices should not only help to preserve environmental benefits, but should also help to ensure that intensively cultivated areas are located where productive potential is highest, thereby improving economic benefits.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 11. Partners' roles in Project 4,Output 2.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination		In kind (Y/N)	Financial (Y/N)
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder		
CIFOR	10	15	15	20	25	5	5	5	Y	Y
Alternatives to Slash-and-Burn Consortium (ASB), Kenya	10	25	20	10	15	5	10	5	Y	N
GTZ, Cameroon	20	20	15	20	10	5	5	5	Y	N
WCS, Cameroon	20	20	10	20	10	5	10	5	Y	N
WWF, Cameroon	20	20	10	20	10	5	10	5	Y	N
KfW, Cameroon	20	20	15	20	10	5	5	5	Y	N
Ministry of Forestry and Fauna,Cameroon	20	20	10	20	10	5	10	5	Y	N
DED, Cameroon	20	20	10	20	10	5	10	5	Y	N
Institute of Development Studies (IUED), UK	10	10	10	30	30	0	0	10	Y	Y
Swiss Federal Institute of Technology (EPFZ)	10	10	10	30	30	0	0	10	Y	Y
ICRAF, Mali	15	15	15	0	15	15	10	15	Y	Y
Center for Social Forestry, University of Mulawarman, Samarinda, Indonesia	5	5	5	5	10	10	10	50	Y	Y
District Governments and Forestry Departments of Malinau and West Kutai, East Kalimantan, Indonesia	10	10	10	10	20	10	10	20	Y	Y
Ministry of Forestry, and its Center for Forestry Education and Training (CFET), Indonesia	20	10	10	10	10	10	10	20	Y	Y
International Model Forest Network, Canada	20	10	10	10	10	10	10	20	Y	Y
UNILA (University of Lampung), Indonesia	10	10	10	30	30	0	0	10	Y	N
Mitra Kutai and Kutai National Park Authority, Indonesia	30	0	35	0	0	25	0	0	Y	N
Inspirit Inc. , Indonesia	20	0	30	0	0	30	20	0	Y	N
RECOFTC, Indonesia	40	0	30			30	0	0	Y	N

National Agricultural and Forestry Research Institute (NAFRI), Laos	10	10	10	30	30	5	5	0	Y	N
IUCN/CEESP, Switzerland	10	15	20	20	20	5	5	5	Y	Y
Ministry of Environment, Sierra Leone	10	10	10	30	30	5	5	0	Y	N
Ministry of Forestry, Liberia	10	10	10	30	30	5	5	0	Y	N
University of Kisangani	10	10	10	30	30	0	0	10	Y	N

Project 4, Output 3: Identification of improved modalities and approaches to effectively support conservation in forest landscapes

Output Description

This Output's research will assess the comparative efficacy of alternative conservation modalities under different contexts, in terms of forest conservation and effects on forest dependant people under different landscape conditions, This analysis will identify the conditions under which PES could be more effective in delivering ecosystem services and improved livelihoods than conventional ICDP interventions, and the key design elements that are necessary for effective PES schemes. In addition, CIFOR will analyse whether alternative institutional models (including extractive reserves, national parks, protected areas and indigenous reserves) are effective in buffering deforestation, while fostering effective local engagement and empowerment. Another component of this Output will comprise a comparative assessment of the long-term impacts of donor-funded biodiversity conservation to provide a framework for "best practice" in terms of delivering optimum outcomes for, and better integration of, conservation and development.

Changes from Previous MTP

The Output remains largely unchanged from the previous MTP. As an evolution of the prior work, an Output Target for 2012 is added on a comparative assessment of the long-term impacts and effectiveness of donor funded biodiversity conservation assistance in developing countries. In addition, it is hoped that a thorough review of alternative conservation approaches, including those related to reward mechanisms will be completed by 2013.

Alignment to CGIAR System Priorities

Achievement of this Project goal contributes to the CGIAR system priority 4a as this Output is primarily centrally concerned with management of land and forests at the landscape level. It fits within Specific Goal 1: "To develop analytical methods and tools for the management of multiple use landscapes with a focus on sustainable productivity enhancement." It also fits within Specific Goal 3: "To establish effective rights and opportunities to ensure that the poor benefit equitably from forest and tree resources".

Research Approach to International Public Goods

Research under this Project helps those involved in conservation initiatives learn from past experiences. Some key research questions being asked include: (i) What are the success factors to achieving win-win outcomes for livelihoods and forest landscape sustainability? (ii) Under what circumstances will payments for environmental services make a difference to poverty alleviation and landscape environmental management? For specific tools used in conservation and development and in landscape management we will review and assess what has been used and will undertake action research using modified approaches.

Through common approaches and research questions across sites in many countries generalisable principles will be derived about how conservation goals can be effectively fostered, and achieved with maximum benefits to the rural poor. These insights will be applicable in a plethora of management contexts across the globe, both within the realm of forest conservation and in other contexts for collective resource management.

Impact pathways

At the global level, CIFOR research will influence the way the major stakeholders and opinion leaders conceptualise, implement, and promote more effective and integrated approaches to conservation and development. CIFOR will target a select few of the major international large conservation NGOs that are influential in the field and are interested in experimenting with new ideas about conservation implementation, as well as an academic audience (so that the next generation of conservation and development courses embed CIFOR research). CIFOR will also target donor organizations (which are well-placed to influence the large conservation NGOs) including the World Bank and the major bilateral donors (via such forums as IIED's Poverty and Environment Partnership – PEP, the Poverty Conservation Learning Group – PCLG, and through targeted publications). Outreach to these global players will involve articles in major academic journals, presentations at selected meetings and conferences, side events on CIFOR research at major conservation congresses, and direct engagement, including articles in in-house publications of these stakeholders.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 12. Partners' roles in Project 4, Output 3.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination		In kind (Y/N)	Financial (Y/N)
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder		
CIFOR	10	15	15	20	25	5	5	5	Y	Y
Charles Darwin University, Australia	30	30	10	5	5	5	10	5	Y	Y
Fundación Natura, Bolivia	10	15	5	15	10	15	15	15	Y	N
Embrapa Amazônia Oriental, Brazil	20	10	10	10	10	30	5	5	Y	Y
Federal Rural University of Rio de Janeiro, Brazil	20	10	10	10	10	30	5	5	Y	Y
Wildlife Conservation Society, Cambodia	20	20	10	20	20	10	0	0	Y	N
World Wide Fund for Nature, Cambodia	5	10	10	20	15	10	15	15	Y	N
Conservation International & National Forestry Administration, Cambodia	10	15	10	20	15	10	10	10	Y	N
WWF, Cambodia	10	15	10	20	15	10	10	10	Y	N
FFI, Cambodia	10	15	10	20	15	10	10	10	Y	N
WWF-Central Africa, Cameroon	10	0	0	15	30	25	10	10	Y	Y
Fundacion Cordillera Tropical, Ecuador	20	10	10	10	10	30	5	5	Y	Y
Los Andes University, Colombia	5	5	10	50	10	5	10	5	Y	N
Royal Roads University, Canada	20	20	10	20	20	10	0	0	Y	N
PILI (Pusat Informasi Lingkungan Indonesia)	20	20	10	20	20	10	0	0	Y	N
RMI (Rimbawan Muda Indonesia)	10	10	10	10	20	10	10	20	Y	N
Conservation International, USA	20	5	10	10	15	15	15	10	Y	N
University of Georgia, USA	20	20	10	20	20	10	0	0	Y	N
North Carolina State University, USA	10	10	10	10	20	10	10	20	Y	N

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination		In kind (Y/N)	Financial (Y/N)
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder		
EcoCiencia, Ecuador	5	10	10	45	10	5	10	5	Y	N
Wondo Genet College of Forestry, Ethiopia	10	10	15	25	10	5	10	15	Y	N
IUCN, Switzerland	10	25	20	10	15	5	10	5	Y	Y
IUCN Cameroon	20	10	20	20	5	5	10	10	Y	Y
University of Port Elizabeth, South Africa	10	10	10	30	30	0	0	10	Y	Y
Universidad Autonoma Madrid, Spain	10	10	20	15	20	0	5	20	Y	Y
Hue University of Agriculture and Forestry, Vietnam	20	20	10	20	20	10	0	0	Y	N
ICRAF, Vietnam	20	10	20	10	20	10	5	5	Y	N
ACSC	20	10	10	20	10	10	10	10	Y	N
IIED, London	20	10	10	20	10	10	10	10	Y	N
FFPRI, Japan	20	10	10	20	10	10	10	10	Y	N
EcoAgriculture Partners	20	10	10	20	10	10	10	10	Y	N

Project 5: Managing impacts of globalized trade and investment on forests and forest communities

Project Overview and Rationale

The increasing globalization of trade and investment (T&I) has become a major driver of forest landscapes transformation in developing countries as result not only of a growing demand for forest products (e.g., timber, pulp and paper), but also for food and fuel crops that compete with forest land uses (e.g., oil palm, soybeans, sugarcane), expansion of pasture, and mineral extraction taking place in forestlands[9] The expansion in global trade is especially associated with a growing role played by foreign direct investment and the internationalization of bank financing. New patterns of T&I have changed the magnitude and direction of financial flows and of commodities (e.g. forest products, agricultural commodities, and minerals). Some of the key trends that have become evident include:

1) A rapid growth in the demand for primary goods from major emerging economies, notably China and India[10], a portion of which originates in tropical and dry forest landscapes from developing countries;

2) Increasing global investments in commercial agriculture, which places pressures on land and land resources[11]. This is driven by increasing global demand for first-generation biofuels, food price fluctuations, and food security concerns[12];

3) A shift in industrial timber production from natural forests in Asia (e.g., Indonesia and Malaysia) to those in Russia and Central Africa, and the increasing number of large-scale investments in industrial forest plantations, particularly in tropical regions[13]

These trends interact with each other in complex ways at different scales. The effects of increased global T&I are, however, somewhat contradictory. On the one hand, T&I generate new opportunities for developing countries to enhance their capital base, increase foreign exchange earnings from the production of primary goods, bring about important occupational shifts and incite (agro-) industrial upgrading through technological spillovers[14]. On the other hand, globalizing T&I could lead to the redistribution and concentration of rights over land and other productive resources. Not only could this have adverse socio-economic effects when populations lose access to vital livelihood capitals, but also lead to deforestation, forest degradation, and loss of environmental services when T&I entails large-scale land use change and changes in land management practices. Unfortunately, in many cases the socioeconomic and environmental costs of T&I can outweigh the benefits. Often, context-specific factors typical to tropical and dry forest landscapes play a substantial

[9] Rudel, et al. 2009 Changing drivers of deforestation and new opportunities for conservation, Conservation Biology 23(6)

[10] McDonald et al. 2008. Asian growth and trade poles: India, China and East and Southeast Asia. World Development 36 (2): 210-234; Athreye, S. and S. Kapur. 2009. The internationalization of Chinese and Indian firms: Trends, motivations, and policy implications. UN University, Policy Brief 1:1-7.

11 United Nations. 2010. Foreign land purchases for agriculture: what impact on sustainable development?. Sustainable Development Innovation Briefs. Issue 8. New York, USA.

[12] UNCTAD. 2009. World Investment Report 2009: Transnational Corporations, Agricultural Production and Development. New York and Geneva: United Nations Conference on Trade and Development

[13] White, A. Sun, X. Canby, K., Xu, J. Barr, C. Katsigris, E. Bull, G. Cossalter, C. and Nilsson, S. 2006. China and the global market for forest products: transforming trade to benefit forests and livelihoods. Forest Trends, CIFOR, Rights & Resources, Center for Chinese Agricultural Policy. Washington, DC.

[14] Borensztein, E., et al, 1998. How does Foreign Direct Investment affect economic growth. Journal of International Economics 45: 115-135

enabling role in these negative processes. This often relates to the insecurity of local tenure rights, market distortions, elitism, and poor governance, amongst others.

Global T&I trends are influenced by broader economic shifts such as the spike in oil prices in early 2008, which prompted some governments to incentivize biofuel production and to mandate fuel blending. This, in turn, expanded the demand for biofuel feedstocks and increased competition with food crops, which, along with financial speculation in commodity futures, induced an increase in prices, thus enlarging pressures on large-scale land acquisition.[15] The expansion of biofuels has placed both direct and indirect pressures on forests. In late 2008, the economic downturn depressed global markets and foreign investments. Global economic recovery started in late 2009 driven by strong growth and faster recovery in the developing countries, which tended to spread to the rest of the developing world, helping world income growth.[16] It is expected that agriculture will continue growing in line with population growth, and developing countries will provide the main source of production, consumption and trade, mainly the BRIC countries (Brazil, Russia, India and China) [17], which will also increase their demand for minerals and sources of energy. Prospects remain uncertain for biofuels due to unpredictable factors such as future trends in crude oil prices, policy interventions, and development in second-generation technologies.

The main challenge is, therefore, how to meet a growing global demand for food, feed, fiber and energy while avoiding negative impacts on forest landscapes and improving the benefits to society. Nonetheless, the nature and magnitude of T&I effects on forests and people depend on several mediating factors. At the national level, significant factors include macro-economic and sectoral policies and legal frameworks, while at the local level diverse interactions take place between socio-economic and ecological conditions which also shape the impacts of T&I in specific landscapes. The multi-scalar nature of the trends and impacts of T&I demands more effective governance instruments and architectures at multiple levels for managing the impacts and trade-offs than currently exist. Recently a number of initiatives to mitigate the adverse social and environmental impacts of globalized T&I have emerged in the public and private realms. For example, those seeking to influence the behaviour of governments (e.g., FLEGT), voluntary codes of conduct of international financial institutions (e.g., the Equator Principles) and multinational corporations (e.g., U.S. Lacey Act, the UNEP's Global Reporting Initiative), and voluntary sector specific standards (e.g., roundtables for sustainable production and Extractive Industries Transparency Initiative). In spite of the progress achieved so far by these different initiatives, there is much room for further progress in minimizing the adverse social and environmental impacts from global T&I, as well as enhancing their contribution towards equitable and sustainable development.

This project focuses on informing international financial institutions, regional bodies, national and sub-national governments, corporate actors and other stakeholders about the implications of the global T&I trends for development, forest-dependent people's livelihoods and forest landscapes transformation and provide analysis on improved governance instruments and architectures to advance sustainability of international finance, and enhance the effectiveness of policy regulations and market-based instruments to manage impacts and trade-offs at multiple scales. This aim will be achieved through assessing the trends and drivers of globalized forest-related T&I, along with their main social, economic and ecological impacts as well as their costs and benefits among various stakeholders. We

[15] Cotula, L., S. Vermeulen, R. Leonard and J.Keeley. 2009. Land grab or development opportunity? Agricultural investment and international land deals in Africa. IIED/FAO/IFAD, London/Rome.
[16] World Bank. 2010. Global economic prospects: Crisis, finance and growth. Washington, DC., USA.
[17] OECD-FAO. 2010. Agricultural outlook 2010-2019. Paris, France.

will also analyze governance options for reducing the identified negative effects of T&I, and finding innovative ways to advance potential opportunities, mainly for marginalized groups such as women and indigenous people. Along these lines, policy innovations will be proposed to enable national policy-makers and other stakeholders to make progress towards more sustainable development futures. This will be illustrated through impact analysis, political economic analysis, and empirically-based scenario analysis. Finally, we will also contribute to facilitate increased accountability of international financial institutions and corporate actors by providing scientific information on impacts and best practices, thereby enhancing the potential of international investment to contribute towards sustainable development.

Goal

The Project's research will contribute towards reducing the negative impacts of global and regional trade and investment on forests and forest-dependent communities through enhanced consideration among key decision makers of their impacts, and improving responses leading to more effective governance instruments, at multiple scales, for curtailing negative impacts and managing trade-offs in an equitable and sustainable manner.

Objectives

1. To analyze the major trends of globalized forest-related trade and investment with likely implications on forest landscape change, and identify opportunities for advancing the contribution of international trade and investment flows to sustainable development, thus reducing pressures on forests and enhancing benefits for local livelihoods.
2. To improve understanding of the implications of globalized trade and investment for sustainability, equity and economic development at diverse levels (i.e., local and national), and how their associated costs and benefits are distributed among local stakeholders and society at large, with particular attention to marginalized groups.
3. To identify and promote improved governance options and architectures, involving state and non-state actors, to regulate global forest-related trade and investment, and manage their impacts at multiple scales to avoid or mitigate their negative effects on forests and people's livelihoods, and enhance their positive impacts.

Overall Alignment with CGIAR System Priorities

This work corresponds to multiple CGIAR System Priority areas. Specifically, these include the following, if each Output is only aligned with one SP:

- SP 5b: Making international and domestic markets work for the poor – Specific goal 1: Enhance livelihoods and competitiveness for smallholder producers and food safety for consumers influenced by changes in national and international markets;
- SP 4a: Integrated land, water, and forest management at the landscape level – Specific goal 5: Creating multiple benefits and improved governance of environmental resources through the harmonization of inter-sectoral policies and institutions.
- SP 5d: Improving research and development options to reduce rural poverty and vulnerability.

Following the Science Council guidelines, we have aligned each Output with one System Priority area. However because there are overlaps between System Priority areas and given

that research has always multiple and nested goals, the Project is also aligned with the following priority areas:

- SP 3d: Sustainable income generation from trees and forests.
- SP 4d: Sustainable agro-ecological intensification in low- and high-potential environments - Specific goal 8: Identify social, economic, policy and institutional factors that determine decision-making about managing natural resources in intensive production systems and target interventions accordingly.

Project 5, Output 1: Analysis of trends and drivers in globalized forest-related trade and investment

Output Description

Research under this Output will focus on trade and investment associated with commodities that are likely to have significant impacts on forests and forest-dependent communities, such as those related to forest products (e.g., timber, pulp and paper), food and fuel crops (e.g., oil palm, soybean), and mining taking place in forestlands. The research will involve examining trade dynamics between supplier and consumer countries, and financial flows and large-scale investment projects involving international finance. In addition to characterizing trade and investment flows of significance to forest landscape transformation, emphasis will be placed in understanding the way in which international (e.g., EC-RED) or national (e.g., China) policies and markets influence investment, production and trade in selected producer countries, particularly those located in the Congo Basin, the dry forests of southern and West Africa, the Amazon Basin and humid tropical forests of Southeast Asia. In producer countries, the research will focus on understanding the legal and institutional conditions shaping investment decisions, the functioning of value chains, and the political economy of investment and resource allocation including the analysis of discourses supporting decision-making of corporate actors and governments, and the role played by other stakeholders involved in negotiating trade and investment deals. This project's output aims at reducing the pressures on forests from global forestry-related trade and investment while enhancing the role of international investment to promote equitable and sustainable economic development in developing countries.

Changes from Previous MTP

There has not been significant reorganization in this output compared to the previous MTP. In Output 1, pieces of a larger body of work have been staged so that they appear under separate output targets, enabling an evolution of work from certain regions or commodities to other regions and commodities. Work has been added on specific pressures, specifically a growing body of work aimed at assessing the China-Africa trade and investment relationships, , as well as analysis of the global trends related to large-scale land acquisition and investments in forest landscapes, oil palm and pulp and paper plantations.

Alignment to CGIAR System Priorities

The research under this Output corresponds to the CGIAR System Priority area 5: Improving policies and supporting institutional innovation to support sustainable reduction of poverty and hunger. Specifically, it links to SP 5b: Making international and domestic markets work for the poor.

- General goal: *To increase adaptive capacity of smallholders and poorer operators to exploit opportunities provided by international and domestic markets and to offset the negative impacts of global changes*.
- Specific goal 1: *Enhance livelihoods and competitiveness for smallholder producers and food safety for consumers influenced by changes in national and international markets.*

Research Approach to International Public Goods

The research under this Output is largely focused on global and regional T&I trends and drivers. The research is expected to have global impact by generating knowledge on the influence of specific policy decisions and market changes in consumer regions or countries related to trade and investment in specific commodities placing pressures on forest landscapes of producer countries such as those from food and biofuel crops, pulp and paper and mining development. To the extent that the research focuses on particular countries and refers to specific commodities, it is structured in a comparative manner so that generalisable conclusions can be drawn across different commodity-sectors and landscapes.

