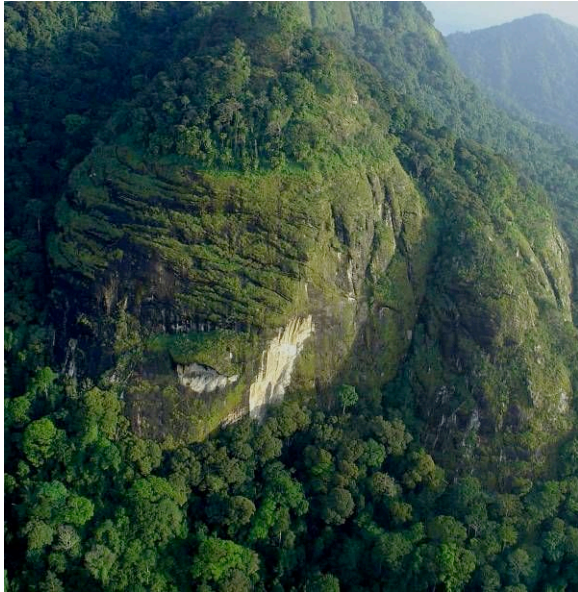


**TANZANIA INVENTORY
OF
PAYMENTS FOR ECOSYSTEM SERVICES**



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Date begun: 1st March 2006

Date completed: 16th July 2006

**Commissioned by Forest Trends and the
Participatory Environmental Management (PEMA) Programme**

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LIST OF ABBREVIATIONS

AWF-African Wildlife Foundation
CAAP – Clean Air Action Corporation
CBFM - Community Based Forest Management
CCBA - Climate, Community and Biodiversity Alliance
CFR - Community Forest Reserve, part of CBFM
CEEST - Center for Energy, Environment, Science and Technology
CEPF - Critical Ecosystem Partnership Fund
CMEAMF - Conservation and Management of the Eastern Arc Mountain Forests
DANIDA - Danish Bilateral Aid
DfID – UK Department for International Development
DHS - Danish Hunters' Association (Donor)
DNA - Designated national authority
EACAMP - Eastern Arc Conservation Area Management Program
EAMCEF - Eastern Arc Mountains Conservation Endowment Fund
EPMS - Environmental Protection and Management Services Co.
FBD/MNRT - Forestry and Beekeeping Division of the Ministry of Natural Resources and Tourism
FRMP - Fisheries Resource Management Project
GEF – Global Environment Fund
GoT - Government of Tanzania
GTZ - German Bilateral Aid
ICRAF – World Agro-Forestry Center
IIED – International Institute for Environment and Development
ISO - International Organization for Standardization
IUCN – International Union for the Conservation of Nature
JFM - Joint Forest Management
LEAT - Lawyers' Environmental Action Team
MEMA - Maendeleo Endelevu ya Mazingira (Sustainable Development for Conservation)
NEMC - National Environmental Management Committee
NORAD - Norwegian Bilateral Aid
PEMA - Participatory Environmental Management Programme, a CARE/WWF initiative
PREM - Poverty Reduction and Environmental Management, a research project of the Institute for Environmental Studies, Free University of Amsterdam
PBWO – Pangani Basin Water Office
REF - Rural Energy Fund, an initiative stemming from the National Energy Policy
SUA - Sokoine University of Agriculture
TANESCO - Tanzania Electricity Supply Company Ltd.
TaTEDO - Tanzania Traditional Energy Development and Environment Organization

TFCG - Tanzania Forest Conservation Group
TIST - The International Small Tree Planting Program
UMET - Ukuzaju Maendeleo Endelevu Tanzania (TIST counterpart in Tanzania)
UTUMI - Utunzaji za Misit (Forest Conservation), DANIDA initiative, Lindi region 2001-2004
UDSM - University of Dar es Salaam
UNDP - United Nations Development Program
VC - Village Council
VLFR - Village Land Forest Reserve, part of CBFM
VPO - DOE Vice President's Office, Division of Environment
WBS - Wami Mbiki Society (a WMA)
WCST - Wildlife Conservation Society of Tanzania
WWC – World Water Council
WWF -TZ World Wildlife Fund Tanzania Program
WMA - Wildlife Management Area (community based)

Summary of Findings: PES Activities in Tanzania and their Policy, Regulatory and Institutional Environment

Tanzania has relatively low population densities and vast tracts of land, with inhabitants who are poor, vulnerable, and in need of livelihood opportunities. Most of its inhabitants rely on natural resources to support their livelihoods. Such people could contribute towards sustainable development as well as benefit from fair and viable payments for environmental management services provision (such as planting trees, reducing soil erosion or switching to more fuel- efficient cooking stoves).

i. PES Activities and Programs

At the time that this summary was written, there were no fully operational PES activities in Tanzania, which had been developed specifically with PES in mind. The sole exception is the TIST programme. However, its carbon sales are currently stalled, awaiting a Government of Tanzania (GoT) CDM letter of approval. At the same time, there are programs already in motion, such as Wildlife Management Areas (WMAs) and Participatory Forest Management (PFM), which are close enough to being PES activities that they could easily be structured as such, given a few minor adjustments. For this reason, both WMAs and PFM have been included in this inventory. That said, PES project ideas and potential ecosystem service sellers are slowly emerging in Tanzania, particularly among private and public organizations in the Energy, Water and Forestry sectors. Activities are at their most advanced stage among Conservation NGOs in the water and forestry sectors, where there are projects in proposal, planning and commencement stages. The majority of other potential projects have remained in the realm of ideas due to a lack of technical and marketing support combined with a lack of regulatory frameworks to support such activities. Notably, awareness of PES and their development potential is lacking among organizations focused on poverty reduction, health and economic growth.

