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A DETAILED ANALYSIS OF CASE STUDIES ON THE SCIENCE OF INTEGRATED APPROACHES TO NATURAL RESOURCE MANAGEMENT

Detailed analysis of case studies on the Science of Integrated Approaches to Natural Resource Management

A STAP Information Document

February 2017

AFRICA

Project/Programme title:
2757 Strategic Investment Program for Sustainable Land Management in Sub-Saharan Africa (TerrAfrica SIP) with 26 participating countries
9070 Integrated Approach Pilot for Sustainability and Resilience of Food Security in Sub-Saharan Africa (IAP-Food Security) with 12 participating countries. Child Projects: 9139 Upper Tana-Nairobi Water Fund (Kenya); Draft regional KM and Coordination project


East African Highlands


The Sahel *(Photos Anna Tengberg)*

GEF Focal Areas: TerrAfrica: LD; IAP-FS: LD, BD, CC-M

GEF Agencies and other key partners: TerrAfrica SIP: World Bank (lead), UNDP, UNEP, FAO, IFAD, AfDB; IAP-FS: IFAD (lead), UNDP, FAO, World Bank, UNEP, CI

GEF funding/co-financing: TerrAfrica SIP: USD 137 million/around USD 1 billion; IAP-FS: USD 106 million/USD 805 million

GEF phase: TerrAfrica SIP: GEF-4; IAP-FS: GEF-6

Objective: The TerrAfrica Partnership was launched in 2005 at the UNCCD Conference of Parties and at the Comprehensive Africa Agricultural Development Programme (CAADP) partnership forum. The vision or overall long-term goal, of the SIP is to improve natural resource-based livelihoods by preventing and reversing land degradation. The global environmental objective is to prevent and reduce the impact of land degradation on ecosystem services in country-defined priority SSA ecosystems. The SIP had four components:

1. Supporting on-the-ground activities for scaling up SLM
2. Creating a conducive enabling environment for SLM
3. Strengthening commercial and advisory services for SLM
4. Developing effective SLM knowledge management, M&E and information dissemination systems

The goal of the IAP-Food Security is to increase the sustainability and resilience of food production systems and to enhance food security in Sub-Saharan Africa. The objective is to support countries in target geographies – the Sahel, the East African Highlands, the Horn of Africa, and Southern Africa - to integrate priorities to safeguard and maintain ecosystem services into investments in improving smallholder agriculture and food value chains. It has three main components that:

1. engages all stakeholders through strengthening of institutional frameworks for sustainability and resilience;
2. acts to scale up, diversify and adapt practices that will achieve large-scale transformation of agro-ecosystems in SSA; and
3. tracks impacts on ecosystem services and resilience to assess progress and enable more informed decision-making on agriculture and food security at multiple scales.

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems

Analysis and definition of system including: System boundaries, main processes, actors and feedbacks: The **TerrAfrica SIP** was designed to unlock critical bottlenecks related to policy, institutional, financial, socio-economic and cultural factors that had hindered significant scaling up and mainstreaming of SLM in national and regional development programmes. The programme had 36 operational projects working in 26 countries. Various approaches were used in SIP projects including planning within locally recognized planning units, landscape territorial development, etc., but projects were also based on modern administrative units, which could encompass entire nations, selected districts or provinces. In general, a systems approach was not fully used to design the TerrAfrica SIP, but drivers and processes of land degradation and barriers to SLM where identified together with key actors.

IAP-FS is delivered through 12 country child projects that address country specific priorities under the three programme components, and one cross-cutting regional coordination child project that will ensure programmatic coherence, co-learning and knowledge sharing, and impact at scale within and across target geographies. The IAP-FS system boundary is four so called target geographies – the Sahel, the Horn of Africa, the East African Highlands, and Southern Africa – that are characterized by distinct agro-ecological systems. The main drivers of land degradation and barriers to SLM/INRM, such as fragmented NRM policies, lack of coordination and collaboration across sectors and scales, access to finance, markets, inputs and processing technology, and inadequate extension and access to knowledge, are identified as well as key actors from local, national, sub-regional, regional to international level. Within the target geographies, landscape-based approaches are combined with strengthening of food crop value-chains to enhance access to markets and strengthening agricultural innovation systems for climate-smart agriculture to upscale INRM/SLM. The Kenya child project is focusing on strengthening of incentives for climate-smart agriculture by establishing a PES system.

Integrated information sources – incorporating knowledge from different sources and system levels: Many projects under the TerrAfrica SIP integrated different sources of information, but did not link this to systems thinking. Many had too many indicators and their M&E systems were too complicated to be effective. Programme-level knowledge management was overall weak or non-existing and manuals and guidance materials for integration of information of complex socio-ecological systems through landscape approaches, use of the WOCAT tools, etc. were developed too late in the programme to be useful, and they were not easily accessible to countries. The IAP-FS has an entire component dedicated to monitoring and assessment of ecosystem services, global benefits and resilience that was designed to establishing integrated baselines. GEF support in the implementation phase will use a more standardized approach to M&E with a limited set of core indicators that will be monitored by all child projects. Its KM system is established at the start of the programme and the Vital Signs platform will be used for the integration of information.

Integration of assessment tools for socio-ecological impacts, including of resilience; integrated environmental-social-economic modelling: The TerrAfrica SIP was not designed to use standard tools for assessment of socio-ecological impacts, but during the course of its implementation supported the dissemination of WOCAT tools for SLM assessment (Liniger et al., 2011). Measuring and reporting on multiple Global Environmental Benefits (GEBs) was also a challenge, and especially determining carbon benefits of SLM was difficult. The IAP-FS is from the outset recognizing the need for standard tools to assess carbon benefits, land degradation and agrobiodiversity. It will use and further refine already existing M&A tools for monitoring of global environmental benefits, resilience as well as socio-economic benefits, such as WOCAT, LDCF, RAPTA, EX-ACT, SHARP, etc.

Integration domains during project design

Integration across GEF focal areas: The TerrAfrica SIP was a single LD focal area programme while the IAP-FS is multifocal and is expected to generate LD, BD and CC-M benefits across several media.

Integration across GEF agencies: A large number of GEF agencies are included in both the TerrAfrica SIP and the IAP-FS (see above), but generally there is little collaboration at the child project level, with the exception of the IAP-FS Uganda child project where FAO and UNDP collaborate, the Senegal child project where IFAD and UNIDO collaborate, and the regional IAP-FS KM and coordination project where all agencies collaborate to provide coherent knowledge management and guidance to the programme as a whole.

Integration of actors and institutions at the subnational and national level (including public and private sector actors):

TerrAfrica SIP:

- Strong involvement of local communities and land users - social-centered approaches where communities were given full responsibility in project design and implementation showed good results.
- Low level of involvement of media, learning and teaching organisations - there should have been better links with national research institutions, such as universities and colleges.
- Low level of involvement of regional organisations

IAP-FS:

- Strong involvement of local communities and stakeholders
- Strong involvement of international research organisations from i.e. the CGIAR (ICRAF, Bioversity International)
- Engagement from the AU, but weaker involvement of sub-regional organisations so far.

Spatial integration (landscapes/seascapes): Some TerrAfrica SIP projects adopted the landscape approach, while others used administrative units as their system boundaries. The IAP-FS focuses on target geographies and a more select set of agro-ecosystems in the Sahel (agro-pastoral and cereal-root crop mixed farming systems), Horn of Africa (pastoral and agro-pastoral systems), East African Highlands (highland perennial and highland temperate mixed systems) and Southern Africa (maize-mixed system), and uses a landscape approach.

Integration of environmental and development concerns: Mainstreaming of SLM in development was a major focus of the TerrAfrica SIP, which included mainstreaming of UNCCD NAPs into CAADP and national agricultural policies as well as into PRSPs. Countries participating in the IAP-FS have been selected based on progress already made with mainstreaming of SLM and INRM, and the creation of an enabling policy environment at national level.

Integration across policy domains: All TerrAfrica SIP country projects included activities to promote inter-sectoral approaches and mainstreaming of SLM into policies. The inter-sectoral approach has met with differing levels of success and was easier to implement at local than central level. An evaluation of the TerrAfrica SIP recognized the challenges related to mainstreaming of SLM into government policy and budgetary frameworks that can be related to overlapping mandates between concerned Ministries and limited duration of projects under the programme. A recommendation was that projects should have focused on supporting the policy review and dialogue rather than aiming for direct policy change.

The IAP-FS is supporting strengthening of multi-stakeholder platforms that bring together different sectors and stakeholders in the environment, agriculture food security space to promote policy integration and enhanced sharing of experiences and knowledge, which is expected to lead to more supportive policies and incentives for smallholder agriculture. It will establish and harness institutional frameworks to promote management of natural capital and ecosystem services in agriculture and food value chains at national, sub-regional and regional levels. This requires cooperation among all stakeholders to build and strengthen institutions, social norms and regulations, and to develop systems of sharing responsibilities and benefits. However, a constraint to intersectoral integration is the fact that the GEF Operational Focal Point (OFP) is often hosted by the Ministry of Environment and not always willing to share resources with other sectors.

Integration domains during implementation and governance

Integration of environmental concerns into governance and investments:

The TerrAfrica SIP developed Country Strategic Investment Frameworks (CSIFs) for SLM to mainstream SLM in the development agenda and to mobilise funding. In some cases CSIFs facilitated mobilisation of financing to SLM from donors as well as governments, but in many cases they were ineffective. One problem is that the institutional anchor of SLM projects in SSA tends to be the Ministry of Environment or equivalent and not productive sectors, such as agriculture. These ministries often lack the authority to mobilise other ministries, despite efforts at inter-sectoral coordination. However, linkages to processes at sub-regional and regional levels, such as NEPAD and CAADP can help overcome this obstacle.

For the IAP-FS, as part of the first component of the programme on strengthening of institutional frameworks, GEF will support mainstreaming of sustainability and resilience into integrated, cross-sectoral policy frameworks, investment programmes and value chains. Policy dialogue mechanisms, that will benefit from scientific knowledge collection on INRM, SLM and innovative finance mechanisms, will be embedded into existing multi-stakeholder and multi-scale structures in order to ensure; (a) efficient linkages between agriculture and other sectors (e.g. environment and finance), (b) effective policy coordination and harmonization at regional and national level, and (c) strong collaboration between the scientific community, policy-makers and practitioners.

Vertically integrated planning and management:
TerrAfrica supported inter-sectoral partnerships at national level, but in future more attention needs to be paid to integration at the local level, while ensuring support from central level. Furthermore, selection of SLM technologies was sometimes top-bottom allowing little room for farmer innovation. The IAP-FS is taking a bottom-up agricultural innovation systems approach to selection of SLM/INRM interventions. It is also linking planning and management at the landscape scale with national level planning through support to strengthening of multi-stakeholder frameworks.

Integration of multiple stakeholder groups into governance:
The TerrAfrica SIP worked successfully with multiple stakeholder groups, from regional down to community level, and across sectors. However, there was limited attention paid to governance issues, such as land tenure and land and water access rights important for local-level stakeholders, such as pastoralists and women. The IAP-FS is involving similar stakeholder groups as the TerrAfrica SIP, but is in addition including agencies and partners from the food security community. It is expected that the IAP approach, which is focusing more on strengthening agricultural innovation systems and institutions at the local level will lead to more effective involvement of local-level stakeholders.

Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.):
There was strong participation by local communities and farmers in the TerrAfrica SIP. However, the most vulnerable groups were not always included to the extent expected; especially women and nomadic groups. Good examples of gender mainstreaming exist, for example through Farmer Field Schools (FFS), as well as SLM training and income creation activities targeting women. The IAP-FS will support strengthening of involvement of CSOs, farmer cooperatives and private sector in pro-poor and pro-environment value chains to help smallholder farmers to scale up good practices in INRM. The GEF adopted a Policy on Gender Mainstreaming in 2012 and the IAP is therefore paying more explicit attention to gender mainstreaming and has the stated objectives to i) promote economic empowerment of rural women and men; ii) increase rural women's decision-making power and representation; and iii) achieve an equitable workload balance. The programme also includes sex-disaggregated indicators for M&E and staff dedicated to gender mainstreaming.

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making):
A major weakness was that most SIP projects lacked a communication strategy and that the TerrAfrica platform initiated its regional KM activities too late to have a significant impact on the programme. This resulted in poor communication with policy and decision makers and a low political profile of the programme, hampering integration of adaptive knowledge management into governance. The IAP-FS is taking a different approach and is starting with establishment of a KM platform and development of a communication strategy even before all child projects have started. The programme is also expected to reach out to policy makers through participation and dissemination of results at regional fora and meetings that involve decision makers in the agricultural, food security as well as environment sectors. It has adopted Outcome Mapping as a complementary approach to assess behavioural change over longer time spans. OM focuses on the program's external influence, both deliberate and unplanned, during its progression and relates these to project activity rather than focussing internally on the progress of the project.

Innovation: The main innovative elements in the IAP-Food Security include:

- Monitoring of resilience will be operationalised across child projects using various tools, such as RAPTA, MPAT and SHARP. This includes integration of resilience aspects into regional food crop value chains.
- Introduction of an Agricultural Innovation Systems Approach (AIS) to support scaling up and out of sustainable INRM practices.
- Impact assessment of global environmental and socio-economic benefits using harmonised approaches and standardised tools.
- Introduction of Outcome Mapping to support monitoring of programme impacts on policy and decision-making processes and to inform adaptive management (see main report).

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over: The TerrAfrica platform and partnership still exists and has attracted new investments from GEF (the Great Green Wall) as well as other donors. It also provides a knowledge platform for SLM. However, not all activities at national level were equally sustainable and the majority of SIP projects did not seem to have managed to integrate SLM elements into other sectoral policies and strategies.

It is too early to assess the extent and sustainability of the IAP-FS programme, as it has only just started. However, lessons from the TerrAfrica SIP on how to achieve integration have been integrated into the design both in terms of the systems approach, the need strengthening of multi-stakeholder coalitions, and the importance of regional KM, monitoring and assessment to inform adaptive management.