Impact Pathways

The outcomes to be obtained under Output 1 focus primarily on the global and regional levels. The main impact pathways will be through informing multilateral agencies, international financial institutions and development banks, regional bodies and national governments, and supporting them to strengthening standards and practices for responsible investment, and improving corporate reporting and disclosure practices. Emphasis will be placed in informing initiatives fostering the adoption of standards aimed at sustainable production such as the Roundtables on Sustainable Palm Oil and Sustainable Biofuels, and the Extractive Industries Transparency Initiative. International institutions to approach in order to enhance governance associated with forest-related trade and investment include international financial institutions (e.g., IFC) and multilateral and regional development banks (e.g., WB, IBD) and regional bodies for economic cooperation (e.g., COMESA, ASEAN, APEC, FOCAC, CAN) or governments from buyer countries with potential willingness to address sustainability challenges associated with their investments (e.g., China, Europe).

CIFOR will also contribute inputs to global processes aimed at designing voluntary guidelines such as the FAO-led process on governance of tenure and natural resources. We will also seek to inform the advocacy initiatives of global and regional civil society organizations, networks and platforms as an intermediate impact pathway. Such an approach may be particularly useful in influencing specific investment decisions, corporate practices of leading companies or financial institutions, and the practices of leading buyers or market institutions associated with particular industries, sectors, or markets.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 13. Partners' roles in Project 5, Output 1.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder	In kind (y/n)	Financial (y/n)
CIFOR	20	15	15	10	25	0	10	5	Y	Y
COMESA, Zambia	40	10	0	0	10	0	40	0	Y	Y
Forest Science Institute of Vietnam, Vietnam	10	20	10	30	20	0	10	0	Y	N
Forest Trends, US	10	20	10	20	20	0	20	0	Y	N
Stockholm Environment Institute-US	10	5	35	15	20	0	5	10	Y	N
ICRAF, China	0	20	0	50	20	0	10	0	Y	N
University of Leipzig, Germany	0	20	10	40	20	0	10	0	Y	N
Universidad Nacional Autonoma de México	20	20	20	10	20	0	10	0	Y	N

Project 5, Output 2: Analysis of the impacts and trade-offs of globalized forest-related trade and investment within specific forest landscapes

Output Description

Research under Output 2 focuses on how forest-related T&I influences land and forest uses, and people's livelihoods in specific landscapes. Based on CIFOR's analysis of globalized trade and investment in forest products and in extra-sectoral commodities with a significant effect on forests (Output 1), specific landscapes will be selected in which to conduct more in-depth analysis of how globalized T&I trends affect forests and people at local and national levels. This will be accomplished through field-based research to assess the social, economic and environmental impacts associated with select commodities under different incentive systems, tenure and market conditions, and business models utilized to produce or extract the products (e.g., smallholder production, large-scale plantations, outgrower schemes). Furthermore, analysis of the distribution of costs and benefits from T&I among different stakeholders will be conducted, with particular emphasis on determining effects on marginalized groups, including women and indigenous people. While assessment of impacts will be conducted at the local level, it will also explore economic effects at the national level (e.g. revenue creation, public finance) as well as multiplier effects at broader scales. Analysis of legal and institutional frameworks influencing impacts of forest-related T&I will also be examined, along with existing power structures. Global comparative research across regions and commodities will help to generalize findings about positive and negative economic, social and environmental impacts, and how these impacts are mediated by regulatory frameworks, governance arrangements and market conditions. Furthermore, data collection and analysis will be socially-disaggregated to enable CIFOR to differentiate effects by gender and other social parameters with implications for policy decision-making.

Changes from Previous MTP

There has been significant reorganization of this output. Previous Output 2 merged, on the one hand, the analysis of impacts from global trade and investment in specific landscapes, and on the other hand, the policy options and governance instruments to avoid or mitigate such impacts. Thereby, in order to clarify the research activities, outcomes and impact pathways, previous Output 2 has been divided in two outputs (Output 2 and Output 3) under the current plan, so that the analysis of impacts and trade-offs of global T&I is more consistently under Output 2, while the analysis of potential national and local governance options and architectures to manage these impacts is more consistently under Output 3. In addition, output targets have been added on assessing the impacts of large-scale land acquisition, oil palm development across different regions, and for a more systematic inclusion of the gender dimension in the analysis of impacts from global T&I.

Alignment to CGIAR System Priorities

The research under this Output corresponds to the CGIAR System Priority 4: Poverty alleviation and sustainable management of water, land and forest resources. Specifically, it links to SP 4a: Integrated land, water, and forest management at the landscape level.

- General goal: *Improved land-use practices contribute to increased and sustained productivity, optimal conservation, reduced conflicts, and equitable use of land, water, and forest resources in multi-use landscapes.*
- Specific goal 5: *Creating multiple benefits and improved governance of environmental resources through the harmonization of inter-sectoral policies and institutions.*

Research Approach to International Public Goods

The approach envisioned for the generation of international public goods (IPGs) is to implement global comparative empirical research across diverse forest-related commodities (timber, pulp and paper, food and fuel crops, and minerals) and forest landscapes in select eco-regions in Africa (Congo Basin and the dry forests of southern and West Africa), Latin America (Amazon Basin) and Southeast Asia (humid tropical forests), to assess the positive and negative social, economic and environmental impacts of different types of trade and investments under diverse policy incentives, market conditions and business models, and how these are influenced by different policy and regulatory frameworks, tenure systems, market conditions and power relations.

Impact Pathways

This output is primarily oriented to influence policy decision-making at the national and sub-national level. Thereby, the main impact pathway will involve influencing government policies and governance initiatives being implemented in specific landscapes. In forest-producer countries, this may include policies and plans for the development of forest-based industries (i.e. timber, pulp and paper), the development plans of other sectors that affect forests (i.e. agricultural crops, biofuels, mining) or cross-cutting governance instruments (e.g. land use planning, investment promotion, environmental impact assessments). CIFOR will seek to influence national policies and planning processes by providing well-documented research and analysis. CIFOR will also establish dialogues with key policy agencies and working groups to share findings and lessons from analysis about the implications of specific policy and planning decisions. CIFOR will also inform national networks and platforms involving NGOs and social organizations in order to amplify the outreach of research findings and messages delivered to larger number of actors in select landscapes and countries.

Findings from Output 2 will also contribute to impact pathways for Outputs 1 and 3. This will enable data on types of impacts, for example, to be considered when revising global standards for investment and corporate reporting and disclosure, as stated in Output 1. Furthermore, findings related to how governance arrangements influence the impacts of T&I will be used to inform policy reforms aimed as part of this Project's Output 3.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 14. Partners' roles in Project 5, Output 2

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder	In kind (y/n)	Financial (y/n)
CIFOR	15	15	15	10	15	10	15	5	Y	y
Bogor Agricultural University, Bogor, Indonesia	15	15	25	15	25	0	5	0	Y	N
Center for Tropical and Subtropical Agriculture and Forestry, Gottingen, Germany	15	15	20	20	20	10	0	0	Y	N
Common Market for Eastern and Southern Africa, Zambia	30	0	0	0	0	0	50	20	Y	Y
Council for Scientific and Industrial Research, South Africa	10	20	20	20	20	0	10	0	Y	N
Directorate of Conservation Areas, Indonesia	20	0	0	10	20	0	50	0	Y	N
Forest Science Institute of Vietnam, Vietnam	20	20	30	0	30	0	0	0	Y	N
Forest Watch Indonesia	20	20	20	10	0	10	10	10	Y	N
Kutai National Park Agency	50	0	0	10	0	40	0	0	Y	N
Tropen Bos Indonesia	20	20	20	10	0	10	10	10	Y	N
Sawit Watch Indonesia	20	20	20	10	0	10	10	10	Y	N
PILI (Pusat Lingkungan Hidup), Bogor	0	0	0	30	0	0	60	10	Y	N
Shanduko (Centre for Agrarian and Environmental Research)	0	20	10	30	30	0	10	0	N	N
Stockholm Environment Institute-USA	0	10	25	20	25	0	10	10	Y	N
Universidad Nacional Autonoma de México	0	20	10	30	30	0	10	0	Y	N
Universitas Papua, Indonesia	0	10	0	30	30	10	10	10	Y	N
World Agroforestry Centre, Vietnam	30	20	20	0	30	0	0	0	Y	N

Project 5, Output 3: Assessment of governance options for managing the impacts and trade-offs of forest-related trade and investment

Output Description

Research under Output 3 will contribute to identifying policies and market-based mechanisms able to reduce the negative impacts from globalized T&I and enhance positive impacts from these T&I trends on forests, forest-based livelihoods (particularly for the most marginalized groups, including women) and national development priorities. CIFOR research will analyze the potential of instruments formulated/driven by state and non-state actors, including regulatory and market-based mechanisms and support services, to shape the impacts from global T&I under diverse institutional arrangements and working at different scales. Thereby, through analysis at multiple scales (i.e., local, national and global), the research will highlight potential regulatory, market-based and supportive interventions that could guide transition processes toward more equitable and sustainable outcomes. In addition, CIFOR will use participatory policy and scenario analyses to help stakeholders assess significant risk factors, critical uncertainties, and drivers of change and to identify potential regulatory policies and market-based mechanisms to improve the sustainability and equity outcomes of T&I.

Changes from Previous MTP

This output was part of Output 2 in the previous MTP. However, it has been separated as a specific output in order to provide a better distinction between the analysis of trade and investment impacts in specific landscapes, and the policy responses and governance options and architectures that could be more effective to either avoid, mitigate or reverse such impacts on both forests and forest-dependant people, at the required levels of government (local, sub-national, national), or at the global level. Research focusing on assessing the policy and legislation frameworks shaping trade and investment, and on analyzing improved options and instruments, have both been placed under current Output 3. Output targets include analysis on the effectiveness of state regulations and market-based instruments to regulate biofuel development, Chinese investments on producer countries, large-scale land acquisition, and expansion of plantation crops such as oil palm.

Alignment to CGIAR System Priorities

The research under this Output corresponds to the CGIAR System Priority area 5: Improving policies and supporting institutional innovation to support sustainable reduction of poverty and hunger. Specifically, it links to SP 5d: Improving research and development options to reduce rural poverty and vulnerability.

- General goal: *Enhance impact of agricultural research in promoting options for the reduction of rural poverty and vulnerability.*
- Specific goal: *Identify agricultural research and development pathways, in order to implement options to reduce rural poverty at global and regional levels.*

Research Approach to International Public Goods

In a similar way as Output 2, the approach envisioned for the generation of international public goods (IPGs) is to develop global comparative empirical research across specific commodities and eco-regions and countries in Africa, Asia and Latin America to assess the efficiency and effectiveness of regulatory and market-based instruments as well as support services to regulate and manage the impacts and trade-offs from globalized trade and

investment. Furthermore, in depth assessment of policy innovations in select countries or regions will contribute to advance our existing knowledge on governance options, thus contributing to generate international public goods, with potential to inform policy decision-making in other regions.

Impact Pathways

Impact will be achieved through conducting research in collaboration with national and local partners, as well as through publication and outreach. This will enhance understanding of the current and likely future outcomes resulting from the implementation of different policy and governance instruments when applied alone and in combination in specific landscapes, and will contribute to translate site-specific findings into lessons of relevance to national policy makers such as those in ministries of finance, trade, planning and forestry and relevant sectoral ministries, and to policy decision-makers in other regions, as well as the global community. It is envisaged that the ultimate impact of the research in Output 3 will be improved incentive systems, support services and institutional arrangements and architectures at multiple scales for governing T&I trends with significant influence on the maintenance of forest goods and services and enhanced livelihoods. More direct impacts will occur through stakeholder use and continuing adaptation of research-derived knowledge, analytical techniques, and policy and governance innovations, while more indirect impacts are anticipated to occur as the result of the empowerment of women and other marginalized groups vis-à-vis government and corporate actors. Publication and outreach will be used to influence change in multiple ways. Findings will be packaged for diverse audiences able to influence national and local governance related to forest-based trade and investment.

Partner Roles

As CIFOR is a 'center without walls' all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Outputs of the Project in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to each Output of this Project.

Table 15. Partners' roles in Project 5, Output 3.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder	In kind (y/n)	Financial (y/n)
CIFOR	15	15	15	10	15	10	15	5	Y	y
Bogor Agricultural University, Bogor, Indonesia	15	15	25	15	25	0	5	0	Y	N
Common Market for Eastern and Southern Africa, Zambia	10	0	0	0	10	20	60	0	Y	y
Council for Scientific and Industrial Research, South Africa	0	15	25	25	25	0	10	0	Y	N
Directorate of Conservation Areas, Indonesia	20	0	0	10	20	0	50	0	Y	N
Forest Trends, US	10	20	10	20	20	0	20	0	Y	N
Tropenbos Indonesia	20	20	20	10	0	10	10	10	Y	N
Sawit Watch Indonesia	20	20	20	10	0	10	10	10	Y	N
Shanduko (Centre for Agrarian and Environmental Research)	0	20	10	30	30	0	10	0	N	N
Stockholm Environment Institute-USA	0	10	30	20	20	0	10	10	Y	N
Universidad Nacional Autonoma de México	0	10	10	30	30	10	10	0	Y	N
Universitas Papua, Indonesia	0	10	0	30	30	10	10	10	Y	N

Project 6: Sustainable management of tropical production forests

Project Overview and Rationale

Tropical forests represent about 51% of the world's forests and are the most biodiversity rich suite of terrestrial ecosystems on Earth. Over 400 million people live in or at the edge of these tropical forests including the world's 60 million native or indigenous peoples who rely partly or entirely on the forests for their livelihoods. Given that production forests (concessions, municipal forests, private holdings) represent up to 80% of the permanent forest estate in many tropical regions, a large number of forest dependent people are living in or near such production forests and are likely to be affected by whether these forests are or are not well managed[18].

In spite of the efforts of the global community's collective search for solutions to address the suboptimal use of forest lands and resources and to promote sustainable forest management (SFM), tropical forests are undergoing unprecedented pressure as population and demand for new agricultural land, forest products and ecosystem services increase. These efforts have nevertheless resulted in an increase of natural forests set aside for timber production under more ecologically sensitive management. The number of tropical forests in which sustainability is a priority consideration, although low, is nevertheless expected to increase in the near future[19].

At the same time, in many tropical forested countries, the basic tenets of forest management have not really changed over the last decades. Reduced Impact Logging (RIL) guidelines and Forest Management Units (FMUs) are commonly advocated as a positive change in management, but the overall tenets are still largely based on European models 'exported' to the tropics in the 1950s. This is despite the facts that there exists growing evidence of the potential contribution of forest people by way of their traditional management systems[20], and that new powerful tools, such as GIS and remote-sensing imagery are widely available. As a consequence, existing management plans in the tropics are frequently based on unrealistic technical prescriptions that hinder implementation by many operators. Also, in the tropics most existing management models appear to be viable only for large concessions in unlogged forests, whereas there is an increasing number of small to medium scale enterprises (some directly managed by local communities) working in secondary or previously logged forests, which require adapted models that include multiple goods and services. Research is therefore needed to revisit existing management approaches for tropical production forests to facilitate the design of more socially and environmentally friendly management rules[21].

Ambiguity in policies, ineffective or inconsistent law enforcement, corruption and overall weakness in the rule of law are still preventing many developing countries from realising the full socio-economic, developmental and environmental benefits from the use of their production forests. In recent years, also as a result of better awareness and empowered civil

[18] Chomitz, K. et al. 2006. At Loggerheads? Agricultural Expansion and Poverty Reduction in Tropical Forests. World Bank Policy Research Report http://go.worldbank.org/TKGHE4IA30
[19] Nasi, R., J.-C. Nguinguiri, D. Ezzine de Blas (Eds.) 2006. Exploitation et gestion durable des forêts d'Afrique Centrale : la quête de la durabilité. ITTO, CIFOR, CIRAD, L'Harmattan, Paris, 429p.
[20] Parrotta, J.A., J. Liu, and H-C. Sim. 2008. Sustainable Forest Management and Poverty Alleviation: Roles of Traditional Forest-related Knowledge. IUFRO World Series Vol. 21. Vienna, Austria: International Union of Forest Research Organizations, 224 pp.
[21] Nasi, R. (Guest Editor) 2009. Do we need new management paradigms to ensure sustainability in tropical forests? Ecology and Society http://www.ecologyandsociety.org/viewissue.php?sf=27

societies, demands for new governance regimes emerged for tropical forests (public-private partnerships, logging companies – NGO partnerships, non-state governance market systems like certification processes). These have the potential to facilitate change, but research is still needed to help devise and implement major reforms in policies and practices for a more transparent forest productive sector.

Although many organisations are involved in promoting sustainable forest management worldwide, they cover research aspects outside of CIFOR's mandate or focus on particular countries. CIFOR has therefore a clear niche in this research domain as a center that emphasises policy-relevant multi-scale global comparative research, and interdisciplinary approaches. These research issues lend themselves to a comparative treatment, to investigate how and why different kinds of investments, actions to influence the behaviour of policy makers, practitioners, and community members have worked, and under what conditions. This will allow drawing lessons and recommendations to help streamline and improve the effectiveness of efforts to influence policies regulating production forests.

Goal

It is intended that CIFOR's research will contribute to major changes in how production forests are managed, improving multifunctionality (integrating timber and non timber products), ensuring better representation of local communities (in all their diversity) in management decisions, more equitable benefit sharing and reducing land-use and resource right conflicts.

Objectives

1. To identify and propose public policies and market-based instruments for a management of production forests that reduce the social and environmental footprints of harvesting.
2. To develop and share knowledge about improved methods and tools for better monitoring and management of tropical production forests.
3. To develop and disseminate new tools and methods to incorporate local values, improve benefit sharing and resolve conflicts in the management of tropical production forests.

Revisiting the scientific bases for achieving sustainable forest management in tropical production forests should help to remove major constraints and barriers to the adoption and implementation of appropriate forest management practices that will allow a sustainable production of goods and services. Thereby, the contribution of sustainably managed tropical forest landscapes to achieving the Millennium Development Goals especially MDG1 ("eradicate extreme poverty and hunger") and MDG7 ("ensure environmental sustainability") will be improved. This should be a major contribution to the achievement of the overall CGIAR goals, specifically the fostering of the sustainable management of natural resources.

Overall Alignment with CGIAR System Priorities

This work falls completely within CGIAR System Priority area (SP 4A) – Integrated land, water and forest management at landscape level, as indicated subsequently by Output, following the Science Council guidelines to align each Output with one System Priority area.

However because there are overlaps between System Priority areas and given that CIFOR's research has always multiple and nested goals, the Project is also consistent with the following priority areas:

SP 1B – Promoting conservation and characterisation of under-utilised plant genetic resources to increase the income of the poor

SP 3D – Sustainable income generation from trees and forests

SP 4D – Sustainable agro-ecological intensification in low- and high-potential areas

SP 5A – Science and technology policies and institutions

SP 5C – Rural institutions and their governance

SP 5D – Improving research and development options to reduce rural poverty and vulnerability

Project 6, Output 1: Identification and evaluation of public policies and market-based instruments to reduce the social and environmental footprints of production forest harvesting

Output Description

Public policies and market-based instruments implemented in tropical countries have an important impact on the evolution and dynamics of forest resources, on the sharing of the benefits resulting from their uses and on the collective capacity of societies to manage these resources and benefits. Designing appropriate policies or instruments that are applicable and effective is therefore a prerequisite for achieving SFM. This is more the exception than the norm in the forestry sector in developing countries, where forest regulations, on the one hand, are frequently violated or weakly implemented, thus not achieving the outcomes of good forest management and/or equitable benefit distribution, and on the other hand, also for historical reasons, are often skewed in favour of the large-scale, industrial forestry sector, and neglect to a large extent the small-scale, artisanal sector, which has by contrast a great impact on rural economies, albeit informal. Furthermore, the current focus of national policies and international initiatives is almost exclusively centred on legality and environmental issues associated the timber trade internationally. Very little attention, if any, is paid to timber extracted, processed, consumed domestically. Yet preliminary evidence suggests domestic timber markets in key producer countries (e.g. Indonesia, Brazil, Democratic Republic of Congo, Cameroon) are vast and, in contrast to international timber flows, almost entirely unregulated.