ii. Policy, Regulatory and Institutional Environment

From the late nineties onwards, most GoT sectors have developed, or are in the process of developing, new policy documents. These are tangibly more holistic, socially inclusive and environmentally conscious than their predecessors. Thus, they contain the language of cross-sectoral coordination, social and environmental sustainability, natural resource protection, community involvement in/co-ownership of natural resources and their management, pro-poor socio-economic development, mitigation of the detrimental effects of economic growth on society and environment, and openness to private sector participation in natural resource management and socio-economic development. At the same time, it is worth noting that there is no policy or legal framework for PES in any sector of Tanzanian government, whether this pertains to finances, natural resource management, energy or land. In addition, the fact that so many policy documents are either recently published or still in process, can act as an obstacle to developing PES activities because of the resulting scarcity of legal and regulatory frameworks stemming from such policy documents. Thus, many sectors are still lacking rules and regulations, while others have not operationalized their recently created laws and regulations. Nonetheless, the process of policy renewal can also represent an opportunity to contribute, not only to the content of policy documents themselves, but also to that of subsequent legal, regulatory and administrative frameworks. There are, however, additional legal, regulatory and institutional obstacles to developing PES activities in Tanzania. Where policies and their accompanying legal frameworks exist, these are not always clear in content and rationale. Moreover, there is insufficient accountability and transparency in governance and inadequate adherence to the rule of law. Thus, established regulations are not always followed, while those who disobey or circumvent the rules are not always held accountable. Part of the problem is that too much decision-making power is relegated to upper-echelon staff within GoT, and too many of these individuals exercise their power without due transparency or constancy. Finally, there is a general lack of funding with which to finance PES information dissemination, legal advice or technical expertise to the public, and no private providers of these in Tanzania. Whether self-designated or appointed, there is no public or private broker linking sellers of ecosystem services with overseas buyers (for additional details, see the 'SWOT Analysis' in Annex One).

STEP 1:

**IDENTIFY ECOSYSTEM SERVICE PAYMENTS, MARKETS, AND MECHANISMS
CURRENTLY OPERATING IN COUNTRY**

CURRENT ECOSYSTEM SERVICE PAYMENT OR MARKET <i>List specific in-country ecosystem service projects under each of the categories below.</i>	WHO IS THE BUYER? <i>List name(s) of both key contact people and government agencies, companies, etc.</i>	WHO IS THE SELLER? <i>List both name(s) of people and/or community organizations</i>	(A) WHERE IS THE PROJECT LOCATED? (B) HOW MUCH AREA INVOLVED IN AGREED DEAL (HECTARES)? <i>Include name of village and/or province</i>	(A) HOW IS THE DEAL STRUCTURED? <i>Is the deal: (A) A gov't payment? (B) A private deal? (C) Open trading?</i> (B) WHAT CONSERVATION MANAGEMENT PRACTICES REQUIRED?	HOW DO PAYMENTS FLOW FROM THE BUYER TO THE SELLER? <i>Provide a brief explanation.</i>	WHAT ARE THE ROLES OF THE INSTITUTIONS ENGAGED IN PAYMENT SCHEME? <i>List all institutions involved (including intermediaries) and briefly explain roles.</i>	DATE DEAL AGREED? <i>List date contract or agreement signed.</i>	CURRENT STATUS? <i>State if in operation, in planning phase, etc., and whether payments made.</i>
Carbon sequestration PES								
Carbon Project 1: <i>The International Small Group Tree Planting Program (TIST)</i>	World Bank (WB) Bio Carbon Fund. Manager: Benoit Bosquet	TIST, through its Tanzanian-registered partner UMET (Ukuzaju Maendeleo Endelevu Tanzania) and affiliated farmers' groups. The TIST program operates in India, Kenya, Uganda and Tanzania. It is a joint venture of the Institute for Environmental Innovation (I4EI) and	A. TIST Projects in Tanzania are located in villages in Morogoro, Tanga, Kigoma and Dodoma regions B. 169,682 trees have been planted around homes, gardens, fields and villages by 222 farmers' groups (6-12 farmers each) Source: http://www.tist.org/tist/Tanzania2.php last accessed April 6, 2006	A. (C) The World Bank payment was a one-off open trading deal. The total amount paid was US\$ 45,000.00 at \$4 per ton of carbon, between 2000 and 2005* (Ben Henneke, Clean Air Action Corporation). Farmers were paid 20 Tsh/USD .02 per year per tree. Note: the TIST contract with farmers states this to be the fee payable for the first 20 years, after which farmers will receive 70% of the market price for every tree planted (see Annex 6 under 'TIST Agreement with	The World Bank sends money to the UMET bank account (at CDRB Bank-Tanzania). UMET issues vouchers which it gives to farmers' groups that have planted trees. Farmers groups take the vouchers to the CDRB Branch where they have an account and cash the vouchers. Note that CDRB Bank has begun operating through SACCOS (local savings and credit	Institutions involved: World Bank Bio Carbon Fund; Clean Air Action Corporation as TIST founder; UMET as the Tanzanian-registered branch of TIST; Farmers' Groups from four Tanzanian regions; CDRB Bank local branches (some of which are operating through SACCOS); Winrock and WB auditors sent to assess and verify the TIST-WB carbon deal	The TIST-WB deal was for five years, 2000-2005. Two sales occurred, one in August 2004 and one in June 2005	TIST is currently blocked from CDM activities by GoT's VPO-DOE office. The program is hoping to get a 'non-objection' letter this year from VPO-DOE allowing it to sell CO2 as a LULUCF/CDM project. No new open market