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CENTRAL ASIA

Project/Programme title: 3230 Central Asian Countries Initiative in Land Management (CACILM-1)

9094 Integrated Natural Resources Management in Drought-Prone and Salt affected Agricultural Production Landscapes in Central Asia (CACILM-2)

Countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkey (Phase 2), Turkmenistan and Uzbekistan

Biosaline agriculture, Uzbekistan

Pastures in the High Pamirs, Tajikistan

(Photos Anna Tengberg)

GEF Focal Areas: CACILM- 1:LD; CACILM-2: LD, CC-M

GEF Agencies and other key partners: CACILM-1: ADB (lead), IFAD, UNDP, UNEP, WB, FAO, GM, GIZ, SDC, CIDA, ICARDA - established as a Type II Partnership at the WSSD; CACILM-2: FAO (lead), GIZ, ICARDA, ICBA, IWMI, Bioversity International, WOCAT, University of Central Asia

GEF funding/co-financing: CACILM-1: Around USD 40 million/around USD 800 million; CACILM-2: USD10.98 million/around USD 50 million

GEF phase: GEF-4/GEF-6

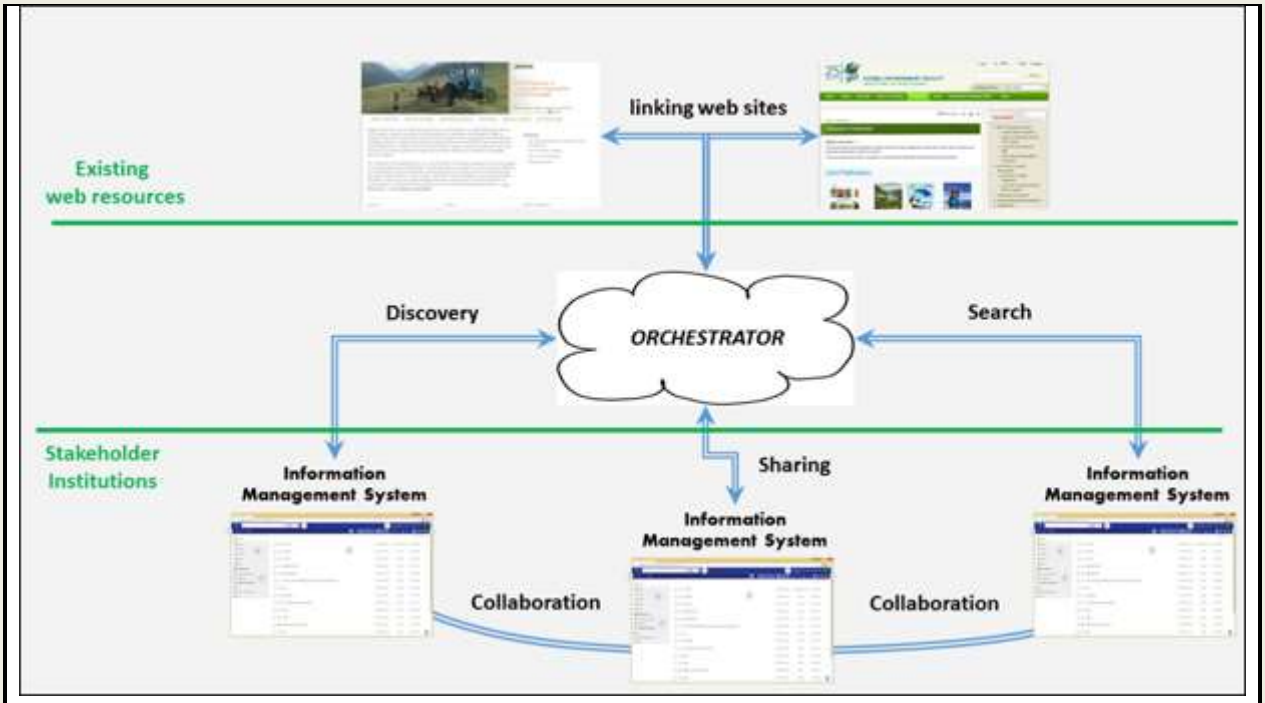
Objective: CACILM-1 was a partnership of Central Asian countries and development cooperation partners to support the implementation of the UNCCD, in synergy with other MEAS, in Central Asia. It had the following components:

1. Capacity building for strengthening the enabling environment
2. Capacity building for integrated land-use planning and management
3. Sustainable agriculture – rainfed lands,
4. Sustainable agriculture – irrigated lands
5. Sustainable forest and woodland management,
6. Sustainable pastureland management
7. Integrated resource management
8. Protected area management and biodiversity conservation, and
9. Aral Sea region remediation.

The overall objective of CACILM-2 is to scale up integrated natural resources management (INRM) in drought prone and salt affected agricultural production landscapes in the Central Asian countries and Turkey. It has the following components:

1. Multi-country collaboration and partnerships to foster the implementation of cost-effective INRM in drought- and salt-affected production landscapes
2. Integration of resilience into policy, legal and institutional frameworks for INRM
3. Upscaling of climate-smart agricultural practices in drought-prone and/or salt-affected production landscapes
4. Monitoring and Evaluation.

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems
Analysis and definition of system including system boundaries, main processes, actors and feedbacks: The system boundary of CACILM-1 was the Central Asia sub-region with a focus on the UNCCD SRAP that identifies six priority areas for possible joint or national pilot implementation: i) monitoring and evaluation of desertification processes, ii) improved water use in agriculture, iii) agroforestry and management of forest resources and watersheds, iv) pastureland management, v) biodiversity conservation and development of eco- and ethno-tourism, and (6) capacity building of local communities. CACILM-1 operated based on a heavy partnership framework that was very complex and involved many agencies and management structures, such as multiple layers of steering committees, multi-country and national secretariats and national coordination councils. According Nurymgereyev (2016), the CACILM-1 Partnership was not sufficiently country driven and closely linked to international funding priorities and availability. At the same time, local NGOs and civil society organizations were minimally informed and involved in decision-making processes. The full dependency of the program on external support was a major cause of the lack of sustainability. CACILM-2 that is funded in GEF-6 is more limited in scope. Its system boundary is based on land use systems – i.e. pastoral, tree-based, irrigated land, and home gardens. It relies heavily on co-financing from the countries through links with on-going national programmes, NGOs and land and water users associations. It will remove barriers to INRM related to: i) inadequate sharing of knowledge at regional level and lack of evidence-based decision making; ii) inadequate integration of resilience into policy and decision-making; iii) absence of strategy for scaling up of INRM; and iv) Weak technical and functional capacities of institutions, agricultural extension and advisory services. CACILM-2 intends to learn from the lessons of CACILM-1 to design a lighter and more function-oriented partnership with a strong focus on knowledge management that receives sustained support from the CA countries and Turkey.
Integrated information sources – incorporating knowledge from different sources and system levels: CACILM-1: The information system set up was assessed as one of the projects most successful components, as hitherto inaccessible key data was made available to the national secretariats. Nevertheless, the completion report complains about a lacking culture of knowledge sharing between and within the countries, and to make the knowledge easily available to the general public. No mechanisms for the transfer of knowledge and research results to farmers in the rural areas were put in place. The completion report also states that there was no clear information sharing policy in CACILM-1. CACILM-2: Is proposing to establish a new type of decentralised and distributed KM system that connects existing KM platforms through a central orchestrator. The contents remain under the physical control of different institutions and international agencies can opt for alternative options to share their data and knowledge. The multi-country knowledge platform is expected to support practitioners across the region with guidelines, extension and knowledge products for harmonized planning and scaling up of INRM for a wider range of land users.



In addition, it is anticipated that through strengthening of agricultural service providers in all countries and introduction of an agricultural innovation systems approach, knowledge will also be shared with farmers in easily accessible information packages in the local language.

Integration of assessment tools for socio-ecological impacts, including of resilience; integrated environmental-social-economic modelling: CACILM-1 was designed to use LADA/WOCAT tools for assessing LD and SLM. CACILM-2 applied the RAPTA tool in project design and will also use SHARP for resilience assessment at the field sites. It will use WOCAT/LADA tools for assessment of DLDD and SLM best practices and the ELD methodology to assess the costs of DLDD and benefits of INRM/SLM. Hence, the toolbox has been enlarged. An evaluation will be undertaken of the various carbon monitoring tools available in the CA region, which will be led by the University of Bern. They include:

- CBP SA and DA (Carbon Benefits Project Simple and Detailed Assessment tools developed by the GEF-funded "Carbon Benefits Project")
- CAT-AR (Carbon Assessment Tool for Afforestation and Reforestation)
- CAT-SFM (Carbon Assessment Tool for Sustainable Forest Management)
- EX-ACT (EX Ante Carbon-balance Tool)
- Forest Carbon Calculator
- Soil Carbon Sequestration Webtool of the World Bank
- DeNitrification-DeComposition Model (DNDC)
- Tool for Afforestation and Reforestation Approved Methodologies (TARAM)
- Agence Française de Développement (AFD) Carbon Footprint Tool
- Cool Farm Tool

Integration domains during project design

Integration across GEF focal areas: CACILM-1 was funded under the LD focal area with a number of BD and MFA projects associated with the programme. But it was essentially a single focal area programme. CACILM-2 is funded by LD and CC-M focal areas with some associated benefits in agrobiodiversity.

Integration across GEF agencies: CACILM-1: Integration across ADB, UNDP, IFAD, and the World Bank; CACILM-2: FAO is the only GEF agency.

Integration of actors and institutions at the subnational and national level (including public and private sector actors): CACILM-1: Was conceived as a bottom-up approach in its Public Participation Plan that includes actors at all levels, from regional, national to local, in the thematic areas of KM and dissemination, SLM research, SLM information system, and programme coordination. However, assessments of the CACILM process revealed an absence of meaningful interactions between international and domestic authorities with the local communities.

CACILM-2: Includes fewer international organisations, but more sub-regional actors. It also plans to include a considerable number of NGOs, CSOs, Local Land User / Indigenous Organizations, Provinces, District and Local Governments in each country, as well as Women's groups. However, it remains to be seen if this phase will be more effective in involving local stakeholders, but the focus on reaching out to local land users through strengthening of agricultural service providers is a new design element that may facilitate this.

Spatial integration (landscapes/seascapes): The focus on SLM in production landscapes in CACILM-1 remains, but the scope has narrowed down in CACILM-2 to a more limited number of agro-ecosystems and land-use systems found across the CA region, which is expected to facilitate transfer of knowledge and scaling up of INRM/SLM in these LUS.

Integration of environmental and development concerns: In CACILM-1, SLM was mainstreamed into donor programmes in CA. Individual child projects were linked to PRSPs and other development priorities. CACILM-2 continues the mainstreaming of UNCCD NAPs into development frameworks, but is also focusing on integrating resilience across relevant sectors.

Integration across policy domains: Both phases of CACILM are multi-sectoral, linking natural resources management with productive sectors, such as agriculture and forestry. However, the sectoral approach of the governments and limitations to integration in line ministries remains a challenge and benefits with integrated approaches have to be demonstrated, including socio-economic benefits.

Integration domains during implementation and governance

Integration of environmental concerns into governance and investments: Both phases of CACILM were designed to integrate environmental concerns into governance and investments by strengthening of inter-sectoral coordination at national level. However, the CACILM-1 approach was not sustained in all countries. CACILM-2 will build on and continue these efforts, but countries need support in writing proposals to access funding.

Vertically integrated planning and management: CA has a tradition of top-down central planning and vertical integration was therefore a challenge in CACILM-1, and local land-users were not sufficiently involved or consulted, although this was a stated objective of the programme and supported by its public involvement plan. CACILM-2 will continue to address this challenge and put an even greater emphasis on involving local government and land users through strengthening of local-level governance structures, such as land and water users associations, etc.

Integration of multiple stakeholder groups into governance: CACILM-1 did not fully achieve its objective in this regard. CACILM-2 will take a more bottom-up approach to involve land users in local-level governance of natural resources through land and water users associations, farmer associations, women's groups, etc.

Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.): Gender, indigenous people and poverty concerns are integrated in both phases of CACILM. However, since the introduction of the GEF Gender Policy in 2012 gender tends to be given a stronger focus. CACILM-2 is developing its own gender action plan to ensure full inclusion of women throughout the implementation phase. It also includes sex-disaggregated indicators in its results framework to monitor implementation progress and specific benefits for women.

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making): Support to knowledge management in CACILM-1 was supposed to strengthen evidence-based decision-making, but this is difficult to track and prove. CACILM-2 has taken stock of CACILM-1 lessons and has reflected them in its design with respect to KM, involvement of stakeholders, and spatial and vertical integration (as discussed above). CACILM-2 is also strengthening the link between KM and decision-making by establishing communities of practice and by providing support to economic valuation of DLDD and INRM/SLM, which should make this information more directly relevant to policy and decision makers. It is also intending to establish a market for the knowledge products it will generate where clients could for example be agricultural service providers in the public and private sectors.

Innovation:

- Consortium of partners, including CA countries and Turkey, CAREC, CGIARs, GIZ, etc. to promote and supported INRM, knowledge sharing and collaboration
- Decentralised and distributed KM system for INRM (see above)

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over: The extent of integration has changed and become less complex with fewer GEF agencies involved in CACILM-2, but more complex in terms of GEF focal areas. The focus has also shifted to integration of investments to integration of knowledge and information on INRM/SLM. Structures established by CACILM-1 to promote inter-sectoral coordination have not proven to be sustainable, except in Uzbekistan. Countries are nevertheless interested in continuing to promote integrated approaches and work across sectors and scales engaging multiple actors. The integrated approach is

not yet fully internalised and depends on donor assistance, but countries are showing growing commitment to allocate their own resources and align resources from different donors towards this end.