The Output's purpose is therefore to devise and assess instruments designed to achieve SFM and share benefits of forestry in order to provide guidance to policy makers on the design of better policy regimes both for international timber trade as well as domestic consumption. In particular, the research will identify effective measures for addressing illegal logging through analysis of the determinants of illegal logging practices, as well as potential measures to verify legality. In addition, research on different forms of illegality (e.g. large-scale and "greed-based" vs. small-scale and "need-based") will be addressed in terms of their differential impacts, social implications and policy prescriptions. Certification of production forests and forest products is being promoted as a sustainable management tool. However, such systems risk excluding small producers from the market as the cost of certification can be prohibitive. Approaches that can minimise such cost will be researched. The differential gender-specific impacts of formalisation of forest activities through certification or deployment of legislation will also be considered. The recent global financial crisis is creating new operating conditions for governments, NGOs and companies that will highlight inherent legislative flaws or weaknesses. We will use and analyse this "real scale" global experiment as part of our work to design better instruments for the management of production forests. This will also build on Outputs 2 and 3 for the design of better forest policies.

Changes from Previous MTP

Recent studies carried out in the Congo Basin by CIFOR show the impressive economic, ecological and social impacts that informal logging can have on the forestry sector of several countries. While research is still on-going, the focus on this sector is an addition to the previous MTP.

Alignment to CGIAR System Priorities

This work falls completely within the CGIAR System Priority area (SP 4A) - Integrated land, water and forest management at landscape level; Specific goal 5: Creating multiple benefits and improved governance of environmental resources through the harmonisation of inter-sectoral policies and institutions.

Research Approach to International Public Goods

CIFOR, as a research center that emphasises "policy relevant research" and trans-disciplinarity, has a clear comparative advantage in producing international public goods through this Project. Our global mandate and a well-established practice of comparative analyses through partnership research lend themselves to comparative treatments, to investigate how and why different kinds of actions to influence the behaviour of practitioners have worked, and to draw lessons and recommendations to help streamline and improve the effectiveness of efforts to influence policy outcomes at global and national levels. Other important organisations involved within the commercial forestry realm are generally country-based research institutions (e.g. CIRAD, EFI, Tropenbos International), environmental "science-based" NGOs (e.g. WWF, WCS, WRI, IIED), advocacy NGOs (e.g. Greenpeace, Friends of the Earth, WRM), certification groups (e.g. FSC, PEFC, ISO) or consulting firms. They are often close partners of CIFOR and cover various aspects of the research Project that are out of our scope (e.g. permanent sample plots, management plan design, and advocacy campaigns) and could help us in addressing the above questions.

Target regions for this Output are the Amazon Basin (Bolivia, Brazil and Peru) and Mexico for the neotropics, Central Africa (Cameroon, Democratic Republic of Congo and Gabon) and South-East Asia (ASEAN countries) for the paleotropics.

The Project will identify, assess and synthesise approaches, principles and lessons for improved public policies and market-based instruments for better governance of the use of production forests. Ultimately, by considering various aspects of the public policies development cycle in different regions, the Project intends to derive general principles for the development of effective public policies for tropical production forests and with relevance and applicability to countries and regions faced with similar issues and conditions.

Impact Pathways

Demand for the information that this research will supply appears in the programmes and strategic documents[22] of multilateral agreements (UNFF, CBD and ITTO), development banks (WB, AFB, ADB), multi- and bi-lateral donors (e.g. EC, US, UK, France, Germany). There is a clear demand from the EC as well as from countries already engaged in the negotiations of Voluntary Partnership Agreements with the EC, so that sound Legality Assurance Systems can be designed with the inclusion of all the relevant actors contributing to the forestry sector. There is also a clear demand from the most advanced part of the commercial timber

[22] Worldbank's Forest Strategy and Operational Policy; UNFF Proposals for Action; ITTO Status of Tropical Forest Management 2005; EC Forest Law Enforcement and Governance – FLEG- Action Plan; etc.

sector linked to the increasing importance of certification and of the generally negative publicity linked to logging in tropical forests. A better organised, more transparent commercial timber sector implementing equitable and environmentally sound management practices will be more beneficial to concerned countries and local people. Our targeted clients are the policy-makers and practitioners who govern and operate commercial forestry operation, so major direct beneficiaries and end users of the results and findings of this Output are government, enterprises and communities managing forests. Clients/users of this research will involve local villagers in cases where they manage a significant forest estate for timber, such as in Mexico. We will collaborate with international organisations and processes (e.g. UNFF, CPF, ITTO, FAO) national and local governments, industry, donors and NGOs in the development of efficient public policies and market-based instruments for better managed tropical production forests. International organisations and international NGOs (e.g. FSC) will also help in disseminating results and promote up-take. Key policy makers and donors will be targeted to illustrate how it can be economically viable to manage production forests to supply forest products and how forest-based industries can sustainably meet the growing demand of timber and other forest products. Citizens of tropical countries will be the ultimate beneficiaries as one way to improve their well-being is to trying change the adverse forces that constrain or impact them.

Partner Roles

As CIFOR is a "center without walls" all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Output targets in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to this Output.

Table 16. Partners' roles in Project 6, Output 1.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination		In kind (Y/N)	Financial (Y/N)
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder		
CIFOR	20	25	20	10	10	0	5	10	Y	Y
Forest Stewardship Council International Center (FSC IC)	20	20	10	0	15	15	20	0	Y	Y
Forest Stewardship Council Cameroon (FSC Cam)	10	10	0	0	15	20	20	25	Y	Y
Forest Stewardship Council Brazil (FSC Bra)	10	10	0	0	15	20	20	25	Y	Y
ProForest, UK	10	0	10	10	0	35	0	35	Y	N
Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), France	10	0	10	30	15	5	10	20	Y	N
Université Catholique de Louvain (UCL), Belgium	20	15	20	20	10	0	10	5	Y	N
Forêt Ressources Management (FRM), France	10	5	10	30	15	20	5	5	Y	N
Institut de Recherches en Ecologie Tropicale (IRET/CENAREST), Gabon	20	10	5	20	10	20	0	15	Y	N
Université de Kisangani, Faculté des Sciences, DRC	20	10	5	20	10	20	0	15	Y	N
Joint Research Center of the European Commission (JRC), Italy	15	10	25	20	20	0	0	10	Y	Y
Indonesian Working Group on Forest Finance (IWGFF)	10	10	10	10	10	10	20	20	Y	Y
Institute Hukum Sumber Daya Alam (IHSA), Indonesia	0	0	5	45	50	0	0	0	N	N
Wahana Lingkungan Hidup (Walhi) Kaltim, Indonesia	0	10	0	10	20	20	20	20	N	N
Jaringan Kerja Penyelamat Hutan Riau (Jikalahari), Indonesia	0	10	0	10	20	20	20	20	N	N

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination		In kind (Y/N)	Financial (Y/N)
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder		
Yayasan Warung Informasi Konservasi (WARSI), Indonesia	0	10	0	10	20	20	20	20	N	N
Australian Institute of Criminology (AIC)	10	10	20	10	20	10	20	0	y	y
Brainforest (Gabon)	0	10	10	50	10	10	10	0	N	N
Unité de Recherches sur la Productivité des Plantations Industrielles (UR2PI, Congo)	0	10	0	60	10	10	0	10	N	N
Ecole Régionale Postuniversitaire d'Aménagement Intégré et Foresterie Tropicale (ERAIFT), DRC	10	20	60	60	50	20	20	20	Y	N
Forestry Research and Development Agency (FORDA), Indonesia	10	20	60	60	50	20	20	20	Y	N
Agricultural University of Bogor (IPB-Bogor), Indonesia	10	20	60	60	50	20	20	20	Y	N
Universidad Técnica Estatal de Quevedo, Ecuador	10	20	60	60	50	20	20	20	Y	N
Servicio Forestal Amazónico (SFA), Ecuador	10	20	60	60	50	20	20	20	Y	N

Project 6, Output 2: Development of tools, methods and guidelines for better monitoring and management of tropical production forests

Output Description

Many important factors ensuring that forests will be retained over time are largely political and socio-economic (see Outputs 1 and 3). However, this does not imply that silvicultural or management research is no longer needed. Timber dominated models are increasingly being challenged to explicitly include other goods and services. Although the elements for implementing multiple-use forest management have been known theoretically for decades, integrated approaches still remain elusive. Yet there is emerging evidence that different types of community-managed forests for multiple goods can be equally—if not more—effective in maintaining forest cover *vis-à-vis* nearby protected areas. Output 2 emphasises multi-use forest management aligned with industrial timber production as a primary economic output—either in private- or community-owned forests. Inclusiveness and expansion of multi-use management is thus warranted. The sustainability of the millions of hectares of tropical forest area, currently owned by local communities, may depend on a closer dialogue between tropical forest science and traditional knowledge where locally adapted silviculture and harvest systems and participatory monitoring protocols are developed. Improved silvicultural practices that reconcile timber and non-timber production have direct implications to human well being and rural livelihoods. To progress further from the "minimum felling diameter" rule and reduced impact logging (RIL) norms, new silvicultural tools and approaches are needed. These improved harvesting guidelines will aim at avoiding local depletion (both in economic and ecologic terms) of commercial species, lesser-known species and will allow integrating biodiversity concerns (including bushmeat) and other environmental or cultural services into multiple-use forest management. Analysis and monitoring tools developed at national and regional levels will build upon these considerations to improve the governance and management of tropical production forests and contribute to the achievement of Output 1. Output 2 will pay particular attention to identifying stand-level tradeoffs in multiple use management systems as they relate to regulatory frameworks, certification, knowledge capacity and silvicultural approaches. In order to develop and validate multiple use models that reconcile timber and other forest goods and services while satisfying divergent stakeholders' interests, sound synthesis of existing information and experiences will also be carried out.

Changes from Previous MTP

No major changes from previous MTP.

Alignment to CGIAR System Priorities

This work falls completely within the CGIAR System Priority area (SP 4A) - Integrated land, water and forest management at landscape level; Specific goal 1: To develop analytical methods and tools for the management of multiple use landscapes with a focus on sustainable productivity enhancement.

Research Approach to International Public Goods

The Project will identify tools, methods and guidelines for better managed tropical production forests to become best practices recognised and promoted at international and national level to encourage multiple use. It will build on indigenous management and uses of

timber and NTFPs, integrating positive elements of these systems into better practices "beyond RIL".

Target regions for this Output are the Amazon Basin (Bolivia, Brazil, Peru and Guyana), Central Africa (Cameroon, Democratic Republic of Congo and Gabon), South-East Asia (Indonesia) and Pacific (Papua New Guinea).

The comparison of experiences across the sites and regions and synthesis work will result in the provision of tools, methods and guidelines widely applicable to other forest management and planning processes occurring in tropical areas where the long-term sustainability of forest product supply is a priority. A large part of the work will be carried out in collaboration with organisations directly involved in the promotion of sustainable forest management (CIRAD), international processes (e.g. UNFF, ITTO), regional initiatives (e.g. ASEAN, CEMAC, COMIFAC) national forestry organisations, forest enterprises and leading certifiers (such as FSC). The progress so far and the global coverage achieved through various case studies, places CIFOR in a unique position to promote the sustainable use of production forests.

Impact Pathways

There is a clear demand for this research from the community of "forestry managers", be they part of the commercial timber sector, governments, regional or international organisations[23]. Much of the work will involve action research that integrates target groups such as extension services, gender disaggregated farmers or NTFP collector groups, forest enterprises (including small scale, NTFP-focused enterprises) and NGOs into the research process to ensure the relevance and uptake of research findings. The Project will also engage national and local governments, industry, donors and advocacy groups in a dialogue about appropriate policies, strategies and guidelines. The Project intends that utilisation of enhanced management methods in production forests will increase their overall value for local people and the income generated through enhanced access to premium timber markets. The project also hopes to integrate NTFP collection/management by local communities into a broader interpretation of forest management (beyond timber alone). In so doing, the use of more sustainable practices will help to conserve important environmental services and safety nets for the poor, as well as build local confidence and capacity in management of both timber and non-timber products. We will collaborate with international organisations (e.g. CPF, ITTO, FAO) national and local governments, industry and NGOs in the development and dissemination of improved silvicultural and monitoring practices consistent with sustainable management of production forests, so as to reach ultimate adopters (forestry companies) more effectively. A more holistic approach to forest management can also have indirect benefits, such as reducing conflicts between companies and local people through attention to NTFPs, which women are more likely to nurture and collect.

Partner Roles

As CIFOR is a "center without walls" all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Output targets in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to this Output.

[23] ITTO Status of Tropical Forest Management 2005; International Technical Tropical Timber Association Management Guidelines; etc.

Table 17. Partners' roles in Project 6, Output 2.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	20	25	20	10	10	0	5	10	Y	Y
Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), France	20	20	20	10	20	0	0	10	Y	Y
Université Catholique de Louvain (UCL), Belgium	20	15	20	20	10	0	0	15	Y	Y
Food and Agricultural Organization of the United Nations (FAO)	10	10	10	10	20	10	20	10	Y	N
University of Florida (USA)	20	20	20	10	20	0	0	0	Y	N
Université Libre de Bruxelles (ULB), Belgium	20	15	20	0	10	0	0	35		
Forêt Ressources Management (FRM), France	10	5	10	30	15	20	5	5	Y	Y
Joint Research Center of the European Commission (JRC), Italy	20	15	20	20	10	0	10	5	Y	Y
Institut de Recherches en Ecologie Tropicale (IRET/CENAREST), Gabon	20	10	5	20	10	20	0	15	Y	N
Forest Research Institute of Papua New Guinea (PNG FRI)	20	10	5	20	10	20	0	15	Y	N
Iwokrama International Center (IIC), Guyana	20	10	5	20	10	20	0	15	Y	N
Université de Kisangani, Faculté des Sciences, DRC	20	10	5	20	10	20	0	15	Y	N
University of British Columbia, Canada	30	0	30	0	20	0	20	0	N	N
Tropical Forest Foundation (Indonesia)	15	10	10	15	25	5	20	0	Y	N
Forestry Research and Development Agency (FORDA), Indonesia	20	10	5	20	10	20	0	15	Y	N

Project 6, Output 3: Tools and methods to resolve conflicts about land use, distribution of benefits and resource rights in the use of tropical production forests

Output Description

It is widely appreciated that local men and women have forest management strategies that are potentially valuable to the development of new silvicultural systems. Many stakeholders are involved in the formal and customary management of forests designated for production, some directly (e.g. indigenous people as well as migrants (men and women), local NGOs, timber companies, agro-industrial developers, local officers), others less directly (international NGOs, national governments, end consumers, companies that trade wood or carbon credits, etc.). Different groups often have conflicting or overlapping rights and responsibilities, as companies may be allocated use rights in areas inhabited by local forest dwellers and/or utilised by forest-adjacent communities. However, there may be unrealised scope for synergies in production forest management.

Research under this Output will explore the values, knowledge and perceptions of local men and women relating to production forests. The potential contribution of women to sustainable production forest management, a much neglected aspect of production forestry, will be assessed; and measures for enhancing their participation in relevant aspects of the enterprise will be identified. This research output will also generate knowledge on the relative ability of different production forestry models/approaches (e.g. outgrower schemes, community concessions, etc.) to contribute to the enhancement of the benefits, skills and knowledge of forest-adjacent and forest-dwelling communities. It will examine the factors that determine how forests are managed and benefits distributed among relevant stakeholders under each production model, including the responsibilities, accountabilities and coordination mechanisms of communities, private companies, government agents and other relevant actors. In particular it will seek to understand and identify incentives mechanisms and procedures for enhancing the benefits of production forestry to women under the different models. The output will analyse the range of property rights regimes that exist at the company concession-community interface in diverse contextual settings and determine how they create, allocate and enforce entitlements and responsibilities among actors. It will identify rights allocation regimes that have potential to resolve existing conflicts, and governance processes and practices that are inclusive and which will enhance equitable access and benefit distribution from production forests. Many forest-adjacent communities, including those residing close to production forests, are among the poorest and sit at the lower end of a power continuum when viewed against governments and private companies. Research under this output will seek to understand how communities can build cooperation and synergies both among themselves and with external actors. Factors that strengthen or undermine collective action for sustainable use and/or securing rights to production forests will be assessed as will the extent to which communities aware of their rights and responsibilities. The institutional channels through which claims to land and forest resources can be or are contested, including mechanisms for resolving disputes and their effectiveness will be assessed.

The results of this research will inform and contribute to achievement of Outputs 1 and 2.

Changes from Previous MTP

There are no major changes from the previous MTP but a stronger emphasis has been put on the consideration of gender issues in production forestry, a topic largely overlooked in existing studies.

Alignment to CGIAR System Priorities

This work falls completely within the CGIAR System Priority area (SP 4A) - Integrated land, water and forest management at landscape level - Specific goal 3: Establish effective rights and opportunities to ensure that the poor benefit equitably from forests and tree resources and Specific goal 5: Creating multiple benefits and improved governance of environmental resources through the harmonization of inter-sectoral policies and institutions.

Research Approach to International Public Goods

The Project will identify tools, methods and guidelines for the integration of local values and knowledge in the management of tropical production forests to reduce the conflicting land and resource use right issues generated by the commercial use of these forests. Special attention will be paid to differences in priorities for forest use and management between men and women, and different categories of people (e.g. ethnic, occupational, caste, tribal, and other social groupings).

Target regions for this Output are the Amazon Basin (Bolivia, Brazil, Peru and Guyana), Central Africa (Cameroon, Democratic Republic of Congo and Gabon), South-East Asia (Indonesia) and Pacific (Papua New Guinea) - areas known to be inhabited by a variety of forest peoples.

The comparison of experiences across the sites and regions and synthesis work will result in the provision of generic tools, methods and guidelines that can be used to understand and make good use of the knowledge and capabilities of local communities. The linking of local and formal or "cosmopolitan" knowledge will also contribute to enhanced and strengthened local capacity to manage tropical production forests. A large part of the work will be carried out in collaboration with organisations directly involved in the promotion of sustainable forest management – international processes (e.g. UNFF, ITTO), regional initiatives (e.g. ASEAN, CEMAC, COMIFAC) national forestry organisations, forest enterprises and leading certifiers (such as FSC). Many of these organisations have expressed ongoing concern about social sustainability, and the work here proposed will contribute to those efforts as well.

Impact Pathways

There is a clear demand for this research from parts of the private sector concerned with "social responsibility" (e.g. Social Guidelines of management plans for the International Forest Industry Association) and from important multilateral donors in their country-based funding (e.g. World Bank policies on indigenous people). Our targeted clients are the policy-makers and practitioners who govern and operate commercial forestry operations at national and local levels. Local people (including women, men, poorer and other marginalised groups) will participate in the research and be ultimate beneficiaries through enhanced management capacities, reduced levels of local conflict, and greater inclusion in decision-making processes concerning production forests. Results generated in Output 3 will also be used in Output 2 (especially on issues of integrated forest management) and in Output 1 to reduce the social footprint of harvesting operations in production forests. As such they will be an integral part of the impact pathways of the two previous Outputs.

Partner Roles

As CIFOR is a "center without walls" all research is conducted through an extensive array of partnerships. Due to the number of partners, it is not possible to effectively convey the contribution of each to specific Output targets in a narrative format of only a few pages. Thus, a tabular approach follows to concisely outline the specific contributions of each research partner to this Output.

Table 18. Partners' roles in Project 6, Output 3.