		<p>Clean Air Action Corporation</p> <p>UMET contact: Dennis Mnyanyi, Director of Training and Development (dennismnyanyi@tist.org). TIST contact: Ben Henneke, President, Clean Air Action Corporation (benh@cleanairaction.com)</p>		<p>Farmers'). At this '20 year anniversary', UMET is slated to receive 30% of market prices to cover program running costs. Additional (non-monetary) benefits to farmers include access to small loans, HIV/AIDs information and training on improved soil-management techniques</p> <p>*There is some discrepancy with the sales figure. Thus, according to another CAAC representative, total carbon sales from Tanzania to date amount to no more than USD 27,840.00</p> <p>B. The conservation management practices required are (i.) tree planting around farmers' homes, gardens, fields and villages and (ii.) adoption of improved soil-management techniques. The top three species of tree planted are Luciner, Mijohoro and Mjlonge (www.tist.org/tist/Tanzania2.php accessed April 7 2006)</p>	<p>organizations) in some remote rural areas of Tanzania, thus facilitating farmers' access to the bank</p>			<p>deals are on the horizon</p>
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<p>Carbon Project 2:</p> <p><i>The Participatory Environmental Management Programme (PEMA).</i></p> <p><i>This is a planned project component which aims to carry out multiple-benefit carbon sequestration PES in Wami River catchment highland forests.</i></p> <p>The project would consist of a partnership between CARE, TFCG, ICRAF, and CCBA</p>	<p>No buyers have been identified yet.</p> <p>Note: PEMA plans to support JFM agreements in some of the 19 villages projected to form part of the carbon sequestration project. In these cases, one of the buyers – making non-monetary payments – is GoT (see below under JFM for more details)</p>	<p>The sellers will be individual villagers, Village Councils and Village Environmental Committees from approximately 19 villages in the area where the PEMA programme operates</p>	<p>A. The project is located in a segment of the Eastern Arc Mountains located in Mvomero District, Morogoro Region.</p> <p>B. The number of ha involved in each deal has not yet been determined. PEMA plans to facilitate the sequestration of at least 50,000 tones of carbon</p>	<p>A. PEMA is aiming to facilitate a voluntary market, multiple benefits LULUCF deal following the CCB standards set by the CCBA (Climate, Community and Biodiversity Alliance www.climate-standards.org/) and involving a 20-30 year contract</p> <p>B. The conservation management practices required would include:</p> <ul style="list-style-type: none"> • Sequestration of at least 50,000 tones of carbon by planting native and non-native trees. Tree planting would take place through (i) village land plantations and (ii) agro-forestry systems which involve planting native and non-native tree species and promote the spread of functional biodiversity – i.e. ‘bring the biodiversity out of the reserves’ 	<p>The payment mechanism has not yet been developed but would need to balance options with rates. Because carbon sequestration payments depend on a global market of buyers, the number of options available for making payments would be more limited than is the case with the water quality PES projects described below</p>	<p>The institutions have not yet been brought on board</p>	<p>No dates yet, as the project is in planning phase. However, PEMA foresees that general terms of the carbon sequestration deal could be struck by mid 2007 (PEMA Programme coordinator, personal communication)</p>	<p>Planning Phase</p>
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Carbon Project 3: (potential seller) <i>Kilombero Valley Teak Company Ltd.</i>	None identified as yet	Kilombero Valley Teak Company	<p>A. Central Morogoro District</p> <p>B. The portion of land that could be allocated for carbon sequestration has not yet been defined. The company manages 28,000 ha. in Morogoro, of which 25% is planted to Teak, and the remaining 75% combines sustainable <i>miombo</i> woodland managed on a 50 year rotation (this is approximately half the remaining area); ‘secondary species’; protected forest (including additional <i>miombo</i> woodlands and some tropical evergreen forest). The 25% Teak is still being planted and will comprise 7000 ha by end 2007</p>	<p>A. It would be a private enterprise seller, and the buyer could be a CDM or open market connection</p> <p>B. This would depend on the specific arrangements of the deal, but carbon sequestration could be combined with biodiversity protection (the company already carries out enrichment planting, biodiversity monitoring and wildlife corridor protection)</p>	This would depend on the agreed-upon mechanisms	N/A	N/A	Ideas Phase
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Note: for information on the market for improved wood and charcoal-burning technologies, see Annex Five under “Energy Service Sellers”