Institutionalisation of CACILM-2 at regional and national levels will also contribute to sustainability: the regional governance structures will be hosted by the ICSD and the KM platform will be more decentralised and hosted by the countries and linked to a 'knowledge market' with clients from the private and public sectors.

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CHINA

Project/Programme title: 3482 People's Republic of China-GEF Partnership to Combat Land Degradation in Dryland Ecosystems; 5142 Sustainable and Climate Resilient Land Management in Western PRC

Sand dune fixation, Ningxia

Farmer Field School, Ningxia *(Photos Anna Tengberg)*

GEF Focal Areas: OP12, LD, BD, CC (phase 1); LD (phase 2)

GEF Agencies and other key partners: ADB (lead), World Bank, IFAD (first phase); ADB (second phase)

GEF funding/co-financing: Phase 1 programme funding from GEF totalled USD 46 million distributed across 8 child projects, including projects in the different provinces/autonomous regions and two capacity building and policy support projects supporting the entire programme.
Phase 2 is comprised of one GEF project entitled Sustainable and Climate Resilient Land Management in Western PRC with total funding of USD 5.25 million that will provide continued support to capacity building and scaling up of the programme to two new provinces.

GEF phase: GEF-3/GEF-4/GEF-5/GEF-6

Objective: The PRC-GEF Land Degradation Partnership was established in 2002 to reduce land degradation and restore dryland ecosystems in the western region of the PRC, and through this to further the goals of protecting dryland ecosystem biodiversity. The specific purpose was to assist the PRC to establish an effective system of integrated ecosystem management (IEM) applied in continuing programmes and policies influencing land and ecosystem quality in Western PRC and to maximize the ecosystem benefits of investment projects in the program region. The Program was expected to

(i) Tackle land degradation through an integrated, participatory, and cross-sectoral approach aimed at addressing the root causes, and resolve inherently conflicting policies;
(ii) Facilitate effective coordination policies, programs, and actions by various sectoral agencies, between national and provincial authorities and among international agencies operating in the areas of agricultural and rural development, land, forestry and water management, environmental protection, finance, and planning in the Western Region of PRC; and
(iii) Facilitate mainstreaming of stakeholder participation and the introduction of effective and transparent monitoring and evaluation systems to assess the outcomes and impact of efforts to combat land degradation and reduce poverty.

The objective of the second phase is restoration of degraded land and improvement of livelihoods through sustainable and climate resilient land management in six provinces/autonomous regions (ARs) in western PRC. The Project will support the up-scaling of SLM investments in Inner Mongolia autonomous region and Shaanxi, Gansu, and Qinghai provinces. The Project will also start working closely with two new provinces, i.e. Guizhou and Sichuan, to expand the Partnership activities both in scope and depth in improving the environment.

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems

Analysis and definition of system including: System boundaries, main processes, actors and feedbacks: The spatial unit in the first phase was dryland ecosystems in North-western China encompassing six provinces/autonomous regions and 8 child projects. The second phase has been expanded to two new provinces in South western China, so the geographical systems boundary has been enlarged based more on administrative units than on an ecosystem basis. With respect to stakeholders, the approach remains the same with the State Forestry Administration being the coordinating agency at central level working with Ministries of Agriculture and Environment, etc. while the Ministry of Finance chairs the programme's steering committee. The Steering committee brings together a total of 12 ministries and agencies. These arrangements are mirrored

at provincial level. There is also strong stakeholder involvement at field level at pilot sites, and Farmer Field Schools have been established to further strengthen the engagement of farmers.
Integrated information sources – incorporating knowledge from different sources and system levels: Information from the participating sectors has been brought into the programme at both central and provincial level. Information collection from the programme pilot sites was not systematic, not so well coordinated, and documented almost too late for the evaluation of phase 1.
Integration of assessment tools for socio-ecological impacts, including of resilience; integrated environmental-social-economic modelling: Phase 1 of the Partnership did not include any standard assessment tools in its design, except cost-benefit analysis of SLM. However, the two projects that supported the central coordination mechanism and capacity building in IEM brought in the LADA/WOCAT toolbox for documentation and assessment of DLDD and SLM, as well as the Farmer Field School concept. Phase 2 will extent these tools and approaches to the two new provinces that have joined the partnership. Although Phase 2 has a focus on resilience, no specific approaches to assessing or integrating resilience were identified at design stage.
Integration domains during project design
Integration across GEF focal areas: The first phase of the partnership integrated funding from LD, BD and CC-M as well as CC-A. However, it was concluded at the end of the first phase that GEBs had not been adequately monitored and therefore most likely under-reported. The second phase, although only drawing on the LD focal area, is essentially maintaining the integrated approach established by focusing on climate-smart agriculture and sustainable forest management that have the potential to improve carbon sequestration and enhance the resilience to climate change of land and forest management systems. There is also a potential for agro-biodiversity benefits through a sub-component focusing on green products.
Integration across GEF agencies: The first phase involved three GEF agencies (ADB, World Bank and IFAD), while the second phase only includes ADB as a result of reduced GEF funding to the partnership thanks to institutionalisation of the approach at provincial and central level. Due to successful mainstreaming of the IEM approach, most of the co-financing to the partnership is now coming from the participating provinces.
Integration of actors and institutions at the subnational and national level (including public and private sector actors): The partnership has successfully brought together actors at the national and provincial levels and there has even been some involvement of private sector actors in studies on CSR and PPPs, although the partnership has mainly been government driven. However, the evaluation of the first phase concluded that there were not enough interaction between the central coordination unit and provincial offices of the programme. Also international initiatives and partners working on similar issues in China, such as WOCAT, LADA and the UNCCD need to be brought more firmly into the programme.
Spatial integration (landscapes/seascapes): The investment projects under Phase 1 focused on spatial units, sometimes defined as landscapes, but more often defined by administrative units or based on poverty assessments. The selection of pilot demonstration sites under the central coordination mechanism in the first phase was not always optimal. It comprised twenty-two sites in six provinces – representing a cross-section of land degradation types, major ecosystems, land uses, social and economic development levels and ethnic groups – to test the a participatory approach to IEM in addressing land degradation. However, in the final evaluation of phase one (Critchley, 2013) it was concluded that the information generated from these sites was not very coherent. In the second phase SLM Innovation Sites in the six provinces selected based on agro-ecological zones will be integrated into investment programmes and projects for larger areas, funded by the central government (e.g. Conversion of Farmland to Forest Programme), the provincial governments (e.g. PES scheme in Shaanxi), as well as donor funded projects. It thus seems that the spatial units are more clearly defined than in the first phase.
Integration of environmental and development concerns: Integration of environment and development concerns is very strong in the partnership. Each participating province/autonomous region developed an IEM plan that was subsequently mainstreamed into successive 5-year plans, which unlocked financial resources for IEM. Funding to SLM/IEM projects integrated into Provincial/Regional 11th and 12th Five-Year Plans amounted to a total of US$26.5 billion.
Integration across policy domains: The IEM plans were intersectoral and based on inputs from all sectors represented on the coordination mechanisms established at provincial levels with members drawn from the agriculture, forestry and animal husbandry sectors as well as those involved with legislation, water conservancy and environmental protection. In addition, the partnership led to the formulation of 54 laws and regulations and revision of 17 at national and provincial levels in support of the IEM approach.
Integration domains during implementation and governance

Integration of environmental concerns into governance and investments: Investments: Phase 1 focused on integration of environment into IFI investments as well as local government investments. Phase 2 has a stronger focus on innovative financing mechanisms, such as:

- PPPs
- Eco-compensation/PES
- Carbon finance – carbon sequestration and SFM with linkages to the carbon market in China

Vertically integrated planning and management: As pointed out above, integration between the central and provincial level could have been stronger in the first phase of the partnership. The management structures put in place at all levels were adequate, but the central coordination mechanism was not always adept at communicating with the provinces. Its capacity will be strengthened in phase 2 of the partnership.

Integration of multiple stakeholder groups into governance: Both central and provincial stakeholders are involved in the governance of the Partnership with a total of 12 ministries and agencies represented in the steering committee. At grassroots level the widespread participation of beneficiaries in decision- making, through participatory rural appraisal (PRA) and Farmer Field Schools is a major achievement.

Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.): Investment projects under the partnership undertook detailed assessments of impacts of indigenous people and women and many projects target the poor that are often comprised of these groups. Support from the central coordination unit has addressed gender to some extent in the demonstration activities.

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making): The partnership was supported by a succession of capacity building and policy support projects that also coordinated knowledge management at programme level. However, It was not evident that there was enough interaction or cross-learning between either the sub-projects of the Partnership or between the GEF Agencies that support those projects (Critchley, 2013).

Innovation:

- Introduction of participatory approaches to IEM and SLM in Western China
- Effective mainstreaming of IEM and SLM thanks to development of provincial IEM plans that were integrated into successive provincial 5-year plans

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over: The partnership as a whole has made a contribution to the uptake of integrated approaches in China with IEM being considered a useful approach that has been integrated into three successive 5-year plans. The commitment to IEM continues despite overall downscaling of external funding to the partnership. Central and provincial governments are now providing the bulk of the funding to IEM, while the GEF and ADB are only providing limited funding to catalyse further upscaling and integration of new dimensions, such as climate-smart agriculture and resilience.

Sources:

- PFD: PRC-GEF Partnership on Land Degradation in Dryland Ecosystems Program, 2008.
- PIF: Sustainable and Climate Resilient Land Management in Western PRC, 2014
- Critchley, W. 2013: A Review of the PRC-Global Environment Facility Partnership on Land Degradation in Dryland Ecosystems. ADB, 2013.
- Completion Report for Management and Policy Support Project under the PRC-GEF LD Partnership. ADB, 2013.
- Tengberg, A., Radstake, B., Zhang, K., & Dunn, B., 2016: Scaling up of Sustainable Land Management in the Western People's Republic of China: Evaluation of a 10-year Partnership. Land Degradation & Development, 27: 134–144 (2016).

THE PACIFIC

Project/Programme title:
5395 PFD: Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods. 14 Pacific SIDS are participating.
Child projects: 5208 Advancing sustainable resource management to improve livelihoods and protect biodiversity in Palau; 5405 Ridge to Reef: Testing the Integration of Water, Land, Forest & Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries

Fisherman, Nauru *(Photo Anna Tengberg)* *(MAP GEF/UNDP/UNEP project on Implementing Sustainable Water Resources and Wastewater Management in Pacific Island Countries)*

GEF Focal Area: BD, LD, SFM, IW, CC-A (many countries have flexible allocations)

GEF Agencies and other key partners: UNDP, UNEP, FAO, SPC

GEF funding/co-financing: Programme: USD 83 million/ USD 333 million; Palau: USD 3,747,706/ USD 15,800,000; Regional: 10,317,454/87,708,160

GEF phase: GEF-5

Objective:
Programme: To maintain and enhance Pacific Island countries' (PICs) ecosystem goods and services (provisioning, regulating, supporting and cultural) through integrated approaches to land, water, forest, biodiversity and coastal resource management that contribute to poverty reduction, sustainable livelihoods and climate resilience
Palau: To effectively and sustainably use biodiversity and maintain ecosystem goods and services in Palau by building institutional capacity to integrate the Palau Protected Area Network (PAN) with the Sustainable Land Management (SLM) initiative, and fostering a ridge-to-reef approach across and within these initiatives
Regional: To test the mainstreaming of 'ridge-to-reef' (R2R), climate resilient approaches to integrated land, water, forest and coastal management in the PICs through strategic planning, capacity building and piloted local actions to sustain livelihoods and preserve ecosystem services

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems

Analysis and definition of system including: System boundaries, main processes, actors and feedbacks:
Programme: In this programme, the Pacific Islands Countries emphasize the need to focus on their own priority national activities as they utilize STAR resources. All child projects are thus autonomous.

Palau: The project covers the Protected Area Network (PAN) and SLM in Palau. It focuses exclusively on areas within the 12 mile nautical border. The project addresses four broad threats: 1) Climate Change; 2) Direct stressors causing habitat loss and degradation; 3) Invasive alien species; and 4) Over harvesting and illegal harvesting, through ecosystem-based management approaches. Stakeholders for the project are at every level: international/regional, national, state, traditional, and local, including government, semi-government, business, and non-profit/NGO. Stakeholder participation crosses sectors, with participation from every Government Ministry and the Office of the President. Stakeholder involvement in conservation is not fully clear or coordinated, but the project explicitly addresses this barrier.

Regional: The project is addressing key drivers and threats identified in the Pacific SAP from 1997: pollution of marine and freshwater supplies (including groundwater) from land-based activities; physical, ecological and

hydrological modification of critical habitats; and excessive exploitation of living and non-living resources. Due to its regional scope, the system boundary is the Pacific Island Countries (PICs). The PICs have national child projects and will also receive support from this project through five component: 1) national demonstrations to support R2R ICM/IWRM; 2) island-based investments in human capital and knowledge, and mainstreaming of R2R ICM/IWRM; 4) development of regional and national 'Ridge to Reef' indicators; and 5) knowledge management; and coordination of the ridge to reef programme at both regional and national levels.

Integrated information sources – incorporating knowledge from different sources and system levels:

Palau: The project integrates biophysical information from marine and terrestrial systems and different types of habitats. It also includes demographic and governance information as well as information from the concerned sectors, such as tourism, agriculture and forestry, fisheries and aquaculture, water resources, etc.

Regional: The project integrates information on biodiversity, water resources, climate variability and change, and socio-economics, but information on land resources and land management are missing, although the overall programme includes significant LD funding.

Integration of assessment tools for socio-ecological impacts, including of resilience; Integrated environmental-social-economic modelling:

Palau: There is no reference to specific assessment tools, only mention of approaches, such as the catchment and ridge-to-reef approaches. SLM tools, such as LADA/WOCAT are not mentioned, nor are tools for integrating resilience.

Regional: The regional IW child project only focuses on IW approaches and tools for assessment linked to IWRM and ICM, although it says that it will also provide coordination functions and linkages with GEF SCCF, biodiversity and land degradation focal areas in the national STAR projects.