Research partner name and country	Role (% of effort)								Resource contribution	
	Research process						Dissemination			
	Problem/ priority determination	Research coordination and management	Contributor of concepts/ tools	Contributor of data	Participant in analysis	Local adapter/ tester	Disseminator/ advocate	Capacity builder	In kind (Y/N)	Financial (Y/N)
CIFOR	20	25	20	10	10	0	5	10	Y	Y
Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), France	20	0	20	20	20	0	0	20	Y	Y
Université Catholique de Louvain (UCL), Belgium	20	15	20	20	10	0	10	5	Y	Y
Université Libre de Bruxelles (ULB), Belgium	20	15	20	0	10	0	0	35	Y	N
Forêt Ressources Management (FRM), France	10	5	10	30	15	20	5	5	Y	Y
Joint Research Center of the European Commission (JRC), Italy	20	15	20	20	10	0	10	5	Y	Y
Institut de Recherches en Ecologie Tropicale (IRET/CENAREST), Gabon	20	10	5	20	10	20	0	15	Y	N
Forest Research Institute of Papua New Guinea (PNG FRI)	20	10	5	20	10	20	0	15	Y	N
Iwokrama International Center (IIC), Guyana	20	10	5	20	10	20	0	15	Y	N
Université de Kisangani, Faculté des Sciences, DRC	20	10	5	20	10	20	0	15	Y	N
University of British Columbia, Canada	30	0	30	0	20	0	20	0	N	N
Women Organizing for Change in Agriculture and Natural Resources (WOCAN)	10	10	30	0	10	10	20	10	Y	N
Participatory Research and Gender Analysis program of the CGIAR	10	0	40	0	20		20	10	Y	N

Project Logframes

Logframe for Project 1: Enhancing the role of forests in climate mitigation

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
Component 1:	**Identification of policies and processes that lead to national-level REDD+ strategies that achieve outcomes that are effective, efficient, and equitable with co-benefits**		**National agencies officially leading national-level REDD+ initiatives.** **Other national stakeholder groups, including civil society organizations, and non-lead agencies** **International agencies seeking to support national processes, such as FCPF and UNREDD** **Researchers seeking to expand on products and findings**	**Global REDD+ architecture and strategies reflect a more sophisticated understanding of trends, actors, and interests impinging on success so as to be better targeted and more politically legitimate**	**National REDD+ processes are conducted such that they are inclusive of diverse stakeholder interests and lead to national-level strategies and policies that are effective and cost-efficient in reducing carbon emissions, non-carbon ecosystem services, improved livelihoods, and strengthening of the rights and tenure of indigenous peoples and local communities**
Output Targets 2010	Analysis of the national context relevant to REDD+, options for REDD+ under discussion and an overview of the policy dynamics outlining the key issues and challenges in the country.	Three pilot country case studies analysing the political and economic barriers likely to limit REDD+ strategy formulation and implementation conducted. A comparative analysis of first generation REDD+ policy frameworks in at least 3 pilot countries conducted. Up to three regional workshops held to build partner capacity and generate input to framework for comparative analysis of national REDD+ initiatives	National agencies officially leading national-level REDD+ initiatives. Other national stakeholder groups, including civil society organizations, and non-lead agencies International agencies seeking to support national processes, such as FCPF and UNREDD Researchers seeking to expand on products and findings	Negotiations of the global post 2012 climate regime include REDD+ as an element of the global post 2012 climate regime in a manner that more efficiently meets environmental and social goals	Improved effectiveness of REDD+ strategies in reducing forest-based emissions and associated co-benefits

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		Framework for comparative analysis of national REDD+ initiatives developed, consulted, revised.			
Output Targets 2011	Analysis of the actors and structural aspects of the REDD+ arena and consider implications for the 3E+ content of REDD+ strategies. Specifically, the analysis will examine questions including such as actors involved in national REDD+ policy making, their perceptions, interests, and power relations.	Comparative analysis of actors and governance conditions influencing efficiency, effectiveness and equity outcomes from REDD+ strategy development and implementation in 3 selected countries completed. Up to three regional workshops to review country findings held and general lessons drawn for political economy barriers and minimum governance conditions for REDD+ policy formulation and implementation. Comparative analysis of the country case studies and identification of minimum conditions for 3E outcomes from REDD+ national initiatives. 2 reports on the forest land allocation policies and governance practices in project provinces and one report on the policy options aimed at reducing the misuse of forest resources. Paper on forest governance, decentralisation and REDD+ in Latin America and the	National agencies officially leading national-level REDD+ initiatives. Other national stakeholder groups, including civil society organizations, and non-lead agencies International agencies seeking to support national processes, such as FCPF and UNREDD Researchers seeking to expand on products and findings	Global policy processes are influenced by results on different options for REDD+, and trade-offs between them to include REDD+ as an element of the global post 2012 climate regime in a manner that more efficiently meets environmental and social goals	The architecture of the global post 2012 climate regime includes REDD+ strategies that are based on improved effectiveness and efficiency of reducing forest-based emissions and generating associated co-benefits in an equitable manner

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		Caribbean.			
Output Targets 2012	Analysis of political economy barriers for efficient, effective and equitable REDD+ policy formulation and implementation	Eight case studies of policy processes political and economic barriers for national REDD+ policy formulation and implementation in 8 pilot countries conducted. Database produced with survey data from 8 countries. Analysis of main barriers in governance conditions for effective, efficient and equitable REDD+ strategy formulation and implementation conducted. Publication synthesizing lessons on the roles of actors and governance environment in the first generation REDD+ national policy formulation and implementation (MB).	National agencies officially leading national-level REDD+ initiatives. Other national stakeholder groups, including civil society organizations, and non-lead agencies International agencies seeking to support national processes, such as FCPF and UNREDD Researchers seeking to expand on products and findings	Second generation REDD+ national-level activities, are designed using best practices of implementation.(derived from the experiences and outcomes from first generation activities)	National REDD+ processes and strategy implementation are conducted such that more real carbon reductions are achieved with co-benefits.
Output Targets 2013	A global comparative analysis to provide guidance for second-generation REDD+ design to address problems appearing in national policy arenas from first generation REDD+ initiatives. Recommendations to improve the transparency, inclusiveness, and efficiency of REDD+ policymaking processes, including REDD+ national strategies and implementation	Communication tools and assistance provided in developing a communication strategy. Findings by partner institutions disseminated to influence their respective national REDD+ processes Nine country-level meetings conducted – one in each case-study country to be held	National agencies officially leading national-level REDD+ initiatives. Other national stakeholder groups, including civil society organizations, and non-lead agencies International agencies seeking to support national processes, such as FCPF and UNREDD Researchers seeking to expand	Second generation REDD+ national-level activities, are designed using best practices of implementation.	National REDD+ processes and strategy implementation are conducted such that more real carbon reductions are achieved with co-benefits.

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	frameworks	in conjunction with the work on policy processes during the last year of the project, organized by local partners to disseminate and discuss the findings from the project activities with country-level policymakers and stakeholders Three regional workshops held in each region. Two global seminars held, one during the course of the project, and one in the last year, presenting the results of the project. Best practice manual and toolkit to inform second generation REDD+ policy formulation processes and strategy development. Policy documents on key issues for REDD+ policy processes and strategy development and implementation. Final results disseminated at major global conferences.	on products and findings		
Component 2:	**Identification of institutional and technical arrangements that lead to implementation of REDD+ project sites which are effective, efficient, equitable, and with co-benefits**		**REDD+ practitioner community inside and outside government; people developing policies and programs to implement REDD+ and the public and private investors supporting them; advocacy groups dealing with national level**	**Findings are used to improve the design and implementation of national REDD+ interventions**	**First and second generation REDD+ site-level activities result in effective and cost-efficient reduction of carbon emissions, improved livelihoods, strengthening of the rights and tenure of indigenous peoples and local communities, and non-carbon**

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
			implementation issues.		**co-benefits**
Output Targets 2010	Analysis of the background and context of the establishment of REDD+ project sites. Analysis of how REDD+ is likely to be impacted by local context and how REDD+ is likely to influence local livelihoods and governance arrangements	Field research at REDD+ project sites in six countries. A synthesis paper summarizing the literature on the need for forest tenure reform in Indonesia in light of the new challenges and opportunities of REDD+ (WS). Literature review on leakage, including selected case studies on displacement of livelihoods and carbon-emitting activities due to policies aimed at controlling land use change (SA). Document describing the potential of REDD+ in particular landscapes, and the likely impacts on livelihoods and equity (MC). Paper with analysis of REDD+ actors in selected landscapes (motivations, behaviours and constraints) including analysis of institutions that can be mobilised for REDD+ (EM).	REDD+ practitioner community inside and outside government; people developing and implementing and investing in REDD+ demonstration activities	New REDD+ initiatives, including demonstration (pilot) activities, are designed using best practices of implementation.	Planned national REDD+ schemes (and demonstration activities) mitigate risks related to the design of the schemes, so that more real reductions are achieved with co-benefits.
Output Targets 2011	Analysis of baseline conditions of the process of establishing REDD+ project sites	Compilation of information on REDD+ projects with an emphasis on key REDD+ countries. Global REDD+ database and the process evaluation of the	REDD+ practitioner community inside and outside government; people developing and implementing and investing in REDD+ demonstration activities	National REDD+ schemes are better implemented in terms of governance and poverty alleviation.	Planned national REDD+ schemes in the post 2012 climate regime are designed so that they reduce risks to vulnerable communities and include policies and programs that produce pro-

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		intensive and extensive sites analyzed and results published. Analysis of data collected at project sites in six target countries. Paper on the processes that lead to carbon leakage and livelihood changes in REDD+ pilot study sites, based on two REDD+ pilot projects in Indonesia (SA). Document on principles that have a bearing on the design of REDD+ site-level demonstration activities MRV capacity of project proponents at research sites assessed. Local causes of deforestation and degradation assessed.			poor and pro-biodiversity co-benefits
Output Targets 2012	Analysis of early outcomes of establishing REDD+ project sites. Results from field research on the impact outcome of REDD+ project site interventions	In-depth analysis of the outcome of REDD+ project activities prior to the introduction of incentives. Paper on knowledge of REDD+ at local level. Paper on attention to tenure in the process of establishing REDD+ project sites. Paper on benefit sharing systems in REDD+ Document of tenure conditions and REDD++. Groundwork is laid for the	REDD+ practitioner community inside and outside government; people developing and implementing and investing in REDD+ demonstration activities	Second generation REDD+ site-level activities, are designed using best practices of implementation	Planned national REDD+ schemes in the post 2012 climate regime are designed so that they reduce risks to vulnerable communities and include policies and programs that produce pro-poor and pro-biodiversity co-benefits

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		second round of field research at all of the project sites visited in 2010.			
Output Targets 2013	Comparative analysis of the attainment of effectiveness, efficiency, equity and co-benefits at REDD+ project sites, Formulation of policy and technical lessons, and wide dissemination of the findings and recommendations among all stakeholders	Analysis of the impact of REDD+ interventions at project sites in term of 3Es and co-benefits. Documents on perspectives on the impacts of REDD+. Publications on the impact outcomes of first generation REDD+ project activities and on how the design and implementation of REDD+ can be improved. Second generation REDD+ Project Design Manual reflecting instruments and experience of demonstration activities prepared, including guidelines for effective, efficient and equitable site-level REDD+ activities.	REDD+ practitioner community including local government; local people, and private sector developing/implementing REDD+ demonstration activities	Second generation REDD+ site-level activities, are designed using best practices of implementation.	Planned REDD+ demonstration activities mitigate risks related to the design of the schemes, so that more real reductions are achieved with co-benefits.
Component 3:	**Improved procedures and practices for estimating and managing carbon stocks of tropical forest landscapes**		**National agencies officially leading national-level REDD+ initiatives** **Project development groups, including civil society organisations, and non-lead agencies** **International agencies seeking to support national processes, such as FCPF and UNREDDs**	**Post 2012 climate regime is designed and national REDD+ schemes are constructed to use improved practices for managing, estimating and monitoring forest carbon pools so as to lead to real reductions of emissions from deforestation and degradation.** **Reduced transaction costs leading to increased adoption of REDD+ schemes.**	**Enhanced reductions of carbon emissions, and increased co-benefits from forest conservation, increased revenue flows to forest dependent people.**

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
Output Targets 2010	Identification of best practice methods for estimating carbon stocks in forest landscapes (including peatlands)	Reference levels: Bioeconomic modelling framework developed and outlined in a working paper. Carbon accounting: Database and conceptual models for estimating below and above-ground C-stocks and non-CO_2 GHGs developed. Document on revised methods for carbon accounting for forest-based bioenergy (EC bioenergy project) National assessment of capacity and data availability in year 1 countries completed.	IPCC, negotiators (COP), scientific community, donors, national and local governments, NGO's, private sector, forest managers research institutions, conservation and development agencies in SE Asia, Andean region, Congo Basin.	REDD+ schemes are better designed in terms of methods for estimating and managing carbon stocks in peatlands. Agreed methods are included into the COP decision.	Greenhouse gas emissions from peatlands are more effectively managed as a result of enhanced REDD+ modalities.
Output Targets 2011	Decision support tools for estimating reference emissions levels. Decision support tools for estimating and managing carbon stocks, including methods for estimating and managing carbon from degradation and in peatlands.	Reference emissions Examples of modelling of reference emission levels based on results from selected case studies. Carbon accounting: Database and conceptual models for estimating below and above-ground C-stocks and non-CO_2 GHGs developed. Document on national-level measurement and monitoring technical and institutional capacity in target countries (Indonesia, Cameroon, Bolivia, Brazil). Documents on methodological issues in estimating and managing carbon stocks,	IPCC, negotiators (COP), scientific community, donors. National and local governments, NGO's, private sector, forest managers research institutions, conservation and development agencies in SE Asia, Andean region, Congo Basin	REDD+ schemes are better implemented in terms of methods for estimating and managing carbon stocks. Agreed methods are used by REDD+ schemes.	Enhanced real reductions in greenhouse gas emissions through more efficient and effective REDD+ modalities

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		including a paper on N_2O and CH_4 emissions from peat, review paper on regional constraints on soil organic carbon, and lifecycle analysis of deforestation and biofuels. One draft Project Design Manual with guidelines for demonstration project-level carbon assessment using the most appropriate methods.			
Output Targets 2012	Tools and guidelines for defining emission reference levels and for community participation in carbon monitoring	<u>Reference emissions</u> Manual and user-friendly tool for developing reference level scenarios. <u>Carbon accounting</u>: Assessment of national capacity and data availability in nine case study countries. Documents on methodological issues in estimating and managing carbon stocks, including papers on participatory, community-based monitoring. Project Design Manual with guidelines for demonstration project-level carbon assessment using the most appropriate methods.	Project development groups including civil society organizations and non-lead organizations; international agencies; and national agencies leading REDD+ initiatives.	Meaningful participation and ownership of communities in the measurement and monitoring of carbon stocks.	Enhanced accounting of emission reductions via reference levels that use reliable current data and participatory community carbon accounting methods leads to reduced uncertainty about REDD+ performance and more effective REDD+ investments
Output Targets 2013	Comparative analysis of references levels and methods for developing them Comparative analysis of methods for estimating and managing carbon stocks, including methods for	<u>Reference emissions</u> Final results available of modelling of reference emission levels in selected case study countries. Training material and online	Project development groups including civil society organizations and non-lead organizations; international agencies; and national agencies leading REDD+ initiatives.	Meaningful participation and ownership of communities in the measurement and monitoring of carbon stocks.	Enhanced accounting of emission reductions via reference levels that use reliable current data and participatory community carbon accounting methods leads to reduced uncertainty about REDD+ performance and more

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	estimating and managing carbon from degradation and in peatlands	tutorials on reference levels. <u>Carbon accounting:</u> A tool box of methods and procedures for estimating and managing carbon stocks. Training material and online tutorials on estimating and managing carbon stocks.			effective REDD+ investments

Logframe for Project 2*:* Enhancing the role of forests in adaptation to climate change

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
Output 1	**Identification of strategies for adapting sustainable forest use and management to the context of climate change**		**Forest users in general (local communities, extractive companies, forest managers, extension services, NGOs, etc) Forest policy community (Ministries in charge of forests, Ministry of planning, and other actors in the policy arena) International community (UNFCCC, IPCC, donors and board of adaptation fund, scientific community).**	**Mainstreaming climate change adaptation in forestry.** **Implementation of new management practices for tropical forest ecosystems.** **Forest communities are less vulnerable to climate change.**	**Increased resilience of vulnerable forest communities and ecosystems as a result of more appropriate adaptation measures**
Output Targets 2010	National geospatial and local scale assessments of vulnerability of forest communities to climate variability and change in Africa	▪ Case studies on local vulnerability of forest-dependent communities in Africa (Congo: DeSo, YoBe, Mali: MaBr, HoDj, West Africa: TroFCCA) ▪ Policy briefs on adaptation in Africa (TroFCCA, IUFRO) ▪ Document about mapping the vulnerability of forest communities at national scale (CofCCA DeSo, ChPa, BrLo)	▪ Forest users or managers (communities, companies, extension services, NGOs…) ▪ National policy makers (forest ministries, planning…)	Forest communities are engaged in a process of vulnerability assessment and decision makers are aware of the main drivers of vulnerability.	Increased resilience of vulnerable forest communities and ecosystems as a result of more appropriate adaptation measures
	Methods and tools for assessing the impacts of climate change on forests and their services	▪ Articles on the use of specific tools and methods for assessing the impacts of climate change on hydrological services (PaIm), protected areas (BrLo PaIm), plantations (BrLo PaIm), forest fires (HeHe PaIm BrLo), forest pests (BrLo) ▪ Synthesis paper on tools and methods (BrLo)	▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…) ▪ Forest managers (companies, extension services, NGOs…)	Relevant institutions use adequate tools to improve forest conservation and management decisions in the context of climate change	
Output Targets 2011	Assessments of the impacts of climate change on forests and their services in Latin America	▪ Articles on impact studies in Latin America (BrLo, PaIm…) ▪ Fires in Asia (DaMu, HeHe)	▪ Forest managers and policy makers (NGOs, forest ministries, planning, other	Relevant decision makers are aware of the climate change related threats to forests.	Increased resilience of vulnerable forest communities and ecosystems as a result of

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
	and Asia		actors influencing policy)		more appropriate adaptation measures
	Identification of approaches for integrating adaptation to climate change in forest management, conservation planning and forest based climate change mitigation activities	▪ Papers on perceptions on forest managers (MaGu, BrLo) ▪ Toolbox on forests and CC ▪ Papers on mitigation and adaptation (MaGu, VaEv, BrLo) ▪ Papers on protected areas and adaptation (BrLo, PaIm) ▪ IUFRO reports (several)	▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	Forest managers apply better practices of in a context of a changing climate. Forest mitigation projects include forest adaptation measures.	
Output Targets 2012	Vulnerability mapping and comparative analysis of the needs for strengthening the adaptive capacity of forest-related people in Central Africa	▪ Action research protocol for assessing vulnerability (Cobam, CoFCCA) ▪ Methods for assessing current vulnerability and future scenarios (Facafo) ▪ Regional vulnerability maps (Cobam, Cofcca, ChPa) ▪ Spatial assessment of vulnerability in coastal areas (Acips)	▪ Forest policy makers (forest ministries, planning…) ▪ Forest users or managers (communities, companies, extension services, NGOs, conservation bodies, mitigation programs…) ▪ Planning agencies and policy makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local)	Decision makers know better practices for strengthening adaptive capacity	Increased resilience of vulnerable forest communities and ecosystems as a result of more appropriate adaptation measures
	Comparative analysis of the role of local institutions (e.g., rights and tenure) and gender differences in adaptation	▪ Case studies on gender issues related to vulnerability and adaptation in Central Africa (Cofcca, Cobam) ▪ Methodological tool for studying institutions and adaptation (Bmz) ▪ Local action plans, governance recommendations in Central Africa (Cobam)	▪ Forest policy makers (forest ministries, planning…) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	Decision makers recognize gender specific needs and the role of local institutions in the adaptation of forest communities to climate change	Increased resilience of vulnerable forest communities and ecosystems as a result of more appropriate adaptation measures
Output Targets 2013	Recommendations for enhancing the synergies between adaptation and mitigation in forest projects and policies	▪ Synthesis of lessons learned at local and national scale in Central Africa (Cobam) ▪ Policy options (Cobam) ▪ Synthesis on synergies between adaptation and mitigation (VaEv, BrLo, MaBr)	▪ Forest policy makers (forest ministries, planning…) ▪ Forest users or managers (communities, companies, extension services, NGOs, conservation bodies, mitigation programs…)	REDD projects and policies contribute to adaptation. Adaptation projects benefit from mitigation funding.	Increased resilience of vulnerable forest communities and ecosystems as a result of more appropriate adaptation measures
	Comparative analysis and	▪ Case studies and modeling in	▪ Forest policy makers (forest	Relevant decision makers recognize	Increased resilience of most