Biodiversity PES

<p>Biodiversity Project 1:</p> <p>Wildlife Management Areas (WMAs), with illustrative examples from: Wami Mbiki WMA in Morogoro District and, to a lesser extent, Mbomipa WMA in Iringa District (bordering Ruaha Nat. Park) *</p> <p>WMAs are inter-village associations or CBOs promoted by GoT through the Wildlife Division. They are situated in tracts of village or district land rich in wildlife and other natural resources set aside for community</p>	<p>Wami Mbiki: No buyers yet. Possibilities include: Tourism Operators and Private Business Persons. Note: Resource marketing – including carbon sequestration - and sales of non timber forest products are also included in the Association business plan (Wami Mbiki Society, 2004). Other WMAs: Mbomipa: Buyers include</p>	<p>The Wami Mbiki Society. Wami Mbiki Society Council Contact person: Mr. Dimitrius Malolopa, Wami Mbiki Society Manager (Mobile phone: 0744 222 042 wamimbiki@morogoro.net). Other pilot WMAs: 16 other WMA projects have been piloted nationally of which 14 are still operational (see Baldus et al., 2004 or visit http://www.wildlife-programme.gtz.de/wildlife/do)</p>	<p>A. Wami Mbiki is located in northeast Morogoro Region. B. Wami Mbiki consists of 2,300km² of ‘core area’ (district land set aside for conservation and managed by the Wami Mbiki Society) and 1,500km² of village land shared by 24 villages (tracts of land owned and managed by each independent village). The land is in one continuous block. Other WMAs. Note: Most WMAs in Tanzania consist of smaller tracts of land and involve fewer villages than Wami Mbiki (3-4 on average). Jukumu and Mbomipa are the only other WMAs with large territories: Mbomipa is on the border of Ruaha National Park, Iringa District. It includes 19 villages and covers</p>	<p>A. Once the WMA is legally established as a GoT-registered association under the Societies Ordinance (ie. has obtained CBO status), as the legal owner of the land** and has been gazetted as a WMA by the MNRT, deals can be struck with any buyer and organization, be they government or private – as long as they: (i) are in agreement with the area Land Use and Management Plans, (ii) produce an Environmental Impact Assessment, (iii) obtain approval from the Director of Game/Wildlife, WD/MNRT and (iv) limit contracts to 3 year renewable periods (WMA Regulations 2002). The very act of establishing a WMA bestows a non-</p>	<p>With regard to the transfer of land ownership and utilization rights (ie non-monetary payments) from GoT to the WMA Association: this is completed only once the Villagers have legally registered their WMA Association, the Land Use Plan has been approved by the appropriate Local, District and National Government Agencies, and by the Ministry of Lands and Human Settlements, and once the WMA has</p>	<p>Role of private tourism operators: Pay WMA Association service fees and, where relevant, GoT WD hunting license fees. Role of GoT: Collect revenue and distribute benefits to WMAs in accordance with agreements. In the case of Hunting License Fees, these are collected by WD and channeled to WMA villages through District Councils. Role of donors and their supporting institutions: Establish mechanisms (such as trust funds and bank accounts) for channeling payments from buyers to the WMA village association</p>	<p>The Wami Mbiki Society WMA program began in 1997. The Association has been legally registered and plans to complete the process of WMA registration by end 2006. The Mbomipa WMA program began in 1997 and was legally registered as an Association in January 2002. By end 2003 (when DFID funding was terminated)</p>	<p>WMAs are currently in an extension of the 3 year WMA pilot phase officially begun in 2002. Few WMAs have been granted Authorized Association Status (registered as CBOs). Many have not completed the Management Plans and, fewer still, the Land Use Planning process (an exception is Wami Mbiki which is well on its way to</p>
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<p>based conservation and management. The majority of financial or other benefits accrued by WMAs is supposed to flow back to the respective villages, to support sustainable resource management and poverty alleviation (Walsh, 2003). See section below on country-level legal, regulatory and administrative context for PES – biodiversity column for more details.</p> <p>* Note: Due to a lack of general information on the other 14-16 pilot Tanzanian WMAs, this inventory is limited to using two pilot cases as illustrative</p>	<p>resident hunters, through their purchase of villagers' annual Hunting Quotas; Foreign Tourists on Hunting Safaris (no company names available). The latter contribute 25% of their Tourist Hunting License Fees to the Mbomipa Association via a benefit sharing agreement with GoT's WD/MNRT</p>	<p>wnload/cbc.pdf.f.I for an overview of pilot WMAs). These include: 1) Mbomipa Association, Ruaha National Park, P.O. Box 398, Iringa or visit www.mbomipa.info/ 2) Jukumu in the of the Selous Game Reserve 3) Twatwatwa 4) Ipole 5) Uyumbu 6) Loliondo, Ngorongoro National Park 7) Ikoma 8) Tarime 9) Enduimet, Monduli 10) Namtumbo 11)Tunduru 12) Lilawe 13)Ngarambe/ Tapica 14) Buruge 15) Makame 16) Ikoma, Serengeti Park (Baldus et al., 2004)</p>	<p>approximately 220km² (www.mbomipa.info). Jukumu is located in the Gonabis Buffer Zone, North of the Selous Game Reserve, in southwestern Morogoro District. It includes 22 villages in an area of 250km²</p> <p>Size and location of remaining WMAs not available</p>	<p>monetary public payment on local villagers. As with Participatory Forest Management Agreements (see Bundled Service 1), villages obtain rights over the management of, and benefits accrued from, natural resources in the lands designated to them.</p> <p>Despite lacking full legal recognition, a number of WMAs have already struck deals with private organizations. For example: (i) Tourists pay a portion (in theory, 25%) of their Hunting License Fees to the Mbomipa Association, via a benefit sharing agreement between the Association and the Wildlife Division, MNRT. Note: this agreement does not operate without its tribulations. For example, the WMA's shares were denied by GoT in 2000 and, when restored, were less than half of what they</p>	<p>been approved and officially Gazetted by the Minister for Natural Resources and Tourism (see Appendix 6 for procedural details).</p> <p>With regard to the flow of payments from private/public individuals and organizations, the 2002 Wildlife Management Area Regulations requires WMA Authorized Associations to reinvest no less than 15% of their annual gross revenue into 'resource development' no less than 50% to 'member villages forming the WMA' and no less than 25%</p>		<p>Mbomipa had not get completed the Land Use Planning process (a key requirement for WMA gazzetment). Information on their subsequent progress was not available</p>	<p>completing this last part of the process). Without this their legal status remains insecure and their potential to develop solid PES activities and contracts are compromised</p>
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examples of WMAs. Nonetheless, generic information has been included where possible				<p>originally were, and are currently at around 13% (Walsh, 2003)</p> <p>(ii) Resident Hunters buy annual 'hunting quotas', again at Mbomipa.</p> <p>** WMA land in all current pilot WMAs has been especially reserved for the purpose by GoT (WMA Regulations 2002). This means that it has been handed over to the respective Associations. However, in principle, it is district land. The only way for villagers to secure landownership is to obtain village Land Certificates (through the Ministry of Lands and Human Settlements) and then cede a portion of that land to the WMA Association for a certain period of time. In the case of Wami Mbiki, once the Land Certificates are obtained, villages will cede portions of their land to the WBS for a 50 year period, during which time they can only pull out if the</p>	<p>to 'strengthen the Authorized Association.' Further details would depend on the individual WMA administrative set-up and on arrangements made with individual buyers. In the case of Wami Mbiki Society their constitution states that the Society will utilize 25% of revenues to cover running costs. Then each member village shall share equitably in the remaining 75% of revenues generated according to the % of the WMA boundary they occupy (Wami Mbiki Society, 2004).</p>			
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				<p>society is dissolved (Technical Adviser, pers comm.).</p> <p>B. Conservation practices required in return for the non-government payment: the 2002 Wildlife Management Area Regulations requires WMA Authorized Associations to reinvest no less than 15% of annual gross revenue into 'resource development'. In addition, WMAs are required to comply with Land Use Plans which require sustainable natural resource management on designated tracts of territory. In the case of Wami Mbiki, the Management Plan designates hunting areas requiring sustainable wildlife management, and enrichment planting areas requiring sustainable forestry practices. These management requirements are administered through the governing/admin. body of the WMA</p>	<p>Individual villages then define their own objectives, however, at least 1m TSh/village/year must be allocated to 'village development' (Technical Adviser, pers. comm.)</p> <p>Finally, GoT (through any of its relevant ministries, including Wildlife Division, Forestry and Beekeeping, and Tanzania National Parks) can engage in benefit sharing agreements with WMA associations. The only example of this, as described previously, is sharing of</p>			
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				<p>Association. In the case of Mbomipa, operational funds come from the above mentioned private payments by tourists or local hunters. A similar structure is planned for Wami Mbiki, with the additional possibility of private timber plantation contracts in 'non core' areas (ie private village lands) designated to sustainable forestry.</p> <p>Mbomipa illustrates how payments by private tour companies, tourists and hunters can be channeled directly into ecosystem protection. 60% of the money earned in Mbomipa pays for the WMA running costs, a large portion of which consists of village game scouts who patrol and monitor wildlife populations (so far, the money has only sufficed to pay for scouts' food and equipment). 190 total scouts were reported working in 2003. In Mbomipa, increased</p>	<p>Tourist Hunting License Fees collected from tourism activities on WMA land</p>			
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				<p>patrolling has decreased poaching and animal populations have shown signs of recovery.</p> <p>Note: Major setbacks to WMAs have been the time, energy, detailed legal procedures and substantial financial resources required for legal establishment. To date, most WMAs have not yet completed all legal aspects of the establishment process. Wami Mbiki, is an exception as it aims to complete its land use planning process –and obtain a Land Certificate –this year (2006) However, the costs have been substantial. The Wami Mbiki Technical Adviser estimates that DANIDA) have invested USD 100,000 over two years to set up a WMA with 24 donors (DHA and villages (see Appendix 6 for details on the procedure for WMA establishment)</p>				
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Water PES								
<p>Water Project 1:</p> <p>International Union for the Conservation of Nature – Water and Nature Initiative (IUCN-WANI)* Pangani River Basin Demonstration Site Project. The water PES activity is a component of this project and still in proposal stage</p> <p>*The IUCN-WANI initiative is a USD 13 million global initiative that aims at ‘more equitable, efficient and sustainable wetland management resulting from the practical application of environmental economics techniques and measures in</p>	<p>No buyers yet, project in proposal stages.</p> <p>However, proposed buyers include: small and large scale irrigators, hydropower users, urban water supply and sewerage authorities, industries, government, local and external donor contributors and polluters (Source : Power Point of a PES Mechanism presented by the Pangani River Basin Management Project at an IUCN ‘Economics Workshop’ held in Dar es</p>	<p>No sellers yet, project in proposal stages.</p> <p>However, potential sellers include upstream and river bank local communities and private landowners</p>	<p>A. The project would be located in the Pangani River Basin, located in north-east Tanzania and part of Kenya.</p> <p>B. The basin consists of 43,000km²</p>	<p>A. The proposed structure consists of collecting PES fees from water users and others (see proposed list of ‘buyers’) in the form of an Environmental Service Fee (ESF) using ‘existing modalities’. The latter would involve adding an additional fee to the current user fees collected by the Pangani Basin Water Office (PBWO). The proposed breakdown of this ESF would be as follows: 40% would go to FBD/MNRT in the form of a ‘conservation fee’; 30% to priority environmental and water issues; 20% to all sub-catchments on the basis of ‘equity considerations’, payments being proportionate to fees paid by each sub-catchment; and 10% to the PBWO to cover the costs of ‘monitoring’ and implementing the payments mechanism</p> <p>B. The specifics have not been developed, but</p>	<p>Details of payments flows have not yet been clarified. However, one proposal suggests granting ‘conservation awards’ to upstream communities, conservation activities and stakeholder groups (Source : Power Point of a PES Mechanism presented by the Pangani River Basin Management Project at an IUCN ‘Economics Workshop’ held in Dar es Salaam, May 2005)</p>	<p>These are not clear. For example, the PWBO ‘monitoring’ activities could include payments monitoring only. On the other hand, it could include monitoring of sellers’ conservation management activities. In the latter case, the PWBO would be playing the role of PES ‘mediator’. The potential role played FBD/MNRT is also unclear</p>	<p>No deal has been made yet. The IUCN-WANI Pangani River Demonstration Project began in 2003-2004 with modest funding. It has now developed into the ‘Pangani River Basin Management Project’ with slightly more than USD 2 million in funding, and which is still in the process of being setup. The project aims to continue operations until 2008 (Source: West, K. ‘Introductio</p>	<p>Proposal stage / Stalled</p>