Integration domains during project design

Integration across GEF focal areas:

Palau: The project will support integration of SLM, SFM and activities across sectors. Land and water management will be integrated at the catchment level thanks to improved land-use planning.

Regional: The project is a single focal area IW project, but with linkages to climate change adaptation, land degradation, biodiversity and sustainable forest management.

Integration across GEF agencies:

Programme: UNDP, UNEP and FAO managing different child projects and it has been difficult to synchronize the development of different projects. However, the programme has created a Pacific forum across the agencies, which will hopefully facilitate this process.

Palau: UNEP is the only GEF agency and other agencies are not mentioned.

Regional: UNDP is the GEF agency, but linkages to UNEP and FAO child projects are discussed.

Integration of actors and institutions at the subnational and national level (including public and private sector actors):

Palau: Deliverables of this project include clarifying the roles and contributions of stakeholders from national institutions, state governments (sub-national), to NGOs. But the role of local communities is not given strong attention in the document.

Regional: The project will link directly into the very strong stakeholder relationships of the PacIWRMs Community to Cabinet and back approach built by the regional IWRM precursor project. Functional participation by community and its leaders at local project level and National Policy level has been established and are operational. The focus on extending the diagnostic analysis to the coast and its characterization relies implicitly on local stakeholder's knowledge. The primary stakeholders for the project are the 14 governments of the PICs (particularly institutions dealing with water, land and coastal management, environment, Disaster Risk Management and Climate Change) and communities within the R2R pilot demonstration projects. As an integrated project private and public sectors will also participate and benefit and this will include tourism, agriculture, fisheries, health, environmental and other locally selected industries. The private sector partnerships will be developed at local level demonstration projects to initiate a high level of involvement and collaboration with the private sector. The NGO community will have a significant stakeholder role in promoting awareness of water, land and coastal management and use issues and concerns and NGO's have already been actively involved in partnering with National GEF Pacific IWRM demonstrations providing additional resources to local communities and facilitating the development of community leadership.

Spatial integration (landscapes/seascapes):

Palau: The project integrates land management and protected area networks along the ridge to reef continuum in the entire archipelago of 1) atoll islands, 2) high limestone islands, 3) low platform islands, 4) high volcanic islands, and 5) marine systems.

Regional: Some PICs have selected specific islands or catchments for implementation of IWRM/ICM, while others do not take a spatially integrated approach.

Integration of environmental and development concerns:

Palau: Support to integration of policies and sectors outside environment and natural resources is weak and no mention is made of integration into development concerns.

Regional: The project will support the participating countries in the identification of nationally relevant coastal policy, legal and budgetary reforms for R2R integrated approaches in the 14 countries. This will include the formulation of recommendations for the harmonization of governance systems, i.e., (a) across sectors, and (b) between national government and local governance frameworks.

Integration across policy domains:

Palau: The project is coordinating NBSAP, SLM policies and activities, National Invasive Species Policy, Strategy and Action Plan, Communication to the UNFCCC, and addressing cross-sector issues. Linkages to development policies are not clear.

Regional: The project aims to build an enabling environment at national level for linking IWRM with ICM into a new integrated R2R approach. However, this seems to neglect the role of SFM and SLM in R2R approaches. The integration across sectors varies among the countries, with some only working with the Ministry of Environment and other involving e.g. Ministry of Infrastructure, Ministry of Agriculture, etc.

Integration domains during implementation and governance

Integration of environmental concerns into governance and investments:

Palau: The project is expected to reduce the reliance on green fees for PAN and lead to diversified financial support at the national and state levels, and to update the existing SLM Sustainable Financing plan.

Regional: The project is supporting investments in human capital, but it is not directly mainstreaming IWRM/ICM into investment frameworks.

Vertically integrated planning and management:

Palau: Land-use planning will be integrated from the catchment, state (sub-national) to the national level using ridge to reef approaches.

Regional: It varies among countries with some involving local governments and catchment committees. However, due to the limited size of some PICs, only one planning and management level may be relevant.

Integration of multiple stakeholder groups into governance:

Palau: The project will support participatory land-use planning that will link local land users with governance structures at state and national level. However, there is no mention of representation of local NGOs, CBOs or local communities in the project's governance structure.

Regional: The project is developing multi-stakeholder leader roundtable networks to strengthen stakeholder participation. Activities are planned to strengthen the involvement of the private sector.

Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.):

Palau: Women and vulnerable groups are expected to benefit from the projects eco-tourism activities. Gender equity will be addressed with guidance taken from the Pacific United Nations Development Assistance Framework (UNDAF) Gender Equality Score Card, but the focus on equity issues is otherwise weak.

Regional: The importance of gender mainstreaming is stressed in the ProDoc and women's associations are identified as important stakeholder groups, but there are no gender specific activities in the Results Framework and very few gender disaggregated indicators, and they mostly refer to training activities. Other vulnerable groups are not mentioned in the design of demonstration activities.

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making):

Palau: The project has a component on 'integrated coordination' facilitating information-sharing and two-way learning. The lead national agency will also be strengthened and promote mainstreaming of best practices concerned across sectors.

Regional: The project will establish national and regional platforms for managing information and sharing of best practices and lessons learned in integrated land, water, forest and coastal management, including climate change adaptation. An online 'results' portal will be developed for Results-Based Management training, the online submission of routine reports, and the routine sharing of Ridge to Reef programme results, including the geospatial presentation of results linked to related initiatives of the GEF International Waters Learning Exchange and Resource Network (IW:LEARN) project.

Innovation:

- Pacific Forum across GEF agencies operating in the Pacific to enhance coordination and synergies
- Establishment of a regional community of practice for R2R approaches

- Operationalisation of the R2R approach - closer linkages to scientific concepts as well as established management approaches need to be developed along the R2R continuum. Linkages could be established to the Source-to-Sea Platform that receives support from GEF and several of its agencies (Granit et al. 2016).

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over:

Palau: Much of the project is coordinated planning for the long-term, with feedback loops for evaluation and adaptation. The inclusion of sustainable financing mechanisms for PAN and SLM levels and the focus on income generating sectors is part of the design for sustainability.

Regional: The sustainability of the IWRM and ICM activities at national level seems to be strong thanks to integration into policy and governance frameworks. The groundwork for this was done by a completed regional IWRM project for PICs that had a very positive evaluation. However, the sustainability of the regional coordination and knowledge management platform is not clear, although SPC could be expected to host the platform.

Sources:

- PFD Pacific Islands Ridge-to-Reef Programme
- UNEP ProDoc, R2R - Palau, 2015.
- UNDP ProDoc: R2R - Pacific Island Countries
- Terminal evaluation of Implementing Sustainable Water Resources and Wastewater Management in Pacific Island Countries (UNEP, 2014)
- Granit, J. et al., 2016. A Conceptual Framework for Governing and Managing Key Flows in a Source-to Sea Continuum: Summary and Policy Recommendations for the GEF Partnership. GEF/STAP/C.50/Inf.05/Rev.01 May 17, 2016, Washington, DC.

SOUTH EAST ASIA

Project/Programme title: 3647 The Coral Triangle Initiative. Child projects: 3589 Coral Triangle Southeast Asia (ADB); 3522 Arafura-Timor Sea Ecosystem Action Programme (UNDP); 5622 LME-EA Coral Triangle Initiative Project (COREMAPIII-CTI) (World Bank); GEF IWLearn/UNDP & ADB RETA: Regional Cooperation on Knowledge Management, Policy, and Institutional Support to the Coral Triangle Initiative

Participating countries: Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands, Timor Leste

Coastal fisheries, Timor Leste *(Photo Anna Tengberg)* *(MAP TNC)*

GEF Focal Areas: BD, IW, CC-A

GEF Agencies and other key partners: ADB (lead), FAO, UNDP, World Bank

GEF funding/co-financing: USD79 million/USD450 million

GEF phase: GEF-4

Objective: The overarching goal of the CTI programme is to:
1) Introduce effective management systems for priority seascapes;
2) Apply ecosystem approach to fisheries management;
3) Expand and improve management and representation of effectively managed marine protected areas;
4) Support climate change adaptation measures to sustain economic development and global services from vulnerable coastal and marine ecosystems;
5) Improve threatened species status in coastal and marine ecosystems.

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems

Analysis and definition of system including: System boundaries, main processes, actors and feedbacks: The system boundary is defined as the centre of the world's coral reefs, holding about 75% of the known coral. It spans from the Pacific to Southeast Asian seas and the implementation area includes the countries' entire Exclusive Economic Zones (EEZs). The main drivers and pressures identified are climate change, coastal development, pollution and fisheries. Implementation partners range from NGOs, private sector, government agencies, donors and others. However, a recent Stocktaking Report of the CTI (Abraham, 2015) concludes that there is a need for a more pronounced and articulated watershed-river basin-coastal seas system approach, which could also be termed ridge-to reef (R2R).

Integrated information sources – incorporating knowledge from different sources and system levels: CTI integrates background information related to biodiversity conservation, international waters and impacts of climate change in the CTI. It is linking global processes with local impacts on ecosystems as well as fisheries and other livelihood activities. However, the CTI Stocktaking points out that a higher degree of integration across technical working groups on e.g. seascapes, marine protected areas, EAFM, etc. is needed.

Integration of assessment tools for socio-ecological impacts, including of resilience; Integrated environmental-social-economic modelling: The programme uses Integrated Coastal Management (ICM) tools, Ecosystem Approach to Fisheries Management (EAFM) in fisheries projects as well as the GEF TDA/SAP tools in its LME projects. Tools for bycatch management were used in two fisheries projects, and tools for reef monitoring and information systems were also promoted. According to the CTI Stocktaking report, better integration is required for comprehensive testing of tools. It can also be noted that tools for SFM and SLM (such as WOCAT) along the R2R continuum are lacking, although soil erosion and sedimentation are problems impacting coastal environments and coral reefs.

Integration domains during project design

Integration across GEF focal areas: BD, IW, CC-A. However, the Terminal Evaluation of ATSEA pointed out that many of the project's demonstration activities were linked to controlling land degradation and that better linkages should have been developed with this issue and focal area although it did not directly fund the CTI.
Integration across GEF agencies: ADB, UNDP, World Bank and FAO are participating. However, it appears that the CTI has had limited success in bringing the different child projects and agencies involved together to create synergies and programmatic impact, as UNDP and World Bank has not been fully involved in activities coordinated by the Interim CTI Secretariat and the Development Partners Forum.
Integration of actors and institutions at the subnational and national level (including public and private sector actors): The program involved international, regional, national and sub-national stakeholders from international organisations, the CT governments and NGOs, such as CI, WWF and the Nature Conservancy. It was the responsibility of the National Coordination Committees (NCCs) to coordinate at national level and to link with the regional CTI Secretariat. Child projects also worked directly with local communities, involving them in marine resource management boards/committees supporting co-management of coral reefs, fisheries refugia, etc. However, to further strengthen the involvement of the private sector, blue economy platforms need to be established to drive investments, which could include customised financial products and services targeting resource-poor coastal populations, market-driven research and development, port infrastructure and cold-chain logistics, sustainable, low footprint aquaculture, experimentation with hybrid fisheries management tools, sustainable financing mechanisms, and cultivating socially responsible enterprises.
Spatial integration (landscapes/seascapes): The programme had a focus on seascapes as well as LMEs in Southeast Asia and the western Pacific, such as the Sulu-Sulawesi/Celebes seascape/LME and the Arafura-Timor Seas. Some projects also had a ridge-to-reef focus, such as the Coastal and Marine Resource Management project in Southeast Asia. However, there is a need for a more pronounced and articulated watershed-river basin-coastal seas systems approach and integrated landscape and seascape planning, as well as codification of the system. For example, once a best practice has been established and documented, standards for replication should be articulated. To put certification systems in place, the CTI Stocktaking report recommends using the ISO 9000 and ISO 14000 related to Quality Management and Environmental Management Systems. They have already been applied by for example PEMSEA. However, lessons can also be learnt from other focal areas and their tools and templates for best practices, such as WOCAT.
Integration of environmental and development concerns: Priorities of the CTI plan of action were expected to be mainstreamed into MDG targets, development plans for the blue economy, etc., but better integration with economic issues is still needed.
Integration across policy domains: Multiple environmental priorities in the CTI plan of action were expected to be mainstreamed into policies and legislation in the CTI countries related to fisheries, agriculture, environment, etc. A key programme component was to strengthen the enabling environment for improved water, coastal and marine resource management. However, a higher degree of integration of CTI priorities in sectors outside of the natural resources domain, such as education, transport, and energy, would help advance the understanding of economic aspects.
Integration domains during implementation and governance
Integration of environmental concerns into governance and investments: Several projects had a focus on developing enabling conditions for the blue economy and marine-based investments. In countries like Indonesia CTI priorities have been firmly integrated into the priorities and programmes of the Ministry of Marine Affairs and Fishery and continues to receive investments. For example, the ATSEA terminal evaluation states that there are initial indications that the project outcomes, including the SAP and an ecosystem-based approach, have been integrated into national sectoral plans.
Vertically integrated planning and management: CTI was a country-owned and country-driven program and its activities were led and/or strengthened through the participation of and by capacitating the National Coordinating Committees and the Interim Regional Secretariat, integrating national and regional priorities and targets under the CTI Plan of Action. LME projects, such as the ATSEA, supported development, and subsequent implementation, of SAPs supported by NAPs that also supported integration of planning and management from the sub-national, national to regional level.
Integration of multiple stakeholder groups into governance: Local fishers and coastal communities were integrated into governance through co-management of fisheries refugia and coral reefs. Farmer Field Schools were also used (to engage fishers). The GEF Small Grants Programme (SGP) provided many good examples of sustainable local-level management practices in the CTI. At national level, the National Coordination Committees ensured integration across sectors. However, the CTI Stocktaking report recommends

establishment of protocols for National Coordination Committee processes management to ensure continuity of leadership and participation of key stakeholders. The CTI programme also established a Regional Business Forum, but it resulted in mixed success.

Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.): Several projects targeted remote and poor communities and indigenous groups. Gender issues were addressed in project design, but generally not in much detail. The ATSEA TE states that conscientious efforts were made to integrate gender concerns in demonstration activities.

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making): Knowledge integrators funded by USAID assisted in addressing country-specific information gaps. This engendered strong country/institutional commitment and ownership and the institutional/financial sustainability of activities. The programme has been working towards creation of learning networks, social networks, communities of practice and centres of excellence. However, capacity for systematic data collection and management needs strengthening, and M&E systems should be refined and made more participatory. A number of information portals have been established, such as the adaptationmarketplace.org, CT Atlas and CT Project Mapping Tool. However, they could be better developed and turned into a CTI-CFF Marketing and Investment Platform to ensure relevance for users and long-term sustainability. Further work is also needed on valuation of ecosystem services to determine the impact of human activities, and better links could be developed to policy and decision makers.

The CTI programme is also integrating and IWLearn component that supported a regional CTI IWLearn meeting (the 5th IW Conference) and other types of knowledge exchange. In the organisation and running of the IWC5 strong partnerships were established with the Australian government and Australian Institutions that lead to increased commitments from Australia to the CTI. Subsequent GEF IWLearn projects have continued to fund exchange of knowledge and learning that has also benefited the CTI.

Innovation:

- Development of a common regional framework for legislation and policy to implement the Ecosystem Approach to Fisheries Management (EAFM), and an Asia-wide 'Essential EAFM Training Course'. This supports ongoing efforts to address Illegal, Unreported and Unregulated (IUU) fishing and Live Reef Fish Trade (LRFT) in the CTI.
- SGP best practices on local-level coastal and marine management.
- Establishment of an online portal to help link financing to climate change adaptation projects (http://adaptationmarketplace.org), but due to lack of funding it has not been maintained.
- Natural resources valuation, including studies on the economics of coral reef conservation, and fisheries and aquaculture, to inform policy and decision making processes.

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over: The CTI initiative continues even after the completion of GEF projects, especially in the six founding member countries: Indonesia, Malaysia, Philippines, Timor Leste, Papua New Guinea and Solomon Islands. CTI priorities have been integrated into sector policies and some initiatives have also received follow-up GEF funding, e.g. ATSEA and COREMAP.

More importantly, a system of governance is in place, which guides interaction between Member States and features an emerging Regional Secretariat to serve as a coordinating body. CTI countries have agreed to provide annual contributions to support the CTI Secretariat that builds on a set formula.

In addition, a coalition of multilateral and bilateral institutions have expressed willingness to continue to invest in sustainable development of coastal and marine resources in the CTI, and NGOs, such as WWF, CI and TNC are also committed to continue to support the CTI. The programme have been reasonably successful in engaging non-profit enterprises, but greater focus should be placed on leveraging sustained participation of the for-profit private sector.

Sources:

- CTI PFD
- ADB Completion Report: Regional Cooperation on Knowledge Management, Policy, and Institutional Support to the Coral Triangle Initiative
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- Coastal and Marine Resources Management in the Coral Triangle—Southeast Asia. ADB Technical Assistance Report

- Terminal Evaluation: GEF IW: LEARN/CTI Portfolio Learning in International Waters with a Focus on Oceans, Coasts, and Islands and Regional Asia-Pacific and Coral Triangle Learning Processes (PIMS: 4164)
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- Abraham, A., 2015. Stock-taking of CTI-CFF Programs and Projects: Strategic review of progress and future directions. ADB, CTI, 2015, 76 pp.

LATIN AMERICA

Programme title: 2371: Biodiversity Conservation in Coffee: Transforming Productive Practices in the Coffee Sector by Increasing Market Demand for Certified Sustainable Coffee (BBC)
Countries: Brazil, Colombia, El Salvador, Guatemala, Honduras, Peru

Coffee production in Colombia *(UN Photo/Jerry Frank)*

Project areas (ha) (*Map developed by Scott Shouse 2005, WGS84 Geographic)*

GEF Focal Areas: Biodiversity

GEF Agencies and other key partners: Executing agency: UNDP
Main partner: Rainforest Alliance
Other partners: Imaflora, SalvaNATURA, Icade, Fundación Natura

GEF funding/co-financing: USD 12 million: co-funding upon completion: USD 107 million

GEF phase: Project completed (OP3 &4)

Objective: The project's goals focused on conservation of biologically rich coffee areas through an increase in market demand for coffee produced under biodiversity-friendly, sustainable production practices. The project aimed to deliver impacts in the Brazilian Atlantic Forest, Brazilian Cerrado, Mesoamerica, and the Tropical Andes biomes. By increasing market demand for certified coffee from all origins, the project focused on producing impact in other countries where certified sustainable coffee is produced. Providing market incentives through certification, the project aimed to achieve transformation in the coffee sector and act as a valuable complement to conservation efforts in protected areas.
The logical framework identified the following objective to measure results: Demand and sales of biodiversity-friendly coffee increases from niche to mainstream product, allowing a significant growth in farms adopting biodiversity-friendly, sustainable productive practices and showing on- farm BD benefits.

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems

Analysis and definition of system including: System boundaries, main processes, actors and feedbacks:
Coffee is the second-largest traded commodity in the world after oil and employs 25 million people in the developing world. Virtually all coffee is grown within 13 of the world's biodiversity hotspots. Coffee production occupies slightly more than 10 million hectares globally, all of it grown in conjunction with or in place of tropical forests. This project focused on the six coffee producing countries in Latin America, which are among the world's largest coffee producing countries, and therefore key suppliers to the world's coffee industry. These six Latin American countries also harbour some of the world's most diverse ecosystems. Coffee production in Central and South America accounts for more than half of the world's coffee production, and covers a total of 5.8 million hectares. Of this, a total of 2 million hectares is estimated to be shade-coffee production.
There are three main factors, which directly threaten biodiversity-rich coffee plantation. First, the transformation of shade-coffee farms into other land use. Second, the "technification" or conversion to intensive full-sun coffee production. Third, a major threat is the increasing pressure from people living within or outside coffee farms, typically in the form of hunting, extraction of plants, collection of firewood, forest fires, as well as pollution. In the following, each main threat is analysed along with its driving forces.
The project aimed to catalyse a vast, and largely untapped potential for improving the sustainability of coffee farms, namely to capitalize on market forces to promote sustainability within the coffee industry, particularly through standards and a corresponding certification scheme, which will verify that producers and coffee companies are

keeping up the established standards. Rainforest Alliance, an international environmental NGO, and a key player in the world of certification, was involved as key partner in the project.

Integrated information sources – incorporating knowledge from different sources and system levels:
The project took advantage of the experience of Rainforest Alliance in certification schemes in coffee and other commodities. Also the experience of Brazil in the coffee sector, and following the advice of the country, insured that small-scale farmers where also targeted beneficiaries in the different countries.

Integration of assessment tools for socio-ecological impacts, including of resilience; Integrated environmental-social-economic modelling: An assessment of lessons learned identified that incorporating climate risk analysis is an important component of any project. In the coffee sector, climate variability and change are associated with higher incidence of plagues and diseases, such as coffee rust. The project responded to the growing threat of climate change through the development of a Climate Module. Farmers who receive verification against the criteria of the module understand the climate risks to their farms, create adaptation plans, and reduce greenhouse gas emissions from fertilizers, pesticides, fossil fuels and animal husbandry. Climate-friendly farms also protect and enhance carbon storage on their land by conserving forests and planting trees.

Certification as a tool to incentivize behavioural change: Certification triggered behaviour change of farmers, which in turn generated a critical mass of sustainable production "champions". Price premium and market access are the main factors in the decision to pursue certification. Despite costs, farmers have recognized the additional benefits of certification, including: organization enhancement; greater administrative and management efficiency (due to the documentation required for certification); improved net income (through reduced costs and improved yields); better access to education; healthier and more dignified working conditions for permanent and temporal personnel; recognition of farmers; and, better care and appreciation for the environment.

Integration domains during project design

Integration across GEF focal areas: Biodiversity was the only focal area

Integration across GEF agencies: The project was executed by UNDP alone. However, lessons from this project have influenced the design of the Commodities-IAP programme, which is multi-agency.

Integration of actors and institutions at the subnational and national level (including public and private sector actors): The project was designed as a joint collaboration between Rainforest Alliance, UNDP and government agencies of the participating countries. Other NGOs were also involved in the project. The role of Rainforest Alliance in the project with its expertise in the certification process and its strict certification requirements.

Spatial integration (landscapes/seascapes): An analysis of lessons learned from the project recognized that biodiversity conservation requires a landscape strategy beyond individual farm practices. Water, soil and agrochemical management have a greater impact if they are adopted collectively or within a specific watershed.

Integration of environmental and development concerns: The project's target population included farmers, especially small-holders, and indirectly farm workers through the improvement of their socio-economic and environmental conditions achieved by adoption of the Sustainable Agriculture Network (SAN) standards.
An assessment of the project recognized the importance of assessing the potential for socio-economic impact when selecting project sites.

Integration across policy domains: The project did not include a formal policy component, however, the project has made advances in contributing and addressing governmental policies. For example, in Peru and Colombia, the project opened up a dialogue with local government authorities in several regions to encourage their participation, which resulted in policy influence in some of these regions.
Furthermore, the project was mostly limited to the coffee sector and involved the national coffee organizations, but other sectors were not necessarily involved.

Integration domains during implementation and governance

Integration of environmental concerns into governance and investments: The Rainforest Alliance certification system is known as one of the most rigorous and complete sustainability standards in the coffee world, and one with demonstrated benefits for biodiversity. For example, the certificate prohibits the felling of forest habitat for coffee production or other reasons, and also bans the hunting of threatened or endangered species.
The terminal evaluation, however, pointed out that important biodiversity areas are usually not easily accessible, and that the remote conditions also have an effect on the social conditions of the population, which presents a double challenge for greater biodiversity and social benefits. The evaluation considered that certification was not a sufficient tool to address the challenges in these areas.

Vertically integrated planning and management: As the project did not include specific policy components the integration between local activities and national level was limited, although see comments on integration across

policy domains. There was vertical integration from the private sector side, that is, between local farmers and larger corporations, which were involved in the project.

Integration of multiple stakeholder groups into governance: Partnerships between NGOs and development agencies (e.g. Rainforest Alliance and UNDP) were beneficial to engage both market and governmental institutions. A lesson from the project is that this type of partnerships can also contribute to engaging a broader set of stakeholders that could support a wider adoption of best management practices. 70% of the farmers who attained certification through the BCC project are smallholders. These producers benefited from the model of group certification, whereby individual producers are included under one certificate, resulting in reduced costs. In Brazil, the project placed a special emphasis on targeting small-scale farmers in response to concerns about the potential for the project to disproportionately benefit larger farmers.

Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.): While project beneficiaries included small-holders farmers, the final evaluation identified that the project suffered from active selection of producers that are closer to compliance, or what the evaluation considered a self-selection bias of the lower hanging fruit. Gender issues were not explicitly addressed in the project.

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making): Instead of systematic information, specific studies were done to assess impact on biodiversity and socio-economic conditions, the limited scope of these studies constrained possibilities for adaptive management in the wider project.

An important lesson drawn from the BBC project regarding project design and implementation is that the first year of implementation for large-scale projects should be used to establish the basic implementation framework. This includes conducting baseline studies, establishing the local advisory board and establishing and validating the monitoring system. Another lesson is that producers need continued access to technical assistance.

Innovation: The design of the project was considered highly innovative because it strengthened a direct linkage between the coffee market and conservation interests. Through scaling-up the certification model, the project promoted a direct relationship between consumer interests and market demand for certified coffee on the world coffee market, and conservation benefits in biodiversity-rich coffee landscapes.

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over: A lesson from the project regarding sustainability is that while certification is an important tool that complements biodiversity conservation efforts and sustainable farming practices, in order to be truly effective it needs to incorporate both large and small producers and strengthen producer organizations.

Many actors believe that the success of certification programs is built on consumer demand, but the evidence does not support this belief. The growth in markets for more sustainable products (e.g., recycled paper, fairtrade products, and FSC wood) was developed by companies, governments and activist groups in the context of price-conscious and largely uninterested consumers. Following this, the Rainforest Alliance has concentrated its marketing efforts on the behind-the-scenes sectors of the supply chain so that companies use their well-known brands and marketing expertise and budgets to promote sustainable products to the end consumers.

During project design it was estimated that if coffee certification would reach a tipping point, the project would be well known and continue to grow without external donor funding. While the estimated tipping point was not reached, the final evaluation of the project assessed that there is enough basis for certified coffee to continue to be in demand.

A lesson that has been carried to the Commodities-IAP is that certification should be considered one of the tools for promoting sustainable production but not the only one. There is a trend to focus on best practices instead of certification. One reason is to avoid the additional cost of certification. Furthermore, certification can reach only best performers and is not adapted to low performers. Best practices would address the majority of farmers. In order to measure the impacts, the final evaluation team suggested promoting the use of an on-going self-assessment tool that could help farmers measure their own progress and adapt without significant additional external inputs.

Sources:

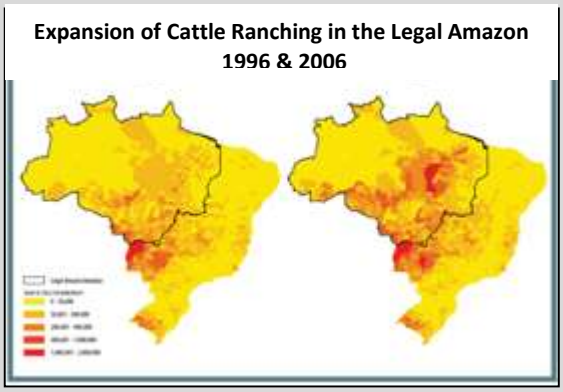
- Biodiversity Conservation in Coffee: transforming productive practices in the coffee sector by increasing market demand for certified sustainable coffee. Project Executive Summary, GEF Council Work Program Submission, UNDP, 2005.
- GEF, Rainforest Alliance & UNDP, 2015. Project Achievements and Lessons Learned: Biodiversity Conservation in Coffee: Transforming productive practices in the coffee sector by increasing market demand for certified sustainable coffee 2006–2013. Issue March.