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
	modeling of the interactions between local communities and ecosystem services in a context of climate change in Africa	West Africa (Facafo) and Asia (Acips) ▪ Synthesis on the role of forests in the adaptation of forest people (Cobam)	ministries, planning…) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	the importance of managing ecosystem sustainably for reducing the vulnerability of local forest communities.	vulnerable forest communities and ecosystems as a result of more appropriate adaptation measures
Output 2	**Identification of roles and potentials of forests to contribute to reduced social vulnerability beyond the forestry sector**		▪ Planning agencies and policy makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	**Integration of forest into the climate change adaptation agenda at different levels** **Improved land-use planning and governance to harness the potential of forests to reduce vulnerability** **Forest-dependent sectors are empowered to influence national and international policies regarding forest or adaptation**	**Reduced vulnerability of sectors and stakeholder depending on forest ecosystem services**
Output Targets 2010	Comparative study on how current governance systems address the potential of forests to reduce vulnerability of other sectors and stakeholders	▪ Paper on policies for ecosystem based adaptation (RaVi, JoNk…) ▪ Paper on EBA in the NAPAs (EmPr) ▪ Synthesis on analyzing governance and vulnerability (MaBr, BrLo, Iufro) ▪ Policy analysis in Central Africa (Cofcca, CaBr, OlSo), Asia (RoLa, HeHe) and Latin America (RaVi).	▪ Planning agencies and policy makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	Relevant institutions can better identify the need for adequate governance arrangements and financial mechanisms for fostering the use of forest ecosystem services in adaptation	Reduced vulnerability of sectors and stakeholder depending on forest ecosystem services as a result of preservation of key services from forests.
	Assessment of the potential of different financial mechanisms to foster the use of forest ecosystem services in adaptation	▪ Papers on PES and adaptation (Central America RaVi + general ShWe) ▪ Paper on carbon markets and adaptation (synergies miti-adap BrLo, DaMu)			
Output Targets 2011	Geospatial assessments of the role of ecosystem services in the adaptation of the society in Latin America	▪ Mapping ecosystem service in Central America (BrLo, RaVi, Palm… ▪ Ecosystem services and	▪ Forest users or managers (communities, companies, extension services, NGOs…) ▪ Planning agencies and policy	Decision makers can identify the ecosystems contributing to the adaptation of the society	Reduced vulnerability of sectors and stakeholder depending on forest ecosystem services as a

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
		vulnerability of selected sectors (Palm, RaVi, BrLo + students).	makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local)		result of preservation of key services from forests
	Comparative analysis of governance arrangements for facilitating ecosystem-based adaptation	▪ Policy analysis in West Africa (Facafo), Central Africa (Cobam), Asia (Acips), and cross-continent (Bmz)	▪ Planning agencies and policy makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	Decision makers understand how governance arrangements influence the implementation of appropriate adaptation plans or strategies considering forests for adaptation	
Output Targets 2012	Vulnerability assessments of sectors depending on forest ecosystem services in Africa and Asia	▪ Articles or report on case studies on vulnerability assessments in coastal areas with focus on ecosystem services (Acips). ▪ Vulnerability of sectors depending on ecosystem services (DeSo)	▪ Planning agencies and policy makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	Decision makers in the relevant sectors recognize the links between ecosystem services and their vulnerability.	Reduced vulnerability of sectors and stakeholder depending on forest ecosystem services as a result of preservation of key services from forests
	Synthesis on approaches for defining and assessing ecosystem-based adaptation (including cost benefit analysis and comparison with other adaptation strategies)	▪ Tools for evaluating adaptation options (including modeling, CBA…) (Acips) ▪ Guidebook for experts and practitioners on vulnerability assessment and adaptation planning (Acips, Bmz)	▪ Forest users or managers (communities, companies, extension services, NGOs…) ▪ Planning agencies and policy makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	Donors, policy makers, and practitioners are aware of adaptation funding needs and opportunities, as well as funding mechanisms.	
Output Targets 2013	Comparative analysis of funding needs for implementing ecosystem-based adaptation in Africa and Asia	▪ Report on funding needs and opportunities from experiences in Central Africa, West Africa, Asia and cross continent (Cobam, Facafo, Acips, Bmz)	▪ Planning agencies and policy makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	National decision makers and the international community understand the needs for adaptation funding. Managers know how to fund adaptation projects.	Reduced vulnerability of sectors and stakeholder depending on forest ecosystem services as a result of preservation of key services from forests
	Assessment of ecosystem-	▪ Synthesis on building	▪ Planning agencies and policy	Decision makers recognize that	

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
	based adaptation (including cost benefit analysis) in Africa and Asia	scenarios, backcasting, adaptation planning and evaluation (Acips, Bmz, Facafo).	makers (e.g., finance, agriculture, land use) at different levels (e.g., national and local) ▪ International community (UNFCCC, donors, adaptation funds, IPCC, scientists…)	ecosystem-based adaptation is a efficient, sustainable and cost-effective approach to adaptation	

Logframe for Project 3: Improving livelihoods through smallholder and community forestry

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
Output 1:	**Identification of enhanced technical practices that facilitate sustainable smallholder and community forestry and secure safety-nets from forests**		**International initiatives for guideline development (e.g. WWF, EU, industry associations, ITTO, IUFRO), certification bodies, NGOs, forestry extension, producer associations**	**Use of information on improved timber and NTFP production practices by service and extension agencies to facilitate adoption of improved management by smallholders and communities**	**Better managed forests that deliver more sustainable outputs**
Output Targets 2010	A series of case studies to identify enhanced silvicultural practices for smallholder and community management of plantations (including timber and NTFPs)	Silvicultural guidelines for Acacia, Jabon and Mahogany for smallholders (MKo, BMZ) Manual on best practices for smallholder teak production (DR, ACIAR Teak) Training for management and commercialization of high-value NTFPs in Cambodia (MB, ITTO)	National-level NGOs and forestry extension agencies, district planning authorities	Use of best practice information by agencies providing extension to smallholders and communities, and use of tools by district planning authorities, leading to smallholder adoption of identified techniques	Increased production and extent of well-managed smallholder plantations, leading to less pressure on natural forests, and greater incomes for smallholders
Output Targets 2011	Analysis of how scientific knowledge can complement local ecological knowledge to improve smallholder forest management strategies	Final report of Cambodian NTFP project (MB, ITTO) Paper on evaluation of management plans and technical norms as decision support tools for community forestry (PC)	International initiatives for guideline development (e.g. WWF, EU, industry associations, ITTO, IUFRO), Certification bodies, forestry extension agencies, district planning authorities, producer associations	Better targeting of forestry research and development activities, so as to complement local knowledge more effectively	More effective research products help to foster better improvements in the sustainability and productivity of smallholder forestry
Output Targets 2012	Synthesis of principles for interventions to improve technical management of timber and non-timber resources for smallholder and community forestry	Case study papers that demonstrate the impact of forestry regulations on market development for key NTFPs Sustainable harvesting of Prunus africana bark article VI + internship student Phillip Nkeng Paper on NTFP in Cambodia	International initiatives for guideline development (e.g. WWF, EU, industry associations, ITTO, IUFRO), Certification bodies, international development and conservation NGOs	Use of guidelines and principles derived from the research by international agencies, certification organisations and extension bodies, so as to facilitate adoption of improved methods by smallholders	Better managed forest resources and fewer failed forestry initiatives lead to benefits for the poor and the environment

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
		(MB et al) Series of policy briefs for international fora			
Output Targets 2013	Synthesis of experiences with decision support tools and guides targeting the needs and conditions faced by smallholders and communities	Case studies Synthesis paper	National policy makers; funders supporting forest policy reform; Development NGOs	Technical norms and management instruments reconfigured to better support effective decisions making to improve resource management by smallholders and community level forest managers	Improved management of forests and forest resources based on sound and transparent decisions.
Output 2:	**Tools, guidelines and approaches that strengthen local organizations and forest enterprises to enhance outcomes from smallholder and community forestry**		**Community groups, producer associations, cooperatives, social movements and the agencies that deal with them: development and conservation NGOs (e.g. CARE, WWF), national extension agencies, private companies**	**Intended users of the outputs implement tools, guidelines and approaches to improve capacity of local organisations to represent themselves, negotiate and distribute benefits**	**Improved livelihoods of smallholders and communities from forestry activities that are mediated by local organizations**
Output Targets 2010	Case study assessments of how producers, and in particular marginalised groups including women and the poorest rural dwellers, can capture a greater portion of the forest product value chains (in terms of value adding, certification, fair trade, greater negotiating power, use of ICTs such as cell phones and internet)	Market performance and impact of Irvingia spp in households in Cameroon AA) Teak and furniture value chain papers (HP, DR, Rini, ACIAR Teak) Policy briefs for Jepara on recommendation to balance value addition distribution among furniture actors, men and women, and overcome constraints (HP, Rini et al. Brazil nut value chains and business models for smallholder and community forestry (PC) Comparative paper on honey values chains in _Africa (VI, MH,	Community groups, producer associations, cooperatives, social movements**,** development NGOs (e.g. CARE), national extension agencies	Techniques to enable increased market capture utilised by communities and producer associations and promoted by development NGOs and extension agencies	Enhanced incomes for smallholders due to increased value chain capture

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
		TC) Paper on five NTFP value chains and management in Cameroon & DRC (VI, AA, JS with FAO & ICRAF) Gnetum in African and Asia – strategies for livelihoods and conservation (VI, TC, , Soedjarwo Soejatmoko) Global Framework for Forest Product value chain analysis CIFOR working paper (Herry, Verina, Dani, Rini, Habte, Madeleen,..) Paper on gender equity issues in forest value chains (SS) Gums and resins value chain paper (HK, Sida Dry Forests) Monograph on economic important NTFPs in Cambodia Forests and livelihoods: three NTFPs in DRC (VI, R Reafor students fro Uni Kisangani DRC) Marketing system and the value chain of gums and resins in Ethiopia.			
Output targets 2011	Comparative analysis of how smallholders engage with larger private sector entities and state agencies	Review of rural financing schemes for smallholder forest enterprises, financing behaviour, and the relevant policy and regulatory frameworks (DR, ACIAR Teak, BMZ smallholder) Paper on Expansion of rubber (*Hevea brasiliensis*) in Mainland	NGOs, development agencies, financial organisations	Best practice financing schemes promoted by development agencies and supported by financial institutions	Enhanced forest management and enhanced smallholder-based forest enterprises due to availability of finance

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
		Southeast Asia and prospects for small holders (JC) Paper on participatory action research for improving small scale furniture producers. (HP, Rini) Roles of IT (internet and cellular phone) in improving small scale furniture producers to have a better market access. (HP, Rini) Paper on obstacles to women's decision making comparing Uganda and Nicaragua (AL, EM) Comparative synthesis paper of Forest Commons in Central America presented at international conference (AL)			
Output Targets 2012	Comparative analysis and synthesis of how smallholder and community producers achieve gains in efficiency, reduce costs, and capture a higher price for their products through improved coordination	Paper on key constraints to effective organizations and institutional arrangements for smallholder and community forestry Beekeeping Associations In Cameroon and Zambia *(FP &* VI conference paper and article*)* Paper on market demand and certification for small scale producers furniture in Indonesia (HP, Rini)	Community groups, producer associations, cooperatives, social movements**,** development NGOs (e.g. CARE), national extension agencies, private companies	Methods to improve the organisation of smallholder and community forestry taken up and used by development agencies	Improved functioning of groups leads to reduced transaction costs, better market access and higher incomes

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
Output Targets 2013	Comparative analysis of formal and customary organizational strategies with emphasis on mechanisms for strengthening capacity for forest managemetn	Paper on role of authority in indigenous territories and influence on community forest management (AL) Paper on organization factors identified in Makala project Fuelwood (JS, VI, AA, GL, SA, RN et al. + CIRAD)	National policy makers, international and national development agencies, funders. NGOs	Stronger and more cohesive organization and organizational strategies improve governance of forest landscapes.	Increase stability from improved organization and collaboration among stakeholders enhances forest management decision making
Output 3:	**Recommendations for national and international policies and approaches that promote sustainable livelihoods through smallholder and community forestry**		**International donor community, conservation agencies, policy makers in national land, agriculture and forestry agencies**	**Adoption of policies and strategies by governments and agencies that include forests in poverty alleviation strategies.**	**Enhanced income and livelihoods of forest communities**
Output Targets 2010	Case studies on smallholder incomes from natural forests (in relation to incomes from other livelihood activities) from diverse countries in Latin America, Africa and Asia	Papers (one per country), plus policy briefs, on smallholder incomes from - Zambia, Mozambique, DRC, Brazil, Bolivia, Ecuador, Bangladesh, Cambodia, Vietnam (SW, AA, TS)	Researchers, think tanks, policy advisors, particularly in national agencies	Improved understanding by key policy advisors of the role of forests in poverty alleviation strategies, so as to improve forest sector based rural development programmes	Increased tree access by the rural poor as a result of improved support, leading to greater benefits from smallholder production.
Output Targets 2011	Analysis of global data set on household incomes to identify the role of forests in human well-being and how forest incomes fit in overall household livelihood strategies	Earthscan book on environmental income assessments and field methods (PEN) (SW)	Researchers, think tanks, policy advisors, particularly those in international agencies	Improved understanding by key policy advisors of the role of forests in poverty alleviation strategies, so as to improve forest sector based rural development programmes	Increased tree access by the rural poor as a result of improved support, leading to greater benefits from smallholder production.
	Analysis of impacts (in terms of local incomes, community rights and environmental conditions) of different models of community forestry	Series of paper on cross country comparisons of trends in community forestry development (PC, GL, PC, VI) Paper on cost benefits of community forestry initiatives (VI, GL, AA &) Paper on the influence of gender and tenure regimes on the	Researchers, think tanks, policy advisors, particularly those in international agencies, and focused on those players promoting community forestry	Improved understanding of the costs and benefits of different forms of devolution and approaches to community forestry leading to a more appropriate array of options being promoted in practice.	Better and more sustainable effects in terms of rights, incomes and environment from community forestry

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
		management and livelihood values of NTFPs (case from Burkina Faso) (MZ, MBB)			
Output Targets 2012	Synthesis of effective conditions and types of public sector forestry sector initiatives for achieving poverty alleviation and forestry development goals	World Development synthesis paper or Special Issue in conjunction with high-level conference (PEN) (SW) High-level paper in Science or Nature on forests and environmental incomes Thematic papers on forest incomes (e.g. tenure) (PEN) (SW) Analysis of PRSPs and national planning processes to determine how forestry can be better incorporated (FP) Small Non-timber forest enterprises in Cameroon & DRC & policy impediments (VI AA) Paper documenting recommendations for local organisations, governments and support organizations for better livelihoods and conservation outcomes in specific countries (e.g. Ethiopia). (HK) Cifor Working Paper on Status of NTFPs in Central African countries and regional synthesis (ACP FORENET Project & VI, Yves Laumonier/Robert Nasi) Paper on policy to improve conditions of small scale furniture producers at district	National economic planning agencies, development agencies, Forest companies, NGOs, development agencies	Improved policy alleviation policies that take into account the role of forests resources as a safety net, gap filler, subsistence income, source of savings and investment, and occasional path out of poverty.	Forest-based incomes of the poor increase, and/or are less risky as a result of more effective forestry interventions.

	Outputs	*Verifiable Indicators of Output Target*	*Intended Users*	*Outcome*	*Impact*
		and national levels (HP, Rini)			
Output Targets 2013	Synthesis of key policy issues for addressing forest development in support of support smallholders and communities	Tenure 'tool box' identifying best practices and frameworks for addressing reform on forest tenure.	National policy makers and development agencies, international donors, International and national producer networks (representing communities and smallholders)	Improved policy environments for supporting the rights and practices of smallholder and community forest managers.	More conducive policies support forest livelihoods and management by local level stakeholders.

Logframe for Project 4: Managing the tradeoffs between conservation and development at landscape scales

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
Output 1:	**Development of improved empirical basis and methods for assessing and monitoring environmental services at landscape level**	**-**	**Land-use planners; Implementers of conservation initiatives; Agricultural agencies; Designers of PES schemes (NGOs, government agencies)**	**Use of methods leads to improved assessment of environmental services provided within the landscape**	**More efficient and effective conservation and use of environmental services due to enhanced ability to identify service flows**
Output Targets 2011	Analysis of the influence of landscape configuration on the provision and marketing of (non carbon) environmental services	Paper on innovative biodiversity monitoring systems based on activities developed in Laos (MB, JLP, IB) Multi-author special Issue on evaluating economic incentives for ecosystem services resulting from symposium at 2010 ATBC meeting (TS and others) Paper on the role of science and training to secure environmental services and conservation outcomes (JLP, TS) Preparation of a paper on livelihood and biodiversity and monitoring systems (JLP) Paper on landscape monitoring in Madasacar (Beforona) with 15 years of data (JLP)	Land use planners, implementers of conservation initiatives	Improved spatial configuration of conservation areas	More efficient and effective conservation and marketing of environmental services due to enhanced ability to identify service flows
Output Targets 2012	State of the art knowledge generated on quantification, mapping and monitoring ecosystem services as a contribution to habitat	Global review paper on the effectiveness of regulation services provided by ecosystems including monitoring methods and	Academia, global and regional decision makers, national planning agencies	Better informed decision making processes and support systems in conservation planning	Conceptual frameworks for conservation planning based on reguation services improved

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	conservation	application of underlying biophysical principles (MG) Review paper on biodiversity and ecosystem services (YL, TS) Paper on community-based monitoring of carbon and biodiversity in a REDD demonstration site in Laos (JCC) Review paper on the importance of biodiversity and ecosysmte services for food securityy (TS)			
Output targets 2013	Optimum institutional approaches of landscape management to maximize ecosystem services	Comparative analysis of optimum forest management regimes in providing sustainable ecosystem services (IW, FFPRI) q	Academia, global and regional decision makers, national planning agencies	Better informed decision making processes and support systems in conservation planning and ecosystem service provision	Conceptual frameworks for conservation planning based on reguation services improved
Output 2:	**Identification of principles, methods and processes for optimizing conservation and livelihood values from the allocation of land use rights within forest landscapes**		**Govt officials at various levels, land use planners, practitioners and social movements**	**Land use planners and practitioners etc are using principles and methods resulting in clearer recognition of C&D trade-offs in land and rights allocation and in better outcomes**	**More equitable land use rights allocation strengthen the capacity of local managers, improving livelihoods and reducing deforestation**
Output targets 2011	Collaborative decision-making and monitoring tools for strengthening community involvement and participation in conservation and land use planning	How can decentralized decision making build legitimate and transparent local institutions for managing conservation-development tradeoffs and increase negotiating power of marginalized groups (including women)? (AL, MM) Paper on the analysis of what works for external	Practitioner community (IMFN, social movement NGOs, district agencies, land-use planners, conservation NGO implementers)	Reforms adopted for more efficient and equitable allocation of land use rights	Land use better optimised for its productive potential for society, resulting in greater social, environmental and economic benefits.