Africa, Asia and Latin America'. They have 10 demonstration sites globally, one of which is the Pangani River Basin	Salaam, May 2005)			would include activities aimed at conserving water basin quality and quantity, conserve catchment river banks and improve water use efficiency (Source : Power Point of a PES Mechanism presented by the Pangani River Basin Management Project at an IUCN 'Economics Workshop' held in Dar es Salaam, May 2005)			n to PBWO-IUCN intervention s in Pangani Basin 2002-2008.' Power Point Presentation in Tanzania by the Coordinator, Wetlands and Water Resources, IUCN, Eastern Africa Regional Office, Nairobi) (n.d.)	
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<p>Water Project 2:</p> <p>“Equitable Payments for Watershed Services.” This project is being implemented by CARE, WWF, IIED (The International Institute for Environment and Development) in the Ruvu and Sigi River Basins. Contact person: Dr. Balaram Thapa, CARE-TZ</p>	<p>None identified yet</p>	<p>The sellers will be individual villagers, Village Councils and Village Environmental Committees from villages in the basin areas where WWF and CARE programs currently operate</p>	<p>A. The project will be located in the Ruvu and Sigi River Basins. B. The number of ha involved in each deal has not yet been determined</p>	<p>A. The program is aiming for private and public deals with downstream agro-industries and municipalities utilizing water from the WAMI River B. The conservation management practices required would include:</p> <ul style="list-style-type: none"> • Protection of riverine ecosystems through (i) re-forestation along river banks, (ii) soil erosion control measures and (iii) re-location of farms illegally encroaching on stream banks *. Since rivers and streams are not used as sources of irrigation for agriculture (i.e. people carry out rainfed agriculture), such relocations should not affect productivity levels. The aim is to reduce the significant sediment load going into rivers and streams due to high rates of soil erosion • Adoption of methods for improved soil management. This would involve villages hiring public or private agricultural extension 	<p>The mechanism for transfer of payments will be developed jointly by discussion between village household sellers and downstream buyers. For the deal to be sustainable, it must be satisfactory to both. Tradeoffs between payment methods and transaction and verification costs will need to be discussed (E.g. if buyers request that households are paid individually, transaction costs go up and lump sums received by each household are reduced. If sellers request rigorous annual monitoring, verification costs go up and total payments per household go down)</p>	<p>The institutions have not been brought on board yet</p>	<p>No dates yet, as the project is in the planning phase. However, the plan is to initiate the PES process during the first half of 2007 (PEMA Programme coordinator, personal communication)</p>	<p>Planning Phase</p>
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July 2006 DRAFT