- Guiramand, Maryline & Orozco, Ana Lucía, 2014. Terminal Evaluation Regional UNDP/GEF RA Project: "Biodiversity Conservation in Coffee: transforming productive practices in the coffee sector by increasing market demand for certified sustainable coffee".
- http://www.scpclearinghouse.org/fr/c/12-scp-latin-america-and-the-caribbean/scp-initiatives/238-biodiversity-conservation-in-coffee-transforming-productive-practices-in-the-coffee-sector-by-increasing-market-demand-for-certified-sustainable-coffee.html
- GEF Project region maps

GLOBAL (LATIN AMERICA, ASIA, AFRICA)

Programme title: 9072 Comm-IAP: Taking Deforestation Out of Commodity Supply Chains (IAP-PROGRAM)
Child project: 9179 Adaptive Management and Learning for the Commodities IAP (A&L Proj.)
Countries: Brazil, Indonesia, Liberia, Paraguay

Palm oil plantations in Bormeo. Klum. National Geographic, 2014



Source: Greenpeace, 2009. Amazon Cattle footprint - Photo: Mattias Mato Grosso: State of Destruction , p. 5

GEF Focal Areas: Multi-focal areas

GEF Agencies and other key partners: Comm-IAP Prog:
Lead GEF Agency: UNDP
Other GEF Agencies: WB, WWF-US, CI, IADB, UNEP

9179 A&L Proj:
GEF Agencies: UNDP and WWF
Other: ISEAL Alliance, Forest Trends

GEF funding/co-financing: Comm-IAP Prog:
GEF: About USD 40.5 million
Co-financing: About USD 443 million

9179 A&L Proj:
GEF: About UDS 4 million 3,978,441
Co-financing: About USD 5 million

GEF phase: Comm-IAP Prog: Concept Approved
9179 A&L Proj: Pending

Objective:
Comm-IAP Prog: The Program overall objective is to reduce the global impacts of agriculture commodities on GHG emissions and biodiversity by meeting the growing demand of palm oil, soy and beef through supply that does not lead to deforestation and related GHG emissions. The program will support production and supply interventions that do not contribute to deforestation, but rather increase the ability of buyers to manage for deforestation in supply chains, increase purchases from suppliers that do not deforest and facilitate commercial transactions. The combined result will be the proof of concept and demonstration that deforestation can be taken out of supply chains and still be commercially viable, and that regions can increase their agricultural output without deforestation.

9179 A&L Proj: Effectively leverage demand, transactions and support to production to ensure successful implementation of the Commodities IAP program. In addition to overall coordination of the IAP Program to ensure coherence and consistency, as well as communications and partnership building, this project will foster substantial knowledge management at the global level to advance the supply chain approach for beef, soy, and oil palm. This will include a Global Community of Practice to share best practices and promote learning, and a Global Research Impacts platform to develop robust and policy-relevant evidence base on the effectiveness of different voluntary sustainability standards for deforestation-free commodities.

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems

Analysis and definition of system including: System boundaries, main processes, actors and feedbacks:

Comm-IAP Prog: Agriculture expansion and production of commodities has been identified as the primary driver of approximately 80% of deforestation worldwide. Food and fiber production (including subsistence agriculture and ranching), and the land use change it drives, represents the second largest anthropogenic source of GHG emissions on the planet, behind fossil fuel combustion. Much of this is driven by production of beef, soy and palm oil. Projected world population increase is expected to lead to doubling of food consumption, and with this increase of *soybean, palm oil and beef* demand. Most of the expansion of these commodities is concentrated in the tropical rainforests of Latin America, West Africa, and South East Asia. These areas coincide with high levels of biodiversity and carbon density. Production must be then reconciled with other social and environmental objectives such as forest conservation, maintenance of ecosystem services and climate regulation. The expansion of commodity production and the associated deforestation is a result of complex national and international supply chains spanning from farmer to final consumer, including a diverse range of actors, both large and small-scale growers, traders, manufacturers, retailers, and financiers, as well as governments at national and local levels. Responses that address the links between supporting improvements in supply-side enabling conditions and practices and demand-side market leverage have yet to be fully harnessed.
This program targets key commodities that are in great demand and are linked to deforestation, namely soy, beef, and palm oil. Large multinationals such as Arthur Daniels Midland, Cargill and Minerva have recently committed to take deforestation out of their supply chains, in an effort to reduce environmental, economic and social risks, and a number of their Paraguay-based counterparts are following suit.
The program will invest in specific stages of key commodity supply chains in regions identified with rapid expansion of key commodities. The target countries are the main producers and emerging producers: In Latin America, the focus will be on beef and soy in Brazil and Paraguay. In Latin America, the deforestation frontier is still expanding. These areas usually contain a combination of small and large farmers, and there are structural problems and lack of capacity with regards to land use planning and enforcement. For palm oil, the program will aim to work in a large and consolidated producer like Indonesia and an emerging producer and new frontier of investment like Liberia in West Africa.

9179 A&L Proj:
There are a number of barriers undermining the ability to reduce deforestation from agricultural commodity production. This project recognizes that initiatives aiming at promoting sustainable commodity production are rarely coordinated or integrated to tackle all links of the supply chain, are limited to individual commodities, or individual countries. There has been insufficient piloting of integrated approaches to link work on the key elements of agricultural commodity production supply chains and to achieve technical synergies. In addition, interventions at national, regional or global levels are not always coordinated. The child project addresses the above gaps. It focuses on important processes related to integration, that is, knowledge management, learning, partnerships and research on impacts of voluntary sustainability standards.

The project description identified an additional knowledge gap. Private companies, governments and civil society have been implementing different initiatives to reduce the deforestation footprint associated with commodity production. This includes through the application of voluntary sustainability standards and certification (VSS) as well as other VSS-like mechanisms (e.g., company policies with associated indicators, monitoring, and verification processes) to promote sustainable practices on the ground and in supply chains. However, information on the impacts of VSS and similar mechanisms is unevenly distributed by commodity and region. Furthermore, evidence is not sufficiently accessible to key user groups and it has not been synthesized and communicated in decision-relevant terms.

Integrated information sources – incorporating knowledge from different sources and system levels:
Comm-IAP Prog: To take advantage of the window of opportunity that exists when changes to commodity production pathways can still be made before irreversible damage to natural resources occurs, the program needs to harness the potential synergy and multiplying effect of addressing the three major commodities in a combined approach
9179 A&L Proj: The project will include sharing of knowledge and experiences with existing platforms at the global level, as well as among and within participating countries.

Integration of assessment tools for socio-ecological impacts, including of resilience; Integrated environmental-social-economic modelling:

Comm-IAP Prog: No specific assessment or modelling tools are included in the program description. However, the STAP review suggests that progress towards ensuring that commodity production takes place without driving deforestation will require data derived from multiple sources that are independently verifiable. Some of these data collection tools include the Normalized Difference Vegetation Index (NDVI). These data sources will be blended with equally important data derived from ground verification, manufacturer data, and purchasing data. The STAP review also suggests the IAP program can build on the experience of the WAVES program which includes natural capital accounting tools at the national level.

9179 A&L Proj: Voluntary and sustainability standards and certification (VSS) tools are being widely used by companies to implement their commitments related to halting deforestation and addressing other key supply chain risks. VSS tools are being applied to help fulfil more than 85% of the 300+ private sector commitments. VSS tools include those developed by: the Roundtable on Sustainable Palm Oil (RSPO), Forest Stewardship Council (FSC), Round Table for Responsible Soy (RTRS), SAN/Rainforest Alliance and others now account for a substantial portion of some commodities. VSS and similar emerging mechanisms include a normative framework (e.g., a company sustainability policy), specific compliance indicators (e.g., key performance indicators associated with the policy), and a verification procedure.

Integration domains during project design

Integration across GEF focal areas: Both program and child project are multi-focal area

Integration across GEF agencies: To tackle the challenge of commodity expansion without deforestation the program is design as a multi-agency program. Coordination of different agencies has been acknowledged to be challenging and time-consuming but when clear guidelines and incentives are provided, it contributed to the design of comprehensive program that took into account the expertise of the different agencies
9179 A&L Proj: UNDP and WWF

Integration of actors and institutions at the subnational and national level (including public and private sector actors):
Comm-IAP Prog: The program is designed based on a supply chain approach that takes into account actors across the supply chain. The supply chain approach proposed by the program for the three major commodities is intended to reinforce the need for all actors to embrace best practices and sustainability principles. The program involves working closely with commodity producers at multiple scales, manufacturers, financiers, and buyers of key agricultural commodities along with government regulators. The key to success is the level of inter-relatedness between the production, processing, and supply of these commodities. The same companies are often involved in their production and processing, and are often invested in by the same financial institutions. This means that improvement in sectors depends on working with the same groups of actors.

It should be highlighted that the program description clarifies that the program cannot take on all the diverse sustainability challenges facing commodity markets and supply chains, and thus an integrated commodities approach means identifying the most effective and appropriate entry points for support, whether supply or demand side, public or private, policy or technical based on full comprehension of market and supply chain structures and corresponding sustainability pressure points along and between the chains.

Spatial integration (landscapes/seascapes): Comm-IAP Prog: The program does not explicitly refer to spatial integration; the focus is put on terrestrial landscapes, with no explicit reference to water or seascapes.

Integration of environmental and development concerns: Comm-IAP Prog: The program includes support to farmers and their communities through farmer capacity systems such as extension programs, training facilities, trade facilitation centres, capacity building, etc.

Integration across policy domains: Comm-IAP Prog: Focusing on a specific component of sustainability – deforestation – strengthens the effectiveness of the Program and allows for the Program's partners to find clear coordination points. The Program's Theory of Change builds on the notion that if the right lands (agriculture lands, degraded lands, etc.) are available and accessible for production, and if forestlands are not accessible, agriculture expansion and growth can be achieved without contributing to deforestation. As an integrated approach, the program therefore builds momentum for propagating sustainability throughout entire commodity supply chain sectors.

Integration domains during implementation and governance

Integration of environmental concerns into governance and investments:
Comm-IAP Prog: One of the program components includes the financial aspects of the commodity, which can be considered an innovative aspect of integration and one that could guarantee the sustainability of the program. The

goal of the component is to design and pilot financial and risk management instruments that extend financing to reduced-deforestation commodity production and reduce financing for unsustainable practices. This component of the IAP will facilitate the involvement of commercial and financial actors in the actual purchasing of reduced deforestation supply coming out of the Program and its targeted areas. This component of the IAP links the efforts and results of the other two components, helping supply and demand materialize in concrete trade transactions and financial support. A challenge of the program is that its nature as an integrated approach implemented by multiple Agencies makes outcomes dependent on the coordination and joint delivery between the different components.

9179 A&L Proj: The coordination and integration of different actors, knowledge platforms and VSS mechanisms can be considered an important aspect for the successful implementation of the IAP program which integrates deforestation concerns into the whole supply chain of 3 key commodities. In addition, the VSS mechanisms can also be considered a form of integration of sustainability standards into private sector operations.

Vertically integrated planning and management:

Comm-IAP Prog: Vertical integration will take place through program components such as dialogue platforms at the national level linking national and local activities, as well as integration between domestic policies and global market commitments.

9179 A&L Proj: The project seems to focus coordination and integration with global platforms and other child projects of the IAP. At the same time, the project plans on integration national and local actors in the different activities (from dissemination events to knowledge platforms), and a range of actors at different levels have already been included in the design stage of the project.

Integration of multiple stakeholder groups into governance:

Comm-IAP Prog: The IAP is designed to work with an array of stakeholders to transform production systems and improve land use. The Program will seek to support action with four different sets of actors committed to this overall goal:

- Governments – through developing the enabling conditions for sustainable practices
- Financial institutions providing financial transactions and services to commodity supply chains at national, regional, and global levels
- Buyers (e.g. traders, processors, brands, and retailers)
- Producers – at a range of scales from smallholders (particularly women and indigenous groups), local communities, SMEs and multinational companies

The program includes a specific component on public private partnerships (PPP) and dialogue. This component will support the dialogue at a sector level within the targeted country. It will enable public-private discussions as well as coordination between different governmental institutions and Ministries.

9179 A&L Proj: The project includes coordination with existing global programs and platforms, e.g. Norway's International Climate and Forest Initiative (NICFI), The Tropical Forest Alliance 2020 (TFA 2020). The Global Impacts Platform that will be developed for the project will disseminate the results of the IAP program through in-person engagement with stakeholders and decision-makers at knowledge-sharing events. In addition, a Global Community of Practice (CoP) will be created and will convene practitioners actively working on these issues. The CoP plans to assemble actual practitioners and producers from the South who are working in this field, focusing on the four target countries of the IAP.

Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.):

Comm-IAP Prog: According to program description, women are usually underrepresented in both the membership and governance of producer groups. On male-owned farms, female family members still do much of the work, yet receive little of the income from crop sales and have little say on how income is spent. The program will seek to engage with all stakeholders at national, subnational and at the community level including any potentially marginalized groups. The program will seek to add to or strengthen these groups when key stakeholders are underrepresented. The program will ensure men, women, youth and other groups are engaged and build monitoring systems that include necessary disaggregation to track this throughout the life of the program. The work with smallholders will be particularly important for the inclusion of both men and women and other marginalized groups to provide them with farmer's capacity systems and extension programs, training facilities and trade facilitation centres to assure benefit sharing is in place for the targeted landscape.

9179 A&L Proj: The project processes to produce periodic publications to support knowledge management on global cross-cutting themes, including gender.