	Outputs	Verifiable Indicators of Output Targets	Intended Users	Outcome	Impact
		implementers, including how to catalyze the involvement of marginalized groups in promoting collaborative management (LY, MM) Paper on the analysis of different stakeholders perspectives on conservation, how the different perspectives affect the effectiveness of conservation, and types of influence international actors should make to promote effective national and local conservation agenda (LY, MM) Paper on impacts of accessibility on forest resources and values (JLP) Paper on lessons learned and optimum tools of the LM project (JLP leads) Guidelines on the use of a collaborative decision models (YL) Analysis of laws, regulations and the legislative framework for collaborative land-use planning in Indonesia (YL) Paper on the implementation of participatory land-use planning to explore the trade-offs between conservation and development in Laos (JCC) Special issue of Policy			

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		Matters with highlight on land-use planning and rights-based approaches to conservation (TS & IUCN)			
Output Targets 2012	Assessment of the implementation of land use planning tools and approaches and consequent equity effects for local communities	Examination of extent and efficacy of participatory land-use planning in selected countries and their impacts on marginalized groups (TBC) Impact assessment of participatory land-use planning in Laos (JCC) A review of governance factors limiting the effectiveness of land-use planning (TS, YL)	Land management authorities, conservation NGOs, local government institutions	Improved planning methods adopted for more efficient and equitable allocation of land use rights	Land use better optimised for its productive potential for society, resulting in greater social, environmental and economic benefits, while minimizing social costs
Output Targets 2013	Collaborative assessment and analysis of land tenure arrangements for land-use planning	Paper on land-use change models including socio-economic and biophysical data integration (YL, TS)	Land management authorities, local and government institutions, land use planners	Communities and government agencies understand and agree on the optimum approaches for efficient and equitable allocation of land use rights for land-use planning	The requisite skills and resources are available to government agencies and communities for optimised land-use planning
Output 3:	**Identification of improved modalities and approaches to effectively support conservation in forest landscapes**		**Senior levels in government, conservation organizations (e.g. IUCN forest program), donor agencies and social movement organizations (e.g. Forests Peoples Program)**	**Better choices of institutional models to promote in different conditions**	**More effective forest conservation arrangements, with accordant reductions in conflicts, improved livelihoods, and retained environmental assets**
Output Targets 2011	Analysis of the circumstances under which different conservation approaches including payment for environmental services and non-cash incentives can be effective in delivering environmental services and	Paper on health impacts of conservation efforts in one or more countries (PS, TS, BP) Paper on ICDP "syndromes" (PC, TS) Comparative analysis of the outcomes of C&D and REDD	Senior levels in government, conservation organizations, donor agencies and social movement organizations	Governmental institutions, donors and conservation agencies draw on CIFOR's comparative analysis to support alternative conservation models and ICDP approaches to achieve more effective conservation-development outcomes	More effective forest conservation arrangements, with accordant reductions in conflicts, improved livelihoods, and retained environmental assets

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	improved livelihoods	initiatives (TS, DM) Analysis about opportunities and constraints for upscaling PES mechanisms from local pilots to national or region-wide schemes (SW and others) Final draft of the IUCN-CIFOR-FFPRI landscape approaches guidelines (JLP, TS) Paper on participatory conservation and land-use planning in Eastern Indonesia (YL) Participatory monitoring methods of biodiversity and livelihood impacts of REDD+ (JCC and others) Applying a conceptual framework to conservation and development trade-offs (TS & ACSC)			
Output Targets 2012	Comparative assessment of the long-term impacts and effectiveness of donor funded biodiversity conservation assistance in developing countries	Paper on the long-term impacts and effectiveness of donor funded biodiversity conservation assistance in developing nations in order to maximise outcomes for both conservation and sustainable livelihoods (TS, BC, Robyn James) Comparative assessment of the long-term impacts and effectiveness of donor funded biodiversity conservation	Senior levels in government, conservation organizations and donor agencies	Governmental institutions, donors and conservation agencies draw on CIFOR's comparative analysis to support alternative conservation models and ICDP approaches to achieve more effective conservation-development outcomes	More effective forest conservation arrangements, with accordant reductions in conflicts, improved livelihoods, and retained environmental assets

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		assistance and capacity building in DRC (VI) Paper on assessing the impact paheays of REDD in SE Asia *JCC and others)			
Output targets 2013	Analysis of alternative conservation approaches and reward mechanisms	Comparative analysis of different alternative approaches and reward mechanisms that can promote better conservation outcomes, including tools to change mindset/perception from short-term economic gains to sustainable practices (LY, MM) Analysis of degree of the outcomes of negotiation processes systematically vary by negotiation capacity, science input, land rights and procedure rights of stakeholders, availability of incentives, type of proponent/initiated, inclusiveness and participation, types of tools applied, vulnerability of ecosystem and community (MM, LY) Monitoring and evaluation for optimised livelihood and conservation outcomes: a global review (TS, BB)	Senior levels in government, conservation organizations and donor agencies	Governmental institutions, donors and conservation agencies draw on CIFOR's comparative analysis to support alternative conservation models and reward mechanisms to achieve more effective conservation-development outcomes	More effective forest conservation arrangements, with accordant reductions in conflicts, improved livelihoods, and retained environmental assets

Logframe for Project 5: Managing impacts of globalized trade and investment on forests and forest communities

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
Output 1:	**Analysis of trends and drivers in globalized forest-related trade and investment**		**Development banks and multilateral agencies, financial institutions, national governments, corporate actors and professional and industrial associations**	**Policy makers and financial institutions have a better understanding on the inter-linkages of major driving forces shaping forest-related trade and investment, and their related threats and opportunities for forests and people livelihood**	**Reduction of the pressures on forests from global forestry-related trade and investments while enhanced the role of international investment to promote equitable and sustainable economic development**
Output Targets 2010	Analysis of emerging sectoral and extra-sectoral trade trends likely to have significant effects on forests and forest related livelihoods in select countries or sub-regions of Africa and Latin America	Report analyzing historical trends in trade in key commodities shaping forests in LA, SSA and Asia-Pacific, (USAID/EC Bioenergy – LG/PP/GS) Document on global analysis of bioenergy development as a driver of tropical deforestation (EC Bioenergy 1.1, PP) Regional reviews of the main dynamics and implications of biofuel development (EC Bioenergy – KO Asia, LG/GS Africa, PP L America) Report on medium term trade and investment scenarios in Indonesia's pulp and plantations sub-sectors, linking global and regional trends to national and sub-national industry development plans (output from 2009 study) (CB/AD - BMZ). Policy briefs on the role of Vietnam and Indonesia in the Asia-Pacific wood market,	Government policymakers and planners (from Ministries of Forestry and Trade and other relevant sectoral ministries), corporate actors (pulp & paper, biofuel, plantation companies), trade and industry analysts, multilateral institutions and donor agencies, industry and producers' associations, civil society organizations	Greater market access for industries and corporate practices that are more socially and environmentally sustainable	Inappropriate deforestation reduced, and livelihood security and sustainable reduction of poverty advanced among rural smallholders involved in or affected by major trade trends

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		highlighting key drivers of market change (CB/AD - BMZ)			
Output Targets 2011	Analysis of trade and investment trends, and policy decisions, for selected food and fuel crops likely to have significant effects on forests and forest related livelihoods in select countries or sub-regions in tropical developing countries	Report on trends in biofuel trade and investment related to key feedstocks shaping forest cover change in selected forest-rich regions and/or countries (USAID, EC Bioenergy 3.1 / LG) Reports on expected drivers, assumptions and implications of biofuel development trends for forest and people in tropical developing countries (EC Bioenergy – LG/ GS)	Public and private sector financial institutions in major consumer countries/regions; Capital Investment Coordinating Boards; financial regulatory agencies; civil society organizations	Improved risk analysis and due diligence, and improved targeting of weaknesses in financial regulatory systems, for specific sectoral and extra-sectoral investments with significant impacts on forests, so that finance is directed towards industries and corporate practices that are more socially and environmentally sustainable	Reduction of the pressures on forests from trade and investment in biofuels and food crops with significant effects on forests through greater financial flows to more sustainable biofuel practices
	Analysis of Chinese trade and investment trends, and policies shaping those trends, in commodities with significant impacts on forests and forest related livelihoods in select countries or sub-regions in Africa	Comparative review of Chinese trade and investment trends in two African sub-regions (Congo Basin and Miombo woodlands) (BMZ 1.1.1-2 / LP) Regional reports summarizing findings from scoping studies on dynamics of Chinese trade and investment in the Congo Basin (BMZ 1.2 - PC/GL/SA/LP/LG) and Miombo woodlands (BMZ 1.2 - LG/GS/DG) Analysis of government and corporate policies and legislation, and other conditions shaping Chinese operations overseas (BMZ - 1.1.3 / LP)	African policy makers (Ministries of Forestry, Agriculture, Environment, Trade; investment promotion authorities), Chinese policy makers and planners (Foreign Affairs, Chinese Ministry of Commerce, State Forestry Administration), Development banks (ADB, China Exim, CDB), civil society, private sector actors	African policy makers are informed of the major trends in Chinese forest-based investments shaping livelihood security, the environment and long-term economic development, and are more able to plan proactively to govern new investments to capture value and minimize costs.	Reduction of the pressures on forests from Chinese trade and investment in two African sub-regions
Output Targets 2012	Comparative assessment of the dynamics of domestic timber markets in their interactions with changes in foreign markets in select countries in Southeast	Reports analyzing the structure, size, and driving forces shaping the domestic processing and consumption of timber products in select countries in Southeast	Southeast Asia, Africa, and Latin American policy makers and planners (Ministries of Forestry, Agriculture, Industry, Trade, Foreign Affairs), civil society,	Southeast Asia, Africa, and Latin America policy makers and planners (Ministries of Forestry, Agriculture, Industry, Trade, Foreign Affairs), civil society, private sector actors,	Reduce the pressures on forest degradation from expansion of informal and illegal logging linked to domestic markets influenced

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	Asia, Africa, and Latin America	Asia, Africa, and Latin America (PC/ PP/ KO/ AD/ AA)	private sector actors, financial institutions and donor agencies	financial institutions and donor agencies are better informed about the role that domestic timber markets play in the overall extraction, processing and trade of timber products globally.	by export markets dynamics
	Assessment of the financial, market and policy conditions driving large-scale land acquisition and investments for the expansion of oil palm production with effects in forest in tropical developing countries	Country reports analyzing the drivers and conditions fostering large-scale investments in oil palm development in select forest landscapes in Africa, Asia, and Latin America (KO/ PP/ GS/EM) Global synthesis of findings on global finance and trade trends and conditions shaping oil palm development in Asia, Africa and Latin America (KO/PP/PL)	Multilateral agencies, development banks, policymakers and land-use planners in Ministries of Forestry, Agriculture, Trade, Foreign Affairs), industry and trade associations, research institutions, and civil society	Global processes established for the development of guidelines for responsible large-scale investment are informed of major trends and likely implications on forests and forest related livelihoods	Significant reduction of the pressures on forests from large-scale investment and land acquisition, with emphasis in oil palm, with shifts toward sub-optimally used non-forest lands
	Analysis of the interactions between forest concessions and emerging carbon commodity in the context of REDD+ and carbon trade in select cases in Asia, Africa and Latin America	Paper discussing the motives and implications of "concession' models in forests allocation linked to the emergence of carbon as a new commodity and their related finance and trade flows (AW/PP/LP/KO/,EM)	Policy makers in the Ministries of Forestry, Agriculture, and Foreign Affairs, financial institutions, multilateral agencies and civil society	Improved policies and responses that minimize the risks of large-scale land appropriation of lands and concentrate carbon trade benefits in powerful corporate actors.	Contribute to improve the awareness of emerging markets linked to carbon on forestland allocation and associated benefit distribution
Output Targets 2013	Comparative analysis of large-scale land acquisition and investments with significant effects on forests in Southeast Asia, Africa, and Latin America	Paper examining the driving forces, objectives, and practices associated with large scale land acquisition for commercial purposes in select countries in Southeast Asia, Africa, and Latin America (PP/ LG/ KO/ GS)	Southeast Asian, African, and Latin American policy makers and planners (Ministries of Forestry and Industry, investment promotion agencies and relevant sectoral ministries), financial institutions, private sector actors, industry and trade associations, multilateral agencies, research institutions, and civil society	Southeast Asian, African, and Latin American policy makers and planners, civil society, private sector actors, financial institutions and donor agencies are better informed about the trends, overall scale, driving forces / motivation and governance shortfalls associated with large-scale land acquisition for commercial purposes in select countries in SE Asia, Africa, and	Significant reduction of pressures on forests from large-scale investment and land acquisition in forest-rich ecoregions, with shifts toward sub-optimally used or degraded non-forest lands

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
				Latin America	
	Analysis of trade and investment trends for selected feedstock for second generation biofuels likely to have significant effects on forests and forest related livelihoods in select forest landscapes in developing countries	Report on supply-demand and investment trends in second generation biofuel shaping forest cover change in selected tropical forest-rich regions and/or countries (KO/AD)	Public and private sector financial institutions in major consumer countries/regions; Capital Investment Coordinating Boards; financial regulatory agencies; civil society organizations	Improved risk analysis or specific sectoral and extra-sectoral investments with significant impacts on forests, so that finance is directed towards industries and corporate practices that are more socially and environmentally sustainable	Reduction of the pressures on forests from trade and investment in biofuels with significant effects on forests through greater financial flows to more sustainable biofuel practices
Output 2:	**Analysis of the impacts and trade-offs of globalized forest-related trade and investment within specific forest landscapes**		**Policymakers, national and local planning agencies, forestry departments, finance ministries, investment regulation bodies, NGOs, private sector associations, regional economic organizations (ASEAN, CEMAC, COMESA, MERCOSUR), multilateral and regional development banks**	**Policy makers and investors use insights for more informed decision-making and investments in the area of forestry related trade and investment to mitigate the negative social and environmental impacts**	**Decrease in negative external impacts on forests and improvement of benefits from forest-related trade and investment , especially for the most vulnerable groups (women and indigenous people)**
Output Targets 2010	Case analyses of the local social and environmental impacts and trade-offs of bio-energy development and how local and national governance arrangements shape these outcomes in select countries of Asia, Africa and Latin America	Papers summarizing the local social, economic and environmental impacts of bio-energy development in select case study countries in Africa, LA and Asia (Cordaid, ACIAR-ANU, EC Bioenergy 1.2 – LG/GS Africa; KO/HK/AA Asia; PP Latin America) Papers analyzing the legal and institutional frameworks for bioenergy production at national	National and local planning departments, forestry departments, investment promotion authorities, relevant ministries, NGOs, private sector, EC (DG-Environment and DG-Tren)	National and regional planning processes and investment promotion practices more effectively anticipate the likely costs and benefits of biofuel investments, and incentive and regulatory instruments strengthened to manage the local economic, social and ecological "footprint" of biofuel commodities with significant effects on forests. European policy dialogue and/or policies reflect understanding of	Inappropriate deforestation reduced, and livelihood security and sustainable reduction of poverty advanced among rural communities influenced by major bioenergy investments

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		level in select case study countries in Africa, LA and Asia (EC Bioenergy 3.2 – KO/HK Asia, LG/GS Africa, PP Latin America)		potential costs of biofuel investment.	
	Policy options and recommendations regarding forest sector and extra-sectoral investments for ensuring sustainable plantation based fiber and timber supplies in select Asia-Pacific supplier and consumer countries based on participatory assessment of scenarios by key stakeholder groups	Report summarizing policy options and recommendations for improved smallholder tree-planting initiatives formulated through participatory assessment of preliminary scenarios by key stakeholder groups in Vietnam and Indonesia (AD - BMZ) Policy briefs summarizing policies, plans, and regulations for industrial tree-planting in Vietnam and Indonesia, with analysis of implications for smallholders (AD - BMZ)	Government policymakers and planners (Ministries of Forestry, Agriculture, Industry, Trade),, financial institutions, multilateral institutions and donor agencies	Improved policies and international/national strategies for pulp mill projects, biofuel investments, and smallholder tree-planting initiatives	Inappropriate deforestation reduced, and livelihood security and sustainable reduction of poverty advanced among rural smallholders involved in industrial tree-planting programs and biofuel projects
Output Targets 2011	Assessment of the social and environmental impacts and trade-offs of select investments (e.g. food and fuel crops, timber, minerals) with proven linkages to deforestation in select landscapes of Africa, Asia and Latin America	Set of case studies summarizing the trade-offs within specific landscapes resulting from investment in key commodities affecting forests (LG/ PP/ KO/ AD/ GS/ HK/EM) (IASC Panel 2011; EC Bioenergy 1.2; China in Africa scoping studies 1.2) Set of bioenergy scenarios for Miombo woodlands that highlight trade-offs between different policy goals and stakeholder interests (EC Bioenergy / LG) Document on potential for sustainable bio-energy production in Sub-Saharan Africa that benefits local people	National and local planning departments, forestry departments, investment promotion authorities, relevant ministries, NGOs, private sector	National and regional planning processes and investment promotion practices more effectively anticipate the likely costs and benefits of investments, and incentive and regulatory instruments strengthened to manage the local economic, social and ecological "footprint" of commodities shaping forests.	Decrease in negative impacts and improvement of local benefits from forest related investment

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		(EC Bioenergy 4.2 – LG) Paper on landscape change in Latin America and policy implications towards REDD (Oaxaca meeting, PP)			
	Analyses of the local social and environmental impacts and trade-offs of Chinese investment in select commodities and how governance arrangements shape these outcomes in select case study countries in the Congo Basin and Miombo woodlands	Case studies on the effects of Chinese trade and investment on local livelihoods, forests and national economies for prioritized countries and commodities (BMZ 2.2 - LG/GS/DG/LP/PC/GL).	African policy makers (Ministries of Forestry, Agriculture, Environment, Trade; investment promotion authorities), Chinese policy makers and planners (Foreign Affairs, Chinese Ministry of Commerce, State Forestry Administration), Development banks (ADB, China Exim, CDB), civil society, private sector actors, regional economic commissions (e.g. COMESA, FOCAC), EITI, OECD-DAC	On Chinese side, policy makers understand implications of Chinese trade and FDI and initiate processes to enhance the sustainability and equity of Chinese corporations operating overseas. On the African side, policy makers understand the shortcomings in existing governance instruments and devise mechanisms to minimize the costs and enhance the benefits of Chinese FDI. Both Chinese and African decision makers are made aware of equity and sustainability issues in bilateral trade and investment.	Decrease in negative external impacts and improvement of local benefits from forest related investment
Output Targets 2012	Comparative analysis of social, economic and environmental impacts and trade-offs of Chinese investments in select commodities shaping forests and livelihoods in Africa	Synthesis of case studies (journal articles, policy briefs) on the effects of Chinese trade and investment on local livelihoods, forests and national economies for prioritized countries and commodities (BMZ 2.2 / LG). Paper analyzing the influence of governance instruments at diverse levels in shaping impacts from Chinese investment, and opportunities for more sustainable and equitable outcomes (BMZ - KO/LG/LP).	African policy makers (Ministries of Forestry, Agriculture, Environment, Trade; investment promotion authorities), Chinese policy makers and planners (Foreign Affairs, Chinese Ministry of Commerce, State Forestry Administration), Development banks (ADB, China Exim, CDB), civil society, private sector actors, regional economic commissions (e.g. COMESA, FOCAC), EITI, OECD-DAC	Improved policies and strategies in China and Africa to govern the social and ecological costs and benefits of major investments that impact forests and forest communities; reduced financial support and market access for industries and forestry projects that are socially and environmentally unsustainable.	Inappropriate deforestation reduced, and livelihood security and sustainable reduction of poverty advanced among rural communities involved in or affected by Chinese investment trends; and more meaningful contributions of natural resources to national economic development.
	Assessment of the local socio-economic and environmental impacts of large-scale land	Case study reports on the social, economic and environmental impacts and trade-offs from land	Policy makers, international financial institutions (IFC) and regional development banks,	Greater accountability of investors, and enhanced governance options to manage landscape change, and	Inappropriate deforestation reduced, improved opportunities for livelihood

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	acquisition and investment for oil palm development in forests and people livelihoods, including vulnerable groups such women	acquisition and investment linked to market development in oil palm in select landscapes in Asia, Africa and Latin America (KO, PP, PL, EM) Paper on the effects of agricultural expansion and large-scale investment in shaping landscape change in the Amazon region (PP)	Ministries of Planning , Finance and Rural Development, private sector actors, donors, networks of NGOs and social actors	improve the distribution of benefits	enhancement among rural communities involved in or affected by investment trends, and more meaningful contributions of investments to economic development.
	Analysis of the relative relevance and strength of political and governance factors at multiple levels of governance in influencing the pace, nature and impacts of large scale land acquisitions in selected sites in Africa, Asia and Latin America.	Comparative case studies on the political and governance determinants of the pace and extent of large scale land acquisitions (EM/KO/PP)	Multilateral development agencies, regional and global financial institutions, donors, national governments of developing and developed countries; relevant policy processes at international and regional levels.	Improved understanding of the political/governance factors that drive the pace and nature of large scale land acquisition among relevant stakeholders at national, regional and global levels. International and regional policy frameworks and processes,(including voluntary processes) incorporate safeguards and processes that minimize and/or eradicate the salience of identified political factors that enhance negative impacts.	Negative impacts of large scale land acquisition processes minimized through the adoption of relevant safeguards and policies.
Output target 2013	Global synthesis of social, economic and environmental impacts, threats and opportunities from land acquisition linked to oil palm development in select countries in Asia, Africa and Latin America	Comparative paper on the social, economic and environmental impacts, threats and opportunities from oil palm development across regions (KO/ PP/ PL/EM) Policy briefs distilling main lessons on threats and opportunities from differentiated government policies and corporate practices on oil palm development across regions	Policy makers, international financial institutions (IFC) and regional development banks, Ministries of Planning , Finance and Rural Development, private sector actors, donors, networks of NGOs and social actors	Greater accountability of investors, and enhanced governance options to manage landscape change, and improve the distribution of benefits	Decrease in negative external impacts and improvement of local benefits from forest related investment

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		(KO/ PP/ PL)			
	Policy options and recommendations regarding forest sector and extra-sectoral investments for ensuring sustainable plantation based fiber and timber supplies in select producer countries	Report on government policies, plans, and regulations related to the promotion of fibre-based energy, bio-refineries, industrial tree-planting, and analyze implications for wood fiber production (AD/KO/PP)	Government policymakers and planners (Ministries of Forestry, Agriculture, Industry, Trade),, financial institutions, multilateral institutions and donor agencies	Improved policies and international/national strategies for the development of fibre-based second generation biofuels	Inappropriate deforestation reduced, and livelihood security and sustainable reduction of poverty advanced among rural smallholders involved in industrial tree-planting programs and biofuel projects
Output 3:	**Assessment of governance options for managing the impacts and trade-offs of forest-related trade and investment**		**National and local planning departments, forestry departments, finance ministries, investment regulation bodies, NGOs, private sector associations, regional economic organizations (ASEAN, CEMAC, COMESA, MERCOSUR), development banks, UNFF**	**Better-targeted policy interventions and investments lead to enhance institutional architectures to reduce negative environmental and social externalities from forestry-related trade and investment**	**Enhanced institutional arrangements and architectures (at multiple scales) for governing trade and investment trends with significant influence in the maintenance of the provision of forest goods and services**
Output Targets 2011	Identification of institutional options, actions and strategies for safeguarding and strengthening property rights and livelihoods of local communities (including vulnerable groups such as women and the landless) in the context of globalized trade and investment in selected forest ecoregions of Africa and Asia.	Comparative syntheses (including a journal article, policy briefs, practitioner manual) of local level responses, actors, actions and strategies to safeguard property rights and claims against external threats. (CAPRI – EM/ HK).	Civil society, including NGOs and CBOs; Forest resource users; National and Local governments; Investors; Donors.	Actions and strategies for strengthening property rights and access of vulnerable groups (eg women, landless, the poor) incorporated into national and subnational policies, plans and strategies, and also into donor and civil society plans and strategies. Improved awareness among local communities (especially women, landless, the poor) of their property rights, and of the relevant actors and actions they can undertake, collectively and individually, to safeguard their claims to forests and related resources.	Property rights, access and claims to forest resources strengthened and protected, especially among the most vulnerable resource users.

	Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	Guidelines and tools for improved financial due diligence, social-environmental safeguards, corporate disclosure, and legal compliance of investments in sectors that affect forests	Report on tools to improve investment decision-making processes by financial institutions (EC Bioenergy 5.1 / LG)	Government policymakers (Financial institutions in major consumer countries/regions; Capital Investment Coordinating Boards) and financial regulatory agencies, financial institutions, donor agencies, and civil society organizations	Use of tools and guidelines by public and private financial institutions to improve safeguards for investments in sectors affecting forests	Increased financial accountability and investment planning taking into account likely negative impacts on forests goods and services and local livelihoods
	Analysis of instruments governing Chinese/International FDI and trade, and how these mediate outcomes, in select African countries	Review of primary governance instruments in target African countries affecting Chinese and International Trade and Investment and efficacy of these instruments in achieving sustainability and equity (WP3.1.1 – LP) Review of industry standards and corporate policies for selected commodities impacting African forests (WP3.2.1 – LP)	African policy makers, Development banks (ADB, China Exim, CDB) ,COMESA, FOCAC, OECD-DAC, EITI, Chinese Ministry of Commerce and State Forestry Administration	On Chinese side, actors understand and help to disseminate the rules governing resource access and trade. On African side, policy makers understand the shortcomings in existing governance instruments and enforcement. Both Chinese and African decision makers are made aware of equity and sustainability issues in bilateral trade and investment.	Increased accountability of international investors and/ traders to sustainable and equitable management of African resources.
	Identification of policies and market-based mechanisms with the potential to foster more sustainable and equitable bioenergy development in forest landscapes	Synthesis of existing and revised criteria and indicators for equitable and sustainable production of bioenergy (EU Bioenergy 1.3, 1.4, 1.5 - LG/PP/GS/KO) Review of the effectiveness of market-based mechanisms to promote sustainable bioenergy development (EC bioenergy 3.3 – PP/LG)	Biofuel industry associations, certification bodies, government agencies, the EU Bioenergy Directive (DG-TREN), biofuel roundtables (RSPO, RSB), civil society	Improved monitoring of the biofuel sector; adoption of specific market-based instruments likely to yield more sustainable and equitable returns from the bioenergy industry	Improved the options for market-based mechanisms with potential to govern trade and investment trends for maintaining the provision of forest goods and services
Output Targets 2012	Analysis of the effectiveness of governance instruments (market-based and regulatory) in minimizing the negative social and environmental impacts of forest-related trade and	Synthesis report by commodity of how different governance instruments shape social, environmental, and economic outcomes for prioritized commodities in case study sites	Development banks, UNFF, Regional economic organizations (ASEAN, CEMAC, COMESA, MERCOSUR, ALENA), National and local planning departments, forestry departments, finance and	Local and national governments adopt improved governance arrangements for managing pressures on forests and local livelihoods in forest landscapes shaped by investment trends	Improved the regulatory options and incentives with potential to govern trade and investment trends for maintaining the provision of forest goods and services

	Outputs	***Verifiable Indicators of Output Targets***	***Intended Users***	***Outcome***	***Impact***
	investment	for China-Africa T&I research (KO/LG/LP). Paper on the effectiveness of governance instruments to regulate the expansion and manage the impacts of large-scale investments in selected sectors (e.g., oil palm development) (KO/ PP/ PL)	trade ministries, investment bodies, NGOs		
Output Targets 2013	Synthesis of governance instruments by sector with the greatest potential to minimize trade-offs of forest-related trade and investment	Comparative synthesis of governance instruments with the greatest potential to minimize trade-offs (leverage greater gains, minimize losses) based on case study data from diverse commodities and regions (LG/ PP/ KO/ LP/ EM)	Development banks, Regional economic communities (ASEAN, CEMAC, COMESA, MERCOSUR, ALENA), national and local planning departments, forestry departments, sectoral ministries, investment promotion bodies, NGOs	Local and national governments adopt improved governance arrangements for managing pressures on forests and local livelihoods in forest landscapes shaped by investment trends	Enhanced architectures at multiple scales for governing trade and investment trends for the provision of forest goods and services, ensuring equitable benefits, especially for the most vulnerable groups including women

Logframe for Project 6: Sustainable management of tropical production forests

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
Output 1:		**Identification of efficient public policies and market-based instruments to improve the social and environmental footprint of the use of production forests**		**UNFF, CBD, ITTO, CPF, multilateral donors (EC), regional bodies (ASEAN, CEMAC), development banks, FSC, scientific community, forestry departments, certification bodies, local forestry NGOs**	**More effective and equitable to preserve environmental and social values of tropical production forests**	**Communities, governments and forest companies benefiting over longer periods from better management and more sustainable use of goods and services from production forests**
Output Targets 2010	OT2010/1/1	Tools and recommendations to curb illegal logging through integrated law enforcement approaches (ILEA, using both extra-sectoral – e.g. money laundering and corruption - and forestry regulations) amongst ASEAN countries	A set of guidelines to use Integrated Law Enforcement Approach for Indonesia and ASEAN countries to curb illegal logging in the region (BS, AS, SM and partners) (ILEA, ADRA Projects)	ASEAN, national and local governments, forestry agencies, law enforcement and judicial agencies, financial institutions, local forestry NGOs, donors	The ILEA approach is implemented in Indonesia and other ASEAN countries to help curb illegal logging	Illegal logging is reduced and can be prosecuted in ASEAN timber production processes, resulting in more sustainable forest management
	OT2010/1/2	Recommendations to the governments of Congo Basin countries (CEMAC) on measures to monitor and control their domestic wood product (timber, fuelwood and utility wood) sector	New policies/approaches toward artisanal wood harvesters (GL, PC, RN) Scientific articles (GL, PC, RN) Survey reports of informal sector (GL, PC) Governance Brief(s) (team + ISG) (DGIS illegal harvesting, FORAF projects)	National governments, forestry departments, bilateral and multilateral donors, scientific community, local and international NGOs	The legal frameworks in respective countries are adapted/modified for more effective and equitable policies on the domestic wood markets	Domestic wood harvesting and markets fully integrated into national legal frameworks and economy, so that the governance of deforestation is enhanced

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
Output Targets 2011	OT2011/1/1	Assessment of the extent and the driving forces of illegal logging in Indonesia and the Congo Basin	Governance Brief(s) and/or article(s) on the extent and the drivers of forest loss Journal papers (PC, KO, GL, RN)	Forestry departments, multilateral donors, certification bodies, scientific community, local and international NGOs	Improved policy measures to addresses illegal logging and deforestation in both regions	Lower quantities of illegally harvested forest products entering markets, with attendant reductions in deforestation
	OT2011/1/2	Comparison of potential policy options for limiting deforestation and promoting economically feasible, environmentally responsible and socially equitable plantation estates and development in Papua	Governance Brief(s) and/or article(s) on best case scenarios for limiting deforestation and promoting a balanced approach to plantation development in Papua (KO) (COR02 project)	Forestry departments, multilateral donors, certification bodies, scientific community, local and international NGOs	Improved land allocation for plantation estates that minimise deforestation	Less deforestation and conflict from timber and oil palm plantation development in Papua, Indonesia
	OT2011/1/3	Analysis of potential to extend forest management (FM) certification to include ecosystem services such as biodiversity conservation, carbon storage, water regulation, etc., with focus on constraints and barriers.	CIFOR Report (LP and partners)	FSC International and partners in project "Expanding FSC certification at landscape level through incorporating additional ecosystem services"	Partners in Chile, Indonesia, Nepal and Vietnam conduct pilot studies to assess potential ways to overcome constraints and barriers to expanding certification to ecosystem services	Better verification of efficacy of ecosystem service provision by managed forests for better-targeted payments
Output Targets 2012	OT2012/1/1	Policy options and recommendations to clarify and improve the role of different actors (government, donors, research organisations, certifying bodies, NGOs) in fostering sustainable forest management and limiting illegal logging in the Congo Basin in production forests	Journal articles (PC, RN and partners)	Forestry departments, logging companies, certification bodies, scientific community, local and international NGOs	Improved PCI for FSC (FSC-IC and national initiatives). Improved and harmonised standards adopted by certifying bodies Improved sustainability criteria adopted by national forestry departments	Legal and certified forest management in production forests adopt improved standards, leading to better managed forests

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	OT2012/1/2	Analysis of the impact of the 2008-2009 global crisis on the forestry sector in the Congo Basin (extraction, deforestation, degradation)	Journal articles (PC, GL, RN)	Forestry departments, multi- and bi-lateral donors, logging companies, certification bodies, scientific community, local and international NGOs	Domestic timber sector importance recognised at national level, challenges quantified, and legal frameworks modified Improved legal framework regulating the domestic timber sectors	Forest management improved in the face of pressures from the financial crisis
	OT2012/1/3	Adaptation of anti corruption and anti money laundering regulations and instruments for identifying and prosecuting illegal logging to Latin American and Congo Basin countries	A set of standards or recommendations for timber companies in complying with regulations (internal and external)	Timber companies, forest decision makers, Ministry of Industry, Ministry of Trade	Better monitoring system or regulations on timber companies in extracting and trading timber for Ministry of Forestry, Ministry of Industry, and Ministry of Trade	Money laundering and corruption in the management of timber production are reduced, leading to reduced deforestation
	OT2012/1/4	Analysis of the synergies and limitation of FLEGT and REDD and analysis of options to curb corruption in REDD payments and transfers	CIFOR papers	KPK, Ministry of Finance, Ministry of Forests, Indonesia, Norwegian government (Ministry of Environment and the team negotiating Norwegian support to Indonesia for REDD), UNFCCC COP community (NGOs and governments), EC FLEGT community, ASEAN	Users informed of proposed options to build synergies and address limitations of existing FLEGT and REDD arrangements to curb illegal logging and corruption Safeguards against corruption built in bilateral arrangements between Norway and Indonesia Ministry of Finance in Indonesia takes up recommendations	The global REDD architecture integrates specific safeguards against corruption in REDD payments and transfer schemes FLEGT schemes in Indonesia strengthened with better synergies between FLEGT and REDD

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	OT2012/1/5	Analysis of the social and environmental effects of FM certification of forests under different tenure types and of COC certification of different types of companies in Latin America, Asia and Congo Basin	Journal articles (LP and others)	Certification institutions, national forestry/nat. res. departments	National development authorities are aware of conditions under which FM and COC certification promise socially beneficial outcomes National governments promote forms of FM and COC certification that benefit local people	Certification schemes that benefit local people are encouraged, resulting in greater benefits from certification programs to local people. Certification programs that cause negative social outcomes are revised or discouraged.
Output Targets 2013	OT2013/1/1	Recommendations to the governments of FLEGT-VPA countries on measures to integrate the domestic timber markets in their Legality Assurance Systems (LAS)	New policies/approaches toward artisanal wood harvesters (GL, PC, RN, KO, PP, LP) Scientific articles (GL, PC, RN, KO, PP, LP) (EC PROFORMAL, FORAF projects)	National governments, forestry departments, bilateral and multilateral donors, scientific community, local and international NGOs	The legal frameworks in respective countries are adapted/modified for more effective and equitable policies on the domestic wood markets and their effective integration in national LAS schemes	Domestic wood harvesting and markets fully integrated into national legal frameworks and LAS, so that the governance of the sector is enhanced.
	OT2013/1/2	Assessment of adherence of forestry companies in Asia, Africa, and Latin America to the stated criteria and regulations of FM and COC certification programmes; assessment of sustainable forestry and social outcomes of certification programs	High-profile journal article (LP and others)	Certification bodies and consultants, forestry departments, bilateral and multilateral donors, scientific community, local and international NGOs	Certification bodies conduct inventories of compliant and non-compliant forestry companies	Increased accountability of certification bodies to demonstrate positive outcomes of certification resulting in more social and environmental benefit of certification programs and fewer cases of greenwashing
Output 2:		**Improved tools, methods and guidelines for better monitoring and management of tropical production forests**		**ITTO, CPF, multilateral donors (EC), regional bodies (ASEAN, CEMAC), development banks, FSC, IUFRO, scientific community, forestry departments,**	**Improved silvicultural and monitoring practices, consistent with sustainable forest management are implemented**	**The ability of production forests to provide different goods and services is maintained, which leads to increased social and**

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
				forest managers, companies, local forestry NGOs, communities and others involved in management of production forests	**Increased area under SFM**	**environmental benefits**
Output Targets 2010	OT2010/2/1	Comparative analysis of silvicultural and management systems harmonising timber and non-timber production in humid tropical forests	Monograph on timber production and non-timber resources management in South-East Asia (YL, RN and partners) Global overview of status and trends on integration of timber and NTFP extraction (book chapter, MG) Scientific articles on compatibility of timber extraction and production / conservation of other forest goods and services (MG, RN, PS, YL and partners) Workshop and report on harmonisation of national reviews on Central Africa NTFP (VI and partners) (FORENET, REAFOR, SIDA project)	Forest policy makers, scientific community, forest managers	Multi-resource forest management plans requested by policies and implemented by companies	Optimised and more sustainable use of tropical production forests in the tropics, with attendant environmental benefits
Output Targets 2011	OT2011/2/1	Analysis of status and trends (management, informal sector, NTFPs, contribution to livelihoods) of forests and forestry in the Congo Basin in 2010	State of forests 2010 (RN other CIFOR staff as requested and partners) Interactive website (project team)	COMIFAC, National governments, forestry departments, multilateral donors, certification bodies, scientific community, local and international NGOs	Better and more transparent monitoring of the state of forests in Congo Basin by stakeholders	Optimised and more sustainable use of tropical production forests in Central Africa, with attendant environmental benefits

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
			(FOR AF, CEOFAC)			
	OT2011/2/2	Global analysis of multiple-use forest management for tropical production forests and assessment of opportunities and barriers to implementing multiple use management systems	Proceedings of the workshop (ITTO project; MG, RN and partners) Three regional reports of integrated approaches of SFM in the tropics (consultants) 2 symposiums in IUFRO 2010 (MG, RN and others) Scientific article on emerging training and education needs of NTFP management for the Neotropics with considerations of timber integration (MG) Scientific article on policy constraints and multi-stakeholder perceptions on feasibility of timber-Brazil nut systems in Peru, Bolivia and Western Brazil (MG, AD) Translated article into Spanish including a Policy Brief containing technical and policy recommendations for Western Amazon (Peru, Bolivia, Brazil) (MG)	ITTO, CPF, scientific and academic community, governments, forestry departments, forest managers, donors, communities and others involved in management of productions forests	The scientific, practitioner and policy communities are better informed about tradeoffs and opportunities in integrated timber and NTFP management, so that best practices are more widely adopted	Improved sustainability of production and greater employment opportunities in production forests due to better profitability and forest cover maintained due to enhanced multiple benefits at the stand and landscape level

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
Output Targets 2012	OT2012/2/1	Approaches and tools to integrate wildlife management (both for conservation and consumption purposes) in logging concessions in the Congo Basin	WFC 2009 event (NV, RN) Systematic review on wildlife and forest management (RN) Symposium in IUFRO 2010 event (NV, RN) Report on tools and methods on: - efficient wildlife survey methods - efficient ways to monitor bushmeat trade and consumption within logging concessions - innovative methods for the analysis of survey and monitoring data - analysis of the social/economical/ecological acceptability of different management measures	Logging companies NGOs Consultancy groups in charge of sustainable management plans for logging companies Ministries of Forestry Certification bodies	Logging concessions, NGOs, consultancy groups and governments implement improved wildlife management in logging concessions, partially as a result of the inclusion of wildlife in certification standards	The most appropriate species are sustainably used as source of protein and income for local communities living inside concessions, improving the nutrition of the poor Logging concessions better contribute to the protection of the most vulnerable animal species
	OT2012/2/2	State of the art review identifying social, technical and economic factors influencing the success for multiple use forest management in the tropics through selected case studies	Special Issue in international journal including synthesis/conceptual article (MG, RN, VI, others) and dissemination in policy briefs One consolidated report based on the CIRAD-CIFOR-ITTO workshop above for an international journal (new JPO from Finland taking the lead) Review paper of multiple-use forest management systems and forestry policy frameworks	Academia, research managers, donor agencies	Forest managers, governments, researchers apply sound information and draw lessons learned when designing and implementing multiple use forest management systems	

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
			Central Africa (VI, GL, PC, AA - Beyond timber CBFF) Comparative analysis of the harvesting methods of Crabwood for timber and NTFP use from forest areas in Guyana and Suriname (FORENET) Characterisation and valorisation of NTFPs (plants, animals and fungi) in Gabon (FORENET)			
Output targets 2013	OT2013/2/1	Forest management models and practical guidance on multiuse management of tropical forests with emphasis on NTFPs	Draft manual for the neotropics (MG) Analysis of literature on multiple-use forest management systems and forestry policy framework (Beyond timber-CBFF) Suite of field tested multiple-use forest management models to reconcile timber and non-timber production (Beyond timber-CBFF) Multiple-use forest management guidelines for different scales, considering relevant parameters and in accordance with the legal framework (Beyond timber-CBFF)	National governments, universities, regional and national research institutes	Better trained forestry personnel and forestry graduates. NGO personnel better informed for implementing development projects on sustainable forest management. Forestry curricula improved	Enhanced sustainability of forest resources through multiuse approaches to management
Output 3:		**Tools and methods to resolve conflicts about land use, distribution of benefits**		**Companies, development and**	**Strategies for more equitable distribution of**	**Enhanced benefits and reduced detrimental**

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		and resource rights in the use of tropical production forests		**environmental NGOs, local communities, local and national governments, educational institutions**	**benefits adopted by NGOs, government and companies** **Local values considered by companies in management and harvesting practices**	**effects for local communities from the use of production forests**
Output Targets 2010	OT2010/3/1	Case studies on lessons learnt about local governance arrangements that effectively harmonise traditional management of resources important for local livelihoods with commercial extraction in production forests	Gabriel Medina's papers (FORLIVE) Synthesis paper on what matters for local people in production forests (MB, NL, MP, IB, DS)	Local governments, Development NGOs, ministries of forestry, timber concessionaires, local communities	Understanding of relative importance of NTFP and other income sources in the context of multiple use forest management	Fewer unnecessary land use or resource use conflicts in production forests
Output Targets 2011	OT2011/3/1	Synthesis and lessons learned regarding the value of production forests to livelihoods and culture of local people (including gender disaggregated analysis), with special emphasis on the contributions of local knowledge to more sustainable forest management	Literature review document (EM and partners) Scientific article Inventories and habitat assessment for key forest resources, and ecological, nutritional, and genetic data for selected food species in Central Africa (VI, VI, GL, PC, AA; EM -Beyond timber CBFF) Role and contribution of multiple-use forest management models to increase equity and capitalise on forest benefits (GL, VI, Beyond timber CBFF)	Local governments, Development NGOs, ministries of forestry, timber concessionaires, local communities	Use of lessons learned by companies in the development of their management plans in order to reduce conflicts with local communities about cultural values	Fewer unnecessary land use or resource use conflicts in production forests
Output Targets 2012	OT2012/3/1	Identification of effective approaches to strengthen local communities' and women's capacity to resolve conflicts and	Manual describing approaches that work Handbook to guide	Communities, local governments, development NGOs, policymakers,	Use of the manual and practitioner guide by NGOs, local government and	Reduced conflicts and improved employment opportunities, incomes

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
		manage production forests in ACP countries Identification of alternative property rights and access regimes and related governance arrangements that foster equitable distribution of benefits (and secure access) among multiple resource users, including men, women, commercial interests and other marginalised groups	practitioners in assessing resource rights and responsibilities and in designing/implementing resource use options One or more articles Policy brief(s) (FORENET; RN; EM)	forest managers, companies	companies in their community work Strengthened local forest communities and increased participation in the management of production forests Rights allocation regimes, and alternative resource access options are understood (and put into practice) by multiple resource users	and other benefits to local people from enhanced resource access options and a better capacity to manage production forests
Output Targets 2013	OT2013/3/1	Global analysis of rights-claiming strategies by local communities, including the nature of collective action by communities and their allies, factors hindering collective action and ways in which collective action by local communities can be fostered and/or strengthened	One review paper and articles One comparative article on conditions for creating and sustaining collective action for property rights/tenure security in production forestry settings One comparative article on conditions for creating and sustaining collective action for sustainable production forest management 1 policy brief (EM)	Communities, local governments, NGOs, forest managers, companies	Local communities of resource users are aware of the factors that enhance and/or depress their capacity for joint action Other practitioners (e.g. NGOs and forest managers) are aware of the factors that enhance and/or depress community capacity for joint action and incorporate appropriate safeguards into their community strategies	Bargaining power (and property rights/tenure security) of local communities strengthened

		Outputs	*Verifiable Indicators of Output Targets*	*Intended Users*	*Outcome*	*Impact*
	OT2013/3/2	Identification of factors that enhance or barriers to community collective action for rights-claiming and defence, and for sustainable forest management more generally, in three production forestry settings in Africa, Asia and Latin America	Handbook to guide practitioners (including local communities) on ways to strengthen collective action among communities 2 policy briefs (EM)	Communities, local governments, NGOs, forest managers, companies	Use of the manual and practitioner guide by NGOs, local government and companies in their community work	Production forests sustainably managed and conserved

Annexes

Annex 1: Progress report on implementation of CGIAR approved EPMR recommendations

RECOMMENDATION	CIFOR Response	Implementation		
		Milestones	**Progress Achieved**	**Target Date of Completion**
1. After the new Director General is in place, a CIFOR strategy be developed through a consultative and participatory process that builds on its current strengths and brings staff and management together with key stakeholders to agree on shared vision, mission, values and strategic goals.	**AGREED.** Timing right for a systematic and inclusive process to define the center's future direction. CIFOR waited for EPMR results before doing the strategy. A participatory process involving staff and external stakeholders will help to ensure that the new strategy has their full understanding and support.	• Consultations completed • Background papers and reports of Task Forces • Strategy approved by BOT	• Strategy developed and approved by BOT	Completed May 2008
2. As a first step towards a more transparent and systematic priority setting process, CIFOR needs to formally document its current practice better by developing an integrated framework that consolidates the steps followed at CIFOR for exclusion and inclusion of projects, giving a full description of criteria, quantitative or qualitative scoring and aggregation methods used.	**AGREED.** Current priority setting (PS) processes will be documented. Due to complexity of PS CIFOR will aim for a flexible system. Strategic planning will also help with PS	Document current practice for priority setting Develop criteria for priority setting and engage programmes to select best option Apply criteria	Achieved during Strategy process	End 2007
3. CIFOR review its resource allocation processes in order to use objective information to support the rationale for decisions on quantitative allocations of research funds between Programmes and regions, and ensure consistency in resource allocations with the Center's approved strategic priorities and related BOT decisions.	**AGREED.** Rec. linked to 1 and 2. Decisions about resource allocation should link to strategic priorities and BOT decisions.	Identified research priorities Agreed process to link priorities to allocations	In the budgeting process for 2008 a new system for allocating research funds was introduced to encourage cross programmatic collaboration. This system is aligned with the new research domains approved by the BOT.	2008

4. Programme objectives be refined jointly rather than individually, in full consultation with major stakeholders and staff, in order to minimize duplication and use effective mechanisms and incentives to enhance synergies among the Programmes.	**AGREED.** Need to avoid duplication. Strategy process will include revisions to programme objectives. Some overlaps might be necessary but CIFOR has taken steps to encourage synergy between Progs.	New strategy document	Addressed through new center strategy. Retreats were held for all domains and this was the process for jointly defining research goals, themes, impact pathways and geographic focus.	May 2008
5. CIFOR's Programmes and Projects, in their diagnosis, design and implementation, increase attention to gender, especially in regard to poverty alleviation	**AGREED.** inventory of all its existing activities with significant attention to women and gender; ensuring that gender issues get adequate attention in the formulation of CIFOR's new strategy, checking project proposals to make sure they adequately address aspects related to gender, and making greater efforts to highlight and disseminate CIFOR's research on gender.	Conduct Inventory of Gender Background analysis on gender issues in forestry research Consider appropriate opportunities for gender focus in the research portfolio that emerges from the new strategy	CIFOR with FAO looking at mainstreaming gender issues in forestry Attention to gender is being incorporated into a proposal checklist MOU with Women Organizing for Change in Agriculture and Natural Resource Management was signed. Cooperation with the Participatory Research and Gender Analysis CGIAR Systemwide Program (for assistance in ensuring that gender is addressed in the research portfolio	2008 Linked to strategy This is on-going linked to proposal development and project implementation
6. In the absence of rigorous technical quality review of research proposals by donor or grant agencies, appropriate peer reviews of all proposals/study plans be undertaken prior to approval by Programme Directors.	**AGREED.** CIFOR will seek to improve its approach to reviewing the scientific quality of its research proposals. Attention will be given to larger projects	Criteria for assessing proposal quality and relevance Endorsement of criteria	Management discussed this item at its Management group Meeting in March 07 as part of its new norms for proposal development. Criteria for reviewing project proposals are included in the center's strategic alignment plan.	May 2008

7. CIFOR establish a policy and develop protocols for research data quality control and assurance to be applied to all of its field research projects.	**AGREED.** CIFOR will review its current practices regarding how it ensures the quality of its research data and establish an appropriate center-wide policy and associated protocols.	Develop data storage, access, and metadata standards	A research data policy was developed, which is intended to clarify roles and responsibilities for the proper management of research data at CIFOR, including quality control, documentation, sharing, archiving and adherence to IPR and privacy standards.	2007, implementation ongoing
8. Programme Directors and scientists be strongly encouraged that, of the research publication effort aimed at the global forest science community, a greater share be focused on higher-impact refereed journals, rather than publishing in lower impact and non-refereed journals.	**AGREED.** For global science community, the center will strive harder to publish in more prestigious journals A substantial share of its publications will be readily available to developing country researchers, policy makers and forestry practitioners.	Review adequacy of current performance contracts' incentives for peer reviewed publication	As part of the CGIAR Performance Measurement, CIFOR reports annually on publications including those listed in the Thomson Scientific ISI. CIFOR has revised its publications policy to reflect the need to publish in high impact journals	2008
9. CIFOR's Board adjust its procedures as necessary to ensure that its Finance and Audit Committee can carefully review the audited financial statements with the External Auditor before consideration by the full Board. • The Panel further **recommends** that the Board actively seek to add to its membership someone with substantial accounting and financial management expertise.	**AGREED**	Board add appropriate individual(s); Board review Audit Committee procedures	Done	2006

10. In accordance with its Capacity Building Strategy, CIFOR prepare monitoring and evaluation guides for measuring the effectiveness and impact of its capacity building activities, improve capacity building management processes, and that Senior Management increase their commitment to capacity building.	**AGREED.** CB within CIFOR should and will get special attention in the formulation of the center's new strategy and in the decisions it makes regarding regional offices.	Capacity building component of new strategy;	Management has included this as part of its strategic action plan. A capacity builidng monitoring tool is being developed	2009
11. Internal policy be developed that includes incentives and opportunities to strengthen capacity of its own researchers and support staff	**AGREED** The center has encouraged junior staff to attend workshops, has supported writing skills training and encouraged staff to get higher degrees. Since these activities require scarce unrestricted funds, it is unlikely the center will be able to greatly increase the resources available for them.	Draft policy for discussion with all staff Submit policy to BOT for formal approval	• This issue has also emerged in a staff perception survey conducted in 2006 • Management has developed a staff development plan focusing on development of national research capacity.	2008
12. CIFOR become more proactive in identifying strong women candidates for future staff vacancies.	**AGREED.** CIFOR will assess options for career development for more junior women scientists. It will formalize the existing practice of including women on all interview panels, and will consult the CGIAR Gender and Diversity Program on ways to improve its approach to recruitment	Improved recruitment practices to encourage qualified women to apply for new openings	On-going CIFOR appointed a female DG in 2006.	On-going
13. CIFOR develop a policy and clear standards regarding ownership and archiving of research data. • The Panel further **recommends** that CIFOR establish a records management system.	**PARTIALLY AGREE.** CIFOR already has a clear policy that all data produced by staff and consultants belong to the organization. CIFOR will develop a records management strategy, with particular emphasis on electronic records management,	Introduce revised version of Research tracking system Prepare draft policy and standards on research data ownership and archiving Prepare a records management strategy	Research Data Policy has been developed and CIFOR is participating in a system-wide initiative to implement a research management system.	2008
14. CIFOR work with other CGIAR centers, in consultation with the Science Council, to take appropriate measures to institute appropriate modalities for a predictable	**AGREED.** It is increasingly difficult to set priorities and conduct rigorous strategic research designed to achieve impact with a reliance on restricted funding.	Discussions with the Alliance Executive in examining how the system is funded	On-going This is also embodied in CIFOR's participation in the CGIAR Change Management process, which	Ongoing

funding environment for centers.			is intended to help improve the stability of CGIAR funding through a new central fund.	
15. Further clarification of the objectives of the Regional Offices, the respective roles of Regional Coordinators and Programme Directors, and an effort towards harmonization of Programme objectives and regional strategies. • The Panel further **recommends** that the Regional Coordinators have adequate authority and resources to fulfill their Terms of Reference.	**AGREED.** CIFOR accepts that regionalization is complex, involves inherent tensions and poses substantial risks for the institution and that many aspects still have to be clarified and worked out. The global programs remains the central mechanism for making programmatic decisions and supervising scientific staff. CIFOR's new strategy will address many of these issues	Strategy process clarifies structure for delivering CIFOR's programme	CIFOR's new strategy clarifies when and where regional offices will be established as well as the roles of regional coordinators and programme directors in fund raising and research planning and implementation. The funding for regional offices has been clarified and will be included in an new budgeting system.	Started in2007 and finalised in 2008
16. CIFOR proactively monitor and evaluate the progress of the regionalization process in order to avoid conflicts among Regional Coordinators, Programme Directors, and regionally based staff, and to further assess the feasibility of establishing and maintaining the planned number of Regional Offices.	**AGREED**	Number of regional offices will be reviewed as part of strategy process Undertake a CCER in 2009 Discussions and audit reports – constraints and what is working	• No new regional offices are planned. • Clear criteria have been developed on expectations of regional offices. • The regional office in Brazil was downgraded to a project office. • Any regional or project office establishment will be driven by strategic needs in line with new research domains and potential to achieve impact.	2008

17. CIFOR devote more effort in its project and strategic planning to clearly identify and assess impact pathways in ways that are more closely linked to the CGIAR poverty priority and its own objectives.	**AGREED.** Attention will be given to this in the context of its new strategy. CIFOR has recently hired a new scientist responsible for impact assessment, who will support the efforts to identify and assess impact pathways.	New strategy and associated priority-setting procedures	CIFOR's new strategy defines impact pathways for each of its six research domains. At the 2008 CIFOR annual meeting, each of the research domains/projects had sessions dedicated to defining intended impact pathways in increased detail.	End of 2008

Annex 2: Acronyms

ACP	:	Africa Caribbean-Pacific
ADB	:	Asian Development Bank
AFB	:	African Development Bank
AFP	:	Asian Forest Partnership
AI	:	Amazon Initiative
AIC	:	Australian Institute of Criminology
ANU	:	Australian National University
APEC	:	Asia-Pacific Economic Cooperation
ASB	:	Alternatives to Slash and Burn Consortium
ASEAN	:	Association of Southeast Asian Nations
ASrIA	:	Association for Sustainable and Responsible Investment in Asia
BOT	:	Board of Trustees
CARE International	:	Cooperative for Assistance and Relief Everywhere
CATIE	:	Centro Agronómico Tropical de Investigación y Enseñanza
CBD	:	Convention on Biodiversity
CBNRM	:	Community-Based Natural Resources Management
CEESP	:	The IUCN Commission on Environmental, Economic and Social Policy
CEMAC	:	Economic and Monetary Community of Central Africa
CFET	:	Center for Forestry Education and Training
CGIAR	:	Consultative Group on International Agricultural Research
CI	:	Conservation International
CIAT	:	International Centre for Tropical Agriculture
CIDIAT	:	Centro Interamericano de Desarollo e Investigacion Ambiental y Territorial
CIFOR	:	Center for International Forestry Research
CIRAD	:	Centre de coopération internationale en recherche agronomique pour le développement (Agricultural Research for Developing Countries)
CLI	:	Country Led Initiative
COMESA	:	Common Market for Eastern and Southern Africa
COMIFAC	:	The Central African Forest Commission
COP	:	Conference of Parties
CPF	:	Collaborative Partnership on Forests
DED	:	Deutscher Entwicklungsdienst
DFID	:	Department for International Development
DNEF		Direction Nationale des Eaux et Forets
DRC	:	Democratic Republic of Congo
DWAF	:	Department Water Affairs and Forestry
EC	:	European Union
EMBRAPA	:	Empresa Brasileira de Pesquisa Agropecuária
ENV	:	Environmental Services and Sustainable use of Forests Programme
EPFZ	:	Swiss Federal Institute of Technology
EPMR	:	External Programme and Management Review
FAO	:	Food and Agriculture Organization of the United Nations
FATF	:	Financial Action Task Force
FLEGT	:	Forest Law Enforcement, Governance and Trade
FOEN	:	Federal Office for the Environment
FORDA	:	Forest Research and Development Agency
FRM	:	Forêt Ressources Management
FSC	:	Forest Stewardship Council
FSC Bra	:	Forest Stewardship Council Brazil

FSC Cam	:	Forest Stewardship Council Cameroon
FSC IC	:	Forest Stewardship Council International Center
FSIV	:	Forest Science Institute of Vietnam
G-8	:	Group of Eight (Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States)
GEF	:	Global Environment Facility
GFIS	:	Global Forestry Information System
GTZ	:	German Agency for Technical Cooperation
ICDP	:	Integrated Conservation and Development Project
ICRAF	:	World Agroforestry Centre
IHSA	:	Institute Hukum Sumber Daya Alam
IIED	:	International Institute for Environment and Development
IITA	:	International Institute for Tropical Agriculture
INIA	:	Instituto Nacional de Investigacióny Tecnologia Agraria y Alimentaria
IPB	:	Bogor Agricultural University
IPCC	:	Intergovernmental Panel on Climate Change
IPGRI	:	International Plant Genetic Resources Institute
IPGs	:	International Public Goods
IRD	:	Institut de Recherche pour le développement
IRET/CENAREST	:	Institut de Recherches en Ecologie Tropicale
IRRI	:	International Rice Research Center
ISO	:	International Organization for Standardization
ITTA	:	International Tropical Timber Agreement
ITTO	:	International Tropical Timber Organization
IUCN	:	International Union for the Conservation of Nature
IUED	:	Institute of Development Studies
IUFRO	:	International Union of Forest Research Organizations
IWGFF		Indonesian Working Group on Forest Finance
IWMI	:	International Water Management Insitute
Jikalahari		Jaringan Kerja Penyelamat Hutan Riau
JRC		Joint Research Center of the European Commission
KfW	:	Kreditanstalt für Wiederaufbau
LAMIL	:	Landscape Management for Improved Livelihoods
LIPI	:	Indonesian Institute of Science
LIV	:	Forests and Livelihoods Program
MDGs	:	Millennium Development Goals
MEA	:	Millennium Ecosystem Assessment
MERCOSUR	:	Common Market of the South
MOP	:	Meeting of Parties
MOU	:	Memorandum of Understanding
MSc	:	Master of Science
MTP	:	Medium Term Plan
NAFRI	:	National Agricultural and Forestry Research Institute
NARIs	:	National Agricultural Research Institutions
NARS	:	National Agricultural Research System
NASA		National Aeronautics and Space Administration
NGOs	:	Non-Governmental Organizations
NTFP	:	Non-Timber Forest Product
ODI	:	Overseas Development Institute
PAR	:	Participatory Action Research
PAs	:	Protected Areas
PCLG	:	Poverty Conservation Learning Group
PEFC	:	Programme for the Endorsement of Forest Certification

PEN	:	Poverty Environment Network
PEP	:	Poverty Environment Partnership
PES	:	Payment for Environmental Services
PNG FRI	:	Forest Research Institute of Papua New Guinea
PRSPs	:	Poverty Reduction Strategy Papers
PSWS	:	Phnom Samkos Wildlife Sanctuary
RECOFTC	:	Regional Community Forestry Training Center for Asia and the Pacific, Thailand
RED	:	Reduced Emissions from Deforestation
REDD	:	Reduced Emissions from Deforestation and Degradation
REL	:	Reference Emission Levels
RFF	:	Resources for the Future
RIL	:	Reduced Impact Logging
RRI	:	Rights and Resources Initiative
SBSTA	:	Subsidiary Body for Scientific and Technological Advice
SFM	:	Sustainable Forest Management
SP	:	System Priority
TNC	:	The Nature Conservancy
UCL	:	Université Catholique de Louvain
UK	:	United Kingdom
ULA	:	Universidad de Los Andes
UN	:	United Nations
UNEP	:	United Nations Environment Programme
UNFCCC	:	United Nations Framework Convention on Climate Change
UNFF	:	United Nations Forum on Forests
UNILA	:	University of Lampung
USA	:	United States of America
USAID	:	United States Agency for International Development
WALHI	:	Wahana Lingkungan Hidup (Friends of the Earth Indonesia)
WB	:	World Bank
WCS	:	Wildlife Conservation Society
WHO	:	World Health Organization
WHRC	:	The Woods Hole Research Center
WOCAN	:	CIFOR and Women Organizing for Change in Agriculture and Natural Resource Management
WRI	:	World Resources Institute
WRM	:	World Rainforest Movement
WWF	:	World Wide Fund for Nature

Annex 3: CGIAR System Priorities

Priority area 1: Sustaining biodiversity for current and future generations

Priority 1A: Conservation and characterization of staple crops
Priority 1B: Promoting conservation and characterization of under-utilized plant genetic resources to increase the income of the poor
Priority 1C: Conservation of indigenous livestock
Priority 1D: Conservation of aquatic animal genetic resources

Priority area 2: Producing more and better food at lower cost through genetic improvements

Priority 2A: Maintaining and enhancing yields and yield potential of food staples
Priority 2B: Tolerance to selected abiotic stresses
Priority 2C: Enhancing nutritional quality and safety
Priority 2D: Genetic enhancement of selected high-value species

Priority area 3: Reducing rural poverty through agricultural diversification and emerging opportunities for high-value commodities and products

Priority 3A: Increasing income from fruit and vegetables
Priority 3B: Income increases from livestock
Priority 3C: Enhancing income through increased productivity of fisheries and aquaculture
Priority 3D: Sustainable income generation from forests and trees

Priority area 4: Poverty alleviation and sustainable management of water, land, and forest resources

Priority 4A: Integrated land, water and forest management at landscape level
Priority 4B: Sustaining and managing aquatic ecosystems for food and livelihoods
Priority 4C: Improving water productivity
Priority 4D: Sustainable agro-ecological intensification in low- and high-potential areas

Priority area 5: Improving policies and facilitating institutional innovation to support sustainable reduction of poverty and hunger

Priority 5A: Science and technology policies and institutions
Priority 5B: Making international and domestic markets work for the poor
Priority 5C: Rural institutions and their governance
Priority 5D: Improving research and development options to reduce rural poverty and vulnerability