* The occupation and use of areas within a

Other Ecosystem Service Projects: NONE

For Energy Service Sellers including:

1. Diesel-to-solar fuel-switching projects proposed by EPMS,
2. Improved technologies for wood and charcoal burning and
3. Co-generation of electricity by sugar companies using biomass energy, see Annex Five

Bundled and stacked PES

<p>Bundled Project 1:</p> <p>Joint Forest Management Agreements (JFM) between GoT National and Local Forest Reserve Authorities and adjacent villages on the joint management and use of forest resources. Potentially represent Water, Biodiversity and Carbon ecosystem services</p>	<p>Buyer: GoT, Forestry and Beekeeping Division of the Ministry of Natural Resources and Tourism (FBD/MNRT)</p> <p>MNRT contacts: Mr. Nashanda, Senior Forest Officer, Catchment Forestry and Mangroves Management, FBD.</p> <p>Dr. Blomley, Senior Advisor, Participatory</p>	<p>Seller: Village Governments, through their Environmental Committee (sometimes called Forest Village or Natural Resource Management Committee)</p>	<p>A. This is a pilot GoT programme, implemented predominantly in Tanga, Morogoro, Kilimanjaro, and Arusha Regions, and in coastal mangrove forests</p> <p>B. The total area covered under JFM is currently estimated at 1.9 million ha, or 563 villages (more than 10% of total forest reserved area in the country). Source: 2006 PFM assessment by FBD/MNRT. Individual villages have a wide range of forest sizes under JFM. Thus, a JFM</p>	<p>A. JFM is a government payment. It is a collaborative approach to forest management, expressed through a Joint Forest Management Agreement between GoT - FBD/MNRT and village governments adjacent to National or Local Forest Reserves. Through JFM, villagers obtain rights of access to, and (full or partial) benefit from, non-timber forest products.</p> <p>B. JFM Management responsibilities are delegated to the Village Environmental Committee. This committee is required to ensure that villagers</p>	<p>Payments are non-monetary. They consist of a transfer of user rights from national authorities to local</p> <p>Flow of 'payment' from buyer to seller: Operating through National or Local Reserve authorities, FBD/MNRT provides villages adjacent to forests with certain access rights over a jointly delimited forest reserve</p>	<p>None.</p> <p>Note: A fundamental problem with this form of PES is that there is no intermediate party to monitor and verify actions and agreements on either side</p> <p>GoT's role is to transfer user rights over a clearly demarcated portion of a forest reserve to villagers, after overseeing and approving a long, villager-driven process which involves: setting up</p>	<p>JFM 'deals' or agreements have been taking place since the early 1990s. However, though many of these are operational, none of the JFM agreements have yet been signed by GoT. Reasons for this lack of official follow through are unknown (senior PFM Advisor, FBD/MNRT).</p>	<p>JFM is currently in a 'scaling up' phase. Areas of focus are high biodiversity catchment forests, especially those of Arusha, Kilimanjaro, Morogoro and Tanga regions.</p> <p>Note: JFM has been largely successful in terms of its conservation</p>
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<p><i>provision by villagers for GoT and other buyers</i></p>	<p>Forest Management, FBD (see Annex 3 for details)</p> <p>Note: PFM policy on JFM also allows for JFM agreements between villagers and the private sector. However, details on required procedures are not stipulated (Mellenthien, 2005)</p>		<p>village can be jointly responsible for as little as 30ha in areas with high population densities, or as much as a several hundred hectares in remote, sparsely populated areas (PFM/FBD/MNRT)</p>	<p>and outsiders adhere to the Joint Forest Management Agreement as detailed in the By-Laws and Management Plan. Village management activities include patrolling the forest, ensuring that users comply with the Management Plan stipulations, reporting and sanctioning illegal activities (including fining and arresting perpetrators), and limited monitoring the status of forest natural resources, mostly in terms of observed disturbances. In addition, government foresters (Local and National Forest Reserve staff) are enlisted to play a facilitating role as coordinators, technical advisors, mediators and environmental watchdogs. However, in practice, they tend to leave all management and monitoring responsibilities with the villagers.</p> <p>Note: The current JFM</p>	<p>area. The procedure requires surveying and delimiting the Village Forest Management Area (VFM), carrying out a resource assessment, and creating By-Laws and a Management Plan stipulating forest access, use and benefits accrued. Levels of access are defined by law (Forest Act 2002) and tend to be limited to minor products such as honey, dead firewood, water, medicines and grazing. Benefit sharing is allowed, and it is recommended that villagers receive no less than 50%. Unfortunately, the reality of JFM is that villagers have little power to</p>	<p>an Environmental Committee (although these are often already in existence), training villagers, surveying and demarcating the forest area under agreement, carrying out a resource assessment, stipulating appropriate bi-laws pertaining to user rights, organizing meetings and drawing up a village management plan. Villagers must also carry out all monitoring, regulation and policing of the portion of the forest for which they have signed the Joint Management Plan. Note that this process carries high transaction costs for villagers as well as reserve authorities. In particular, it has been widely recognized that</p>	<p>It is also worth noting that the procedure of securing JFM agreements is slow and time consuming (Sjaastad et al., 2003)</p>	<p>goals. Thus, forests under JFM are stabilizing. Levels of disturbance are decreasing while quality is increasing (Senior PFM Advisor, FBD/MNRT).</p> <p>Note: JFM is mostly a supply-driven process (ie GoT, rather than villagers, decides where and when JFM is to be implemented). Moreover, JFM's dependence on donor funding means that donor preferences also</p>
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				<p>agreement or ‘deal’ is generally skewed in favor of Government, who has the larger say in defining the terms and conditions of the JFM agreement. As a result villagers are shouldering the bulk of the management burden and policing risk while receiving limited returns.</p> <p>This problem is partly due to the fact that GoT does not perceive itself as a ‘seller’ needing to present an attractive or reasonable deal to villagers. If this were so, JFM agreements would perhaps be fairer to villagers, thus increasing their motivation to carry out forest ecosystem management activities. (See section on ‘local involvement in PES’ below for more details.)</p>	<p>determine what their benefits will be. E.g. with regards to the range of resources they can access or the frequency of their use. Finally, any future benefits from PES contracts would at best be shared equally between GoT and villagers, and most likely be tilted in favor of GoT</p>	<p>returns for villagers are low, while their burdens are many (Sjaastad et al., 2003)</p> <p>External institutions including TFCG, PEMA, WCST, WWF, Africare, EUCAMP, MEMA, UTUMI and FRMP provide technical, financial and legal support in approximately 15% of the cases. However, they are not regarded, or regard themselves as, mediators.</p>		<p>influence JFM implementation (e.g. hence the emphasis on high biodiversity areas)</p>
<p>Bundled Project 2:</p> <p>Community Based Forest Management (CBFM)</p> <p><i>Could</i></p>	<p>Buyer: GoT, through Local District Authorities</p> <p>MNRT contacts: Mr. Nashanda,</p>	<p>Seller: Village Governments, through their respective Village Environmental Committees (sometimes</p>	<p>A. Predominantly in Tanga, Morogoro, Kilimanjaro, and Arusha Regions, and in coastal mangrove forests</p> <p>B. The total area covered under CBFM</p>	<p>A. This is a non monetary government payment. GoT awards forest-adjacent Village Governments with Village Land Forest Reserves (VLFRs) <i>or</i> a sub-group within a</p>	<p>Payments are non-monetary. They consist of a transfer of property rights from GoT to local villagers (a form of group-</p>	<p>None.</p> <p>Note: A fundamental problem with this form of PES is that there is no intermediate party</p>	<p>The process of demarcating and recognizing CBFM forest lands began in the early 1990s.</p>	<p>CBFM is currently in a ‘scaling up’ phase. Areas of focus are high biodiversity</p>

<p><i>potentially contribute to Water, Biodiversity and Carbon ecosystem services provision by villagers for GoT and other buyers</i></p>	<p>Senior Forest Officer, Catchment Forestry and Mangroves Management, FBD. Dr. Blomley, Senior Advisor, Participatory Forest Management, FBD</p>	<p>called Forest Village or Natural Resource Management Committees), or sub-groups within villages, or individuals</p>	<p>is currently estimated at 1.3 million ha, or 1,280 villages (approx. 12% of total unreserved forest area in the country). Source: 2006 PFM assessment by FBD/MNRT. Individual villages have a wide range of forest sizes under CBFM. Thus, a VLFR or CFR can be as small as 20ha or as large as a thousand hectares (PFM/FBD/MNRT)</p>	<p>village with Community Forest Reserves (CFRs) or an individual with a Private Forest. B. Forest owners-managers are required to conform to all requirements stipulated in the required By-Laws and Management Plan, to carry out simple disturbance monitoring and to police the forest. The latter includes patrolling, reporting and sanctioning illegal activities (including fining and arresting perpetrators). In addition, government foresters (Local and National Forest Reserve staff) are enlisted to play a facilitating role as coordinators, technical advisors, mediators and environmental watchdogs. However, in practice, they tend to leave all management and monitoring responsibilities to the villagers</p> <p>Note: Unlike JFM, the burden of management</p>	<p>level privatization)</p> <p>Flow of ‘payments’ from buyer to seller: Prior to Local Councils ‘declaring’ (awarding) the forest area (VLFR, CFR or Private Forest), the forest needs to be surveyed and delineated, a resource assessment carried out and a Management Plan, and Village By-Laws pertaining to forest use and benefits need to be formulated. The forest is then declared and the awardee(s) obtain legal ownership over their forest, over all natural resources therein and over any benefits accrued from those resources.</p>	<p>to monitor and verify actions and agreements on either side</p> <p>External institutions including TFCG, WCST, WWF, Africare, EUCAMP, MEMA, UTUMI and FRMP play a supportive role in VLFR establishment in approximately 15% of the cases. However, these have not acted as official mediators. However, they are not regarded, or regard themselves as, mediators.</p>	<p>It is worth noting that the procedure is slow and time consuming (Sjaastad et al., 2003)</p>	<p>catchment forests, especially those of Arusha, Kilimanjaro, Morogoro and Tanga regions.</p> <p>Note: CBFM has been largely successful in terms of its conservation goals. Thus, forests under CBFM are stabilizing. Levels of disturbance are decreasing while quality is increasing (Senior PFM Advisor, FBD/MNRT).</p> <p>Note: CBFM is mostly a supply-driven process (ie GoT, rather</p>
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				responsibility placed on villagers is often worth the effort because the potential returns from forest resource access and use are higher. In addition, local forest owners are free to secure private contracts for their environmental or other services, and to benefit fully from such contracts	<p>Note: There is currently some disagreement (within GoT as well as among NGOs) as to whether or not a declaration by local district councils is enough to guarantee the legal status of a VLFR. Some believe the VLFRs need to secure approval from the MNRT itself, while others advise villages with VLFR to secure land titles through the Ministry of Lands and Human Settlements to be sure of their legal status (FBD/MNRT staff, Wami Mbiki staff, TFCG staff, personal communication)</p>			than villagers, decides where CBFM is to be implemented). Moreover, CBFM dependence on donor funding means that donor preferences also influence CBFM implementation (e.g. hence the emphasis on high biodiversity areas)
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STEP 2:

**REVIEW COUNTRY-LEVEL LEGAL, REGULATORY, & ADMINISTRATIVE CONTEXT
FOR ECOSYSTEM SERVICE PAYMENTS**

(Please focus on specific laws, regulations, and administrative rules that pertain to sales and payments for ecosystem services. More general laws that relate to natural resource management do not have to be listed.)

ECOSYSTEM SERVICES			
	Carbon	Biodiversity	Water
<p>DO NATIONAL LAWS, REGULATIONS, AND ADMIN. RULES SUPPORT / HELP WITH SALES OF THIS ECOSYSTEM SERVICE?</p> <p><i>(IF YES, PLEASE SPECIFY)</i></p>	<p>Only nominally, and within select sectors. There is no mention of payment for carbon services generally, CDM or carbon sequestration in any policy documents or acts pertaining to the natural resource management sector, including the National Environmental Action Plan (1994) National Forest Policy (1998), Wildlife Division WMA Regulations and Guidelines (2002) and National Environmental Policy (1997).</p> <p>The one exception is the National Forest Program (2001) which states that it aims to increase revenues through the sale of carbon sequestration credits but recognizes the need to develop mechanisms to operationalize such revenues (section 8.2, Expansion of Forest Revenue base). The Forest Program document also mentions the need to increase foreign investment in the forestry sector. Among the various emerging opportunities mentioned are CDM and forest based CO2 sequestration, although it also states that there is still a lack of clear rules and procedures pertaining to such activities in Tanzania (section 8.6 Optimizing the Use of Foreign Assistance and Increasing Foreign Investment). To attract foreign investments, the forestry sector proposes to simplify the process of registration, license acquisition and raw materials procurement for foreign investors in the forestry sector (section 8.6).</p>	<p>There is no mention of payment for biodiversity ecosystem services markets in any policy documents or acts pertaining to the natural resource management sector, including the National Forest Policy (1998), National Forest Program (2002), National Forest Act (2002), National Environmental Action Plan (1994) WMA Regulations and Guidelines, 2002 and National Environmental Policy (1997).</p> <p>However, there are some constructive elements pertaining to PES within Tanzanian policy. For instance, the National Environmental Management Act (2004) provides a broad framework for the use of ‘economic instruments’ (section 80 of the Act) to create financial incentive and disincentives to further the sustainable use of natural resources (e.g. taxes, rebates, subsidies, fines and user charges) and to internalize environmental costs. Their definition of economic instruments includes ‘market creation’ for natural and environmental resource management, but no further details are provided. Ecosystem service markets are not mentioned. This same Act makes provisions for granting <i>environmental easements</i> (proposed by NEMC, legally registered under the Ministry of Lands and Human Settlements) which can be designated</p>	<ul style="list-style-type: none"> Not specifically. Thus, there is no mention of PES in the National Water Policy (2002), National Environmental Action Plan (1994) or National Environmental Policy (1997). Nonetheless, unlike with carbon or biodiversity, there is a long standing institutional mechanism in place in Tanzania for channeling revenue collected as ‘user fees’ (also referred to as ‘abstraction fees’) from river water users to be used for river basin management – by the various regional Water Basin Authorities. However, there are many weaknesses in this system (see box below on ‘legal and administrative obstacles to sales of water ecosystem services’). A number of policy documents recognize the need for water ecosystem management and protection. The Water Policy (2002) prioritizes ‘environmental flows’ (the fair sharing of water resources between users) over economic activities. This could, in turn, serve as a means of prioritizing environmental service activities in wetlands and river basins. Similarly, the National Agricultural and Forest Policies (1997 and 1998 respectively) both recognize the importance of managing and protecting water resource, and the National Land Policy (1995) identifies river and water basins, rivers and river banks as sensitive areas needing protection In addition, there are various cross-sectoral jurisdictions that could be useful for managing PWES, including: the Planning Commission (Planning Commission Act 111989) in its capacity to oversee

	<p>There are some constructive elements in other policy and legal documents. Notably, the National Environmental Management Act (2004) provides a broad framework for the use of ‘economic instruments’ (section 80 of the Act) to create financial incentive and disincentives to further the sustainable use of natural resources (e.g. taxes, rebates, subsidies, fines and user charges) and to internalize environmental costs. Their definition of economic instruments includes ‘market creation’ for natural and environmental resource management, but no further details are provided. Ecosystem service markets are not mentioned.</p> <p>An official CDM Implementation Guide for Tanzania came out in October 2004, and a National Adaptation Program for Action on Climate Change (NAPA) is scheduled for launching this year (2006). Unfortunately, the CDM Executive Board and Steering Committee