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making):

Comm-IAP Prog:

The program has a component dedicated to adaptive management and learning. The Program's overall goal is based on the synchronization of activities and outcomes implemented by different Agencies and child projects; this synchronization requires a strong technical and administrative coordination. Agencies and partners involved in the implementation will be jointly responsible for the necessary adaptive management throughout the implementation of the Program. The component will also facilitate South-South cooperation and technology transfer between the participating countries allowing lessons learned to be replicated efficiently. In addition, this project component will deepen the understanding of root-causes of deforestation and the correlation between sustainability practices and deforestation rates.

9179 A&L Proj:

The whole project is about adaptive management and learning at the global level, incorporating actors and forums across different scales. Among other things, the project will develop an online Global Impacts Platform for Sustainable and Low-Deforestation Commodity Production and Sourcing Initiatives, which will support beyond the IAP program, company- and donor-supported actions to accelerate a transition to low-deforestation and sustainable commodity production.

Innovation:

Comm-IAP Prog: The innovative approach of the Program comes from directly linking demand and production through the specific focus on commodities sourced from targeted landscapes, making the program a "whole supply chain" approach. This program builds upon the lessons from the 'Biodiversity Conservation in Coffee: Transforming Productive Practices in the Coffee Sector by Increasing Market Demand for Certified Sustainable Coffee' (2371) project. The theory of change requires work on sustainable demand for deforestation free commodities, financing, work with regional and local governments to put in place and enforce legislation both to define go and no-go areas (for agriculture), as well as enforce forest conservation, and influence the practices of producers of monoculture agri-commodities. The application of the theory of chain will be adjusted based on the particular target commodity and its best entry points for intervention. Taking into account the complete supply chain from local producers to consumers can be considered an innovative approach to NRM.

Innovation can also be seen in the financial mechanisms that will be implemented to incentivise sustainable production practices. For example, voluntary market based approaches are being considered, such as those embodied by the Forest Stewardship Council (FSC and the Roundtable for Sustainable Palm Oil (RSPO). These approaches have been a valuable means through which environmental improvements to production methods and supply chain risks have been addressed and have shown some potential to establish a new paradigm for commodities. The program description highlights, however, that experience has shown a mismatch between the impact on the ground and the scale and nature of the challenge.

9179 A&L Proj:

As the project document highlights the project features various innovative elements, including the establishment of a Global Community of Practice, a partnership strategy, and a Global Impacts Platform, among others. Large global Communities of Practice meetings every two years will enable practitioners from around the world to exchange lessons and best practices and to build synergies for greater impact.

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over:

Comm-IAP Prog: One aspect that can contribute to the sustainability of the efforts beyond the GEF program is that the project will also engage producers to make and implement commitments across their land holdings with the premise that producers in a landscape often have land-holdings in other landscapes. The component will also pursue the use of conservation agreements linking agricultural technical assistance to forest conservation. In addition, sustainability and continuation of activities after Program implementation will depend in the change in business and market practices. The new market structure and business standard will maintain producers and buyers aligned with the new practices.

9179 A&L Proj: While the Global Impacts Platform will leverage the knowledge created by existing organizations using VSS mechanisms such as ISEAL, Rainforest Alliance, and WWF, it is unclear how the Platform and all the efforst around it will be maintained beyond the duration of the project. Designing a management mechanism of

the Platform beyond the project will be crucial for the long term sustainability and continued coordination and dissemination of research and activities on the issues.
Sources: • PFD IAP Commodities (project number 9072) (April 20, 2015) • STAP Scientific and Technical screening of the Project Identification Form (PIF) (May 7, 2015) • GEF-6 REQUEST FOR PROJECT ENDORSEMENT/APPROVAL. Project Title: Adaptive Management and Learning for the Commodities IAP. (Submission date: July 30, 2016) • Interviews with key informants.

LATIN AMERICA

Programme title: 9272 Amazon Sustainable Landscapes Program
Child project: 9339 Capacity Building and Regional Coordination for Amazon Sustainable Landscape Program
(With some insights from ARPA - Amazon Region Protected Areas Program Phases 1 and 2
771: Phase 1; 4085: Phase 2)
Countries: **9272:** Brazil, Colombia, Peru; **9339:** Brazil, Colombia, Peru; *771 and 4085: Brazil*

UN Photo/ Pernaca Sudhakaran

UN Photo/George Love

GEF Focal Areas: 9272 Program: Multi-focal area
9339: Biodiversity

GEF Agencies and other key partners:
9272 Program:
Lead: World Bank
Other: UNDP, WWF

9339:
Lead: World Bank
Other: UNDP, WWF, governments

GEF funding/co-financing:
9272 Program: About USD 113 million/ about USD 683 million

9339: (only information about project preparation grant: USD 137,615)

Arpa 1- 771: USD 31 million/ USD 51.5 million
Arpa 2 - 4085: About USD 16 million / USD 70 million

GEF phase: 9272: Council approved
9339: PPG approved

Objective:
9272: To protect globally significant biodiversity and implement policies to foster sustainable land use and restoration of native vegetation cover.
9339: To improve national and regional coordination on efforts to maintain forest resources, protect biodiversity, enhance forest management and restore forest ecosystems amongst countries and stakeholders.
4085: ARPA 2: to expand and consolidate the system of Protected Areas in the Brazilian Amazon region and to strengthen mechanisms for its financial sustainability. This Project is scaling up the work carried during the first phase of the ARPA Program, building on its achievements, innovations and lessons learned.

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems

Analysis and definition of system including: System boundaries, main processes, actors and feedbacks:
The Amazon Sustainable Landscape Program builds on the success and experiences of ARPA 1 and 2. While ARPA 1 and 2 were limited to Brazil, the Amazon Sust. Landscape Program was designed as regional program to facilitate collaboration and cross-fertilization between Brazil, Peru and Colombia, and to expand the ARPA model of managing and setting up protected areas to the new countries. For years there was a sense that protected areas in

the Amazon could not be effectively managed given their size, extensive logistical complications, and the numerous threats in the area. The ARPA program has proven that effective protected area creation and management can indeed happen in the Brazilian Amazon. ARPA has shown that protected areas can have a real impact in reducing deforestation and protecting biodiversity as well as the rights of local peoples. This project also showcases that private-public partnerships can break through long-standing bureaucratic and administrative bottlenecks creating the operational capacity to effectively support field staff.

9272:
The Amazon is one of the most important remaining biomes in the world. In the Amazon biome balancing economic development with conservation remains an on-going challenge. The main drivers and root causes of the degradation of the Amazons are related to export markets (e.g. international demand for agricultural and forest goods, minerals and energy), transport infrastructure development, social inequality and poverty. All these are linked to the context of each country in the Amazon, to shortcomings of policies to support sustainable development, weak governance of institutions. System boundaries: The Biome encompasses 6.70 million km2 and is shared by eight countries (Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana and Suriname), as well as French Guiana. Pressures driving deforestation: agricultural expansion, transportation infrastructure, energy infrastructure, mining (legal and illegal), oil and gas, illegal timber trade.

Barriers to achieving Amazon sustainable landscapes: Access to land is still open in certain regions of the Amazon; territorial and landscape planning has not fully developed zoning, inventorying and monitoring of resources in several counties; some government and private sector policies for commodities such as coffee and beef have become drivers of deforestation; limited effective incentives to farmers and ranchers; lack of long-term management, even of designated conservation and indigenous areas; deficient monitoring of land use changes at adequate scales and inadequate dissemination of good management practices and landscape interventions.

9339: Similar to its program, the child project system description describes the threats faced by the Amazon and highlights that countries of the Amazon Basin recognize the urgent need to step up the funding levels and regional cooperation to reduce deforestation rates and safeguard Amazon forests and biodiversity. While each of the participating country faces different threats to the Amazon biodiversity, the project recognizes that they could benefit from addressing the drivers both nationally and regionally. Major barriers to achieving sustainable development of the Amazon Biome include: shortcomings in national policy and legal frameworks for land and natural resources access and utilization, inefficient enforcement of these regulatory frameworks at the national level, limited collaboration and learning from best practices across borders, inappropriate technical capacity and incentives for responsible resource utilization. Besides defining the countries where the program will be implemented and delimiting the program to the Amazon basin, there is no more detailed information on how the system boundaries will be defined.

Integrated information sources – incorporating knowledge from different sources and system levels:
9272: The program plans to improve national and regional inter-agency coordination through knowledge and technology exchange amongst countries and stakeholders. Capacity building for farmers will include addressing existing technical knowledge gaps in issues such as the establishment of set aside reserves, the types of shade regimes in coffee and cacao plantations that enhance crop quality, cattle farming techniques to understanding nutrient status and ecological sustainability without affecting short term productivity; and the application of integrated pest and integrated nutrient management systems capable of limiting the need for chemical inputs.

Integration of assessment tools for socio-ecological impacts, including of resilience; Integrated environmental-social-economic modelling:
- Lessons from ARPA 1 (recommendations for ARPA 2): The M&E component of phase 1 was considered to be unsuccessful and recognized the need for remote sensing capacity. For phase 2 it was suggested to develop an immediate partnership with a remote-sensing facility for M&E. The remote-sensing facility would need to take stock of ARPA's conservation units (UCs) boundaries and the ability of the UCs to lower deforestation rates both within and on the peripheries of the UCs.

9272: Brazil: Innovative tools: Environmental Adjustment Program ("PRA") and the Rural Environmental Registry System (SICAR). SICAR is a georeferenced web system that will enable documentation of over 5 million rural properties. It is aimed at improving transparency and providing a pathway to environmental compliance.

Integration domains during project design

Integration across GEF focal areas: Both program and child project are multi-focal area

Integration across GEF agencies:
9272: Lead agency WB, implementing agencies UNDP and WWF-US

9339: Led by WB, other implementing agencies UNDP and WWF

Integration of actors and institutions at the subnational and national level (including public and private sector actors):
Lessons from ARPA 1: Institutional public/private partnerships were essential to success: Contributions from a diverse set of institutional partners have been the driver for the success of the ARPA program, including the Ministry of the Environment (MMA) and the non-profit FUNBIO, which was in charge of executing the program. The final evaluation highlighted that while there are numerous day-to-day tensions in communicating and managing a large program among so many partners, the successes could not have been achieved by any one of these institutions operating independently.

9272: The program acknowledges the need to collaborate at the regional level to protect the Amazon ecosystems and with new level of investments and cooperation between public, private, federal and local partners. New levels of investments and cooperation are needed between development partners (i.e., public and private, federal and local) that bring biodiversity conservation, forest management, rural development and poverty reduction together. Regional cooperation for the governance of the Amazon Basin has been limited between countries as each has different interest and priorities. While the program is regional, most of the child projects are single country-based, highlighting the challenge of regional coordination.

Spatial integration (landscapes/seascapes): 9272: Program covers both terrestrial ecosystems and aquatic ecosystems of the Amazon basin.

Integration of environmental and development concerns:
9272: The program baseline acknowledges that previous development policies of Amazon biome countries have often led to increasing deforestation. In Brazil, while change in these policies and increasing monitoring and policing has decreased deforestation, there is concern that infrastructure plans (such as roads, railways and dams) will detach people and the economy from the forest and potentially lead to unsustainable practices that put pressure on natural resources. Consequently, the program acknowledges the need to bring together biodiversity conservation, forest management, rural development and poverty reduction.

9339: this project expected to play a significant role in ensuring that key productive sectors work together towards a common objective to reduce deforestation and build productive and protected landscapes in the Amazon

Integration across policy domains:
9272: Program aims to integrate different sectors to achieve its goals. For example, activities include reduction of deforestation through incentive mechanisms in sectors such as agriculture, mining and infrastructure. In Peru, the Ministry of Environment (MINAM) is elaborating the Forest and Climate Change Strategy, as a management tool that will allow the coordination among sectors and the articulation between different government levels to face deforestation. One potential challenge is the limited convening power of the Ministry of Environment to other sectors.

Integration domains during implementation and governance

Integration of environmental concerns into governance and investments:
9272: Program component 2 focused on integrated landscape management plans to finance activities that contribute to the integration and management of forests (timber and non-timber resources) and fisheries management into agricultural landscapes by promoting access to land use planning and innovative financing mechanisms.

Vertically integrated planning and management:

9272: Vertical integration in this program includes coordination of and involvement of local, national and regional stakeholders. The theory of change helped define the priority interventions at the national level and regional levels. At the national level, the Program will support the consolidation of an integrated Amazon protected areas system, the development of integrated landscape management of selected regions within each country participating in the Program and the improvement of policies and strategies for protected areas and productive landscapes. At the regional level, the Program will enhance regional cooperation and learning among all stakeholders.
9339: The project works on the premise of "work together" where the involvement of three countries can be expected to trigger positive synergies in favour of achieving long-term sustainability.

Integration of multiple stakeholder groups into governance:
9272: This Program will build on an important network of stakeholders at the local, national, regional and international levels. The Program will also work closely with community-based organizations and local communities, who are invested in sustainable forest management and biodiversity conservation.
9339: This project includes the coordination of the overall program (9272). As part of this project a Program Steering Committee (PSC) will be put in place. The PSC will be chaired by the World Bank, as lead agency of the Program and comprising one-program focal point from each country, the Global Environmental Facility Secretariat, and relevant Implementing Agencies (UNDP & WWF-US) will act as an advisory mechanism to prioritize activities. While the child projects will be designed through consultation of the governments, there is no mentioning about involving local actors in the governance of the program or project. As it is designed, the program will follow mostly a top-down approach where the coordination and design is led by implementing institution and national governments but only with consultation input from local stakeholders. The program could benefit from involving in the PSC community based organization or indigenous groups, some which work nationally and regionally, such as COICA (*Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica*). The limited involvement of regional indigenous or grassroots organizations could be explained by the regional coordination challenges noted earlier and the focus of single-country child projects.

Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.):
Lessons/challenges from ARPA 1: ARPA Advisory Committees were not used to their full potential. The original program design proposed a number of Advisory Committees that would increase the strategic oversight and civil society support for the ARPA program. Some of these were never convened (e.g. Mediation Committee), others were convened once or twice but never truly used (e.g. Science Committee), and the most important – the *Comité de Programa* had an important role, but was deactivated for a year at the time of evaluation (2009)**.**

9272: Activities to promote sustainability of livelihoods consider gender equity and local gender, cultural norms and rights of indigenous peoples. The program plans to pay particular attention, in cooperation with other partners, to strengthening the role of women in both indigenous and non-indigenous communities. There is not enough detail yet as to how that will be carried out concretely.

9339: At this stage of the project there seems to be limited focus on equity concerns. Given the presence of many indigenous groups in the Amazon region, it is surprising explicit mention is not give to integrating them as active stakeholders in the design and implementation of this capacity building and coordination project. As mentioned in the stakeholder part, regional indigenous organizations such as COICA (*Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónic*a) could be important stakeholders in the program and contribute to the integration of indigenous concerns as well as contribute to regional integration, as this organization serves as an umbrella for indigenous organizations in all Amazon countries (even those not included in the program).

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making):

Lessons/challenges from ARPA 1: The Monitoring and Evaluation Component failed to meet its objectives. Developing effective indicators that could be replicable across UCs (Unidades de Conservação - Conservation Units) in a timely and cost-efficient way is an ARPA priority. Unfortunately, in Phase 1 ICMBio was unable to produce any reports that could answer strategic questions relevant to UC managers. It also failed to develop remote sensing data that could at a minimum enable ARPA to measure UC efficiency in reducing deforestation.

9272: The Program will apply a multi-pronged approach to knowledge management, which involves: A focus on collaborative learning-by-doing, with child project teams coming together in field missions for hands-on learning of implementation of project activities; a focus on testing approaches against clear impact criteria and a well-defined

and agreed theory of change. This will involve building infrastructure upstream during project design to capture lessons across the portfolio and ensure take-up. The best initiatives will be evaluated for scaling up; a focus on collating lessons across the Program through formal knowledge management platforms that will occur annually and will include representatives from each child project, and producing knowledge management products that will be disseminated through formal (e.g. Program website) and informal (e.g. at international events) channels. The program also involves learning lessons from outside the Program. This will involve working with external partners to capture their lessons, creating the infrastructure to feed these lessons into project design and implementation, and incentivizing child projects to replicate and scale up best practices.

9339: This project includes an indicator in its knowledge management and capacity building component to assess the increased uptake of lessons and cutting-edge knowledge generated across the portfolio of interventions, which can be interpreted as a way of applying adaptive knowledge management in the overall Amazon Sustainable Landscapes program.

Innovation:

From ARPA 1: New financial markets. The 3 highest potential mechanisms identified are: Environmental compensation funds; Green lottery; and Carbon transfers for avoided deforestation. Also Administrative innovation: Administrative innovations made effective on-the-ground management possible. Internet-based systems to track protected area management status (SisARPA) and allow partners to track procurement requests and other financial items (CEREBRO). A praised innovation is "*conta vinculada*" or "conjoined account" that allows a direct flow of resources from the non-for-profit FUNBIO to protected area site managers. This system avoids the problems often inherent in a government bureaucracy while still providing ready accountability and an efficient receipt and documentation system. Given that numerous other Amazonian environmental projects managed by government agencies have been unable to successfully expend funds in a regular and sustained way on site, the *conta vinculada* mechanism has been an essential contribution to ARPA success. In contrast to so many other programs, 92% of the GEF funds were expended – in large part thanks to this administrative innovation.

9272: While there have been many projects and initiatives for protected areas systems, mainstreaming of biodiversity and natural resource management, and this programme draws on the success of the ARPA programme, this is the first time that a suite of investments will be coordinated to respond to key drivers of deforestation in the region, harmonize sectoral government policies that impact the region, and work across countries with similar approaches. Interventions will not simply focus on a specific site but rather on mechanisms and enabling conditions to build productive and protected landscapes in the Amazon region.

9339: The project will promote innovation across technology, finance and governance pillars. Preliminary planned interventions include: exchange best practices towards improved effectiveness of legal frameworks and policies to address deforestation; Collaboration in managing bordering PAs; Collaboration in addressing threats imposed by illegal gold mining or logging or trafficking of illegal species; Development of learning platforms in priority thematic areas. Preliminary themes include: biodiversity research and conservation, monitoring deforestation, climate change, forestry, and agricultural and infrastructure development, technology transfer to farmers and ranchers, best practices to reduce deforestation, sustainable productive landscapes and, economic and institutional instruments. Thematic areas will be determined during preparation. The learning will be done through South-South cooperation amongst the three countries. This capacity building will integrate the participation of representatives from local communities, state and federal levels.

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over:

9272: The program plans to address its long-term sustainability beyond program funding through a mainstreaming perspective. In that respect, the Program is aims to play a significant role in ensuring that key productive sectors work together towards a common objective to reduce deforestation and build productive and protected landscapes in the Amazon. The program also plans to work on capacity building with the premise that building the capacity of participating governments to deal with biodiversity conservation, deforestation and

sustainable landscapes, the countries will become better positioned to capture funding beyond the end of the Program.

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- http://www.car.gov.br/#/sobre
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- Bath, Paquita, 2009. Independent Evaluation Of The Arpa Project. Amazon Region Protected Areas - Phase 1: 2004 - 2008.
- http://www.worldbank.org/en/results/2013/10/09/Brazil-protects-Amazon-increasing-size-protected-areas

Programme title: 3889 Mainstreaming Biodiversity Conservation Through Low-Impact Ecotourism in the *Sistema Nacional de Areas Protegidas* (Sinap)
Country: Panama

Source: Smithsonian Tropical Research Institute (http://www.stri.si.edu/sites/panama/ and www.stri.gob.pa)

GEF Focal Areas: Biodiversity

GEF Agencies and other key partners: GEF agency: IDB
Executing agencies: National Environmental Authority (*ANAM: Autoridad Nacional del Ambiente*) and Panamanian Tourism Institute (*IPAT: Instituto Panameño de Turismo de Panama*)

GEF funding/co-financing: USD 4 million/ USD 10 million

GEF phase: Project under implementation

Objective: To generate a model of low environmental impact ecotourism in the national protected areas system (SINAP) that contributes to biodiversity conservation and sustainability of protected areas, in a framework of innovation, entrepreneurial integration, and sustainable social development at the local scale. To this end, the project will finance three components: (a) Policies and regulatory framework for biodiversity conservation and sustainable management of ecotourism in the SINAP; (b) Planning, operational management and monitoring of ecotourism in Protected Area (PA)s; and (c) Strengthening of income generation potential for local stakeholders through ecotourism in selected PAs.

Problem diagnostic/assessment: Systems thinking – description of integrated social-ecological systems

Analysis and definition of system including: System boundaries, main processes, actors and feedbacks: One of the main challenges to implementing the Convention on Biological Diversity is the failure to incorporate and integrate biodiversity considerations in other sectors, and that ecotourism is a poorly developed but growing and promising segment of tourism. The main issue to be addressed by this project is the limited sustainable use of the high biodiversity of Panama's Protected Areas (PA) system, associated mainly with low levels of visitation and limited ecotourism services both within the PAs and in surrounding areas. This situation can be traced to three main root causes: 1- Lack of a sound and consistent ecotourism policy and institutional framework for the SINAP; 2- Limited on-site operational management of ecotourism and associated environmental impacts; 3- Lack of entrepreneurial capacity of nearby community organizations for offering a quality product and the absence of opportunities for participation of local tourism stakeholders in managing the PAs and conserving biodiversity. The limited coordination and few partnerships established between public institutions, private sector and community-based organizations has translated into: (i) limited integration of the PAs in the national strategy for tourism promotion; and (ii) limited offer by either the surrounding communities or the private sector of quality, demand-driven ecotourism services associated with the PAs.
System boundary: nine PAs selected as priority destinations based on the following criteria: (i) current and potential ecotourism demand; (ii) close proximity to the official Tourism Destinations, as included in the Master Tourism Plan for Panama (2007-2020); (iii) biodiversity values and vulnerabilities; and, (iv) potential to maximize community participation in the development and implementation of the project.

Integrated information sources – incorporating knowledge from different sources and system levels: To strengthen planning and management, the project plans to develop practical tools such as public use guides, it also plans to develop concession and co-management policies and procedures, as well as financial mechanisms to increase PA conservation and sustainability.
Integration of assessment tools for socio-ecological impacts, including of resilience; Integrated environmental-social-economic modelling: The project includes development of payment for environmental services schemes (e.g., for the contribution of PAs to the Panama Canal watershed), which require economic valuation of effectively preserved natural resources. The project also includes the design and demonstration of visitor survey methodologies to collect key data on ecotourism use (e.g., visitor characteristics, expenditure patterns, willingness-to-pay) as a basis for setting fee structures and with a view to expanding to the entire SINAP.
Integration domains during project design
Integration across GEF focal areas: Biodiversity is the only focal area. This project was selected for analysis as an example of how integration also takes place in single focal area projects (in this case, integration across sectors, of development concerns and multiple stakeholders must be highlighted).
Integration across GEF agencies: IDB was the only implementing agency.
Integration of actors and institutions at the subnational and national level (including public and private sector actors): The project includes local stakeholders (e.g. population in and around PAs, eco-tourism operators) and national level actors (Environmental Authority – *ANAM: Autoridad Nacional del Ambiente* – and Panamanian Tourism Institute – *IPAT: Instituto Panameño de Turismo de Panama*)
Spatial integration (landscapes/seascapes): Terrestrial, coastal and marine areas are included in the project.
Integration of environmental and development concerns: The project included a component focused on strengthening income generation for local stakeholders through ecotourism in selected PAs. The component sought to support local stakeholders in obtaining concrete economic benefits from the mainstreaming of biodiversity conservation in ecotourism within PA´s and their buffer zones.
Integration across policy domains: The project integrated the environment and tourism sectors by involving the ANAM and IPAT as executing agencies. The Protected Area management plans also l integrate adaptation strategies to respond to the impacts of climate change (e.g., coral bleaching, sea level rise, increase in storm surges, saltwater intrusion) in coastal, marine and terrestrial areas.
Integration domains during implementation and governance
Integration of environmental concerns into governance and investments: The project included the development of a right mix of regulations and market incentives for protected area management that is responsive to climate change adaptation in both terrestrial and coastal and marine areas.
Vertically integrated planning and management: The project includes addressing issues at national, sub-national and local level, which serves as an indication of vertical integration. This vertical integration can be seen in the project's main components: (a) Policies and a regulatory framework for biodiversity conservation and sustainable management of ecotourism in the SINAP; (b) Planning, operational management and monitoring of ecotourism in Protected Area (PA)s; and (c) Strengthening of income generation potential for local stakeholders through ecotourism in selected PAs.
Integration of multiple stakeholder groups into governance: The project included training of local organizations and operators in providing demand driven, high quality ecotourism services and products, integrating best practices and business management, as well as community participation in biodiversity monitoring. In addition, community organizations and tourism operators will be part of local environmental education campaigns, which will give them a sense of ownership and stewardship of the natural resources that provide them with viable livelihoods.
Integration of equity concerns into governance (e.g. gender, indigenous people, poverty, etc.): The project has integrated key aspects to ensure participation on the planning as well as on the reaping of economic benefits from ecotourism activities. Local communities (inclusive of indigenous groups) will have equal access to environmental education campaigns, and economic and business development opportunities, through training

on developing alternatives for sustainable use of natural resources. The Program also includes a process to build awareness and relationships as a first step to identifying the cultural values to be safeguarded and highlighted through the tourism experience. The project design document explicitly stated that executing agency would promote the involvement of indigenous peoples and provide them with culturally appropriate information to access the opportunities presented by the Program. The project did not explicitly addressed gender issues.

Integration of adaptive knowledge management into governance (i.e. evidence-based adaptive policy and decision-making, explicit consideration of uncertainty into decision-making): The project will assist the country in implementing its official PA monitoring programme – PMEMAP (see under innovation for additional information). Monitoring using the PMEMAP is expected to provide the information necessary for the government to consolidate its efforts to develop payment for environmental services schemes. The collection data on ecotourism use through visitor surveys is expected to serve as a basis for setting fee structures and to expand the development of PA public use plans in the rest of the country. The extent to which the surveys will be effectively implemented and the insights from the data collected implemented in scaling-out the activities to other PAs, remains to be seen.

Innovation: The project was designed in a framework of innovation, entrepreneurial integration, and sustainable social development at the local scale. The Environmental Authority implemented an innovative monitoring program of management effectiveness ("*Programa de Monitoreo de la Efectividad del Manejo de las Areas Protegidas de Panama – PMEMAP*") which is applied on a annual basis in each PA, with the participation of local communities and stakeholders. The PMEMAP follows a regional methodology adopted by the Central American Protected Areas System, which is based on the Nature Conservancy methodology 'Measuring Success: Parks in Peril- Site Consolidation Index'. The PMEMAP methodology includes a census that collects complementary data about the PAs and participatory monitoring sessions that collects information about the management of protected areas with technical staff and local stakeholders. The indicators monitored include natural and cultural resources, as well as social, political, legal, economic, and administrative aspects.

Extent and sustainability of integration – what/ who was included and not included in integrated projects, sustainability of integration (to what extent it will continue) once funding is over: The effective preparation and implementation of public use plans and ecotourism management systems, which are considered part of the activities of the project, could support the sustainability of the project beyond project finance. The participatory aspect of the PMEMAP monitoring sessions mentioned above is key from an integration and sustainability perspective, as they can contribute to build the capacity and empower local stakeholders.

Sources:

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- ANAM, 2008. Informe 2006-2007. Programa de Monitoreo de la Efectividad del Manejo de las Áreas Protegidas del SINAP. Dirección de Áreas Protegidas y Vida Silvestre, Autoridad Nacional del Ambiente, Panamá.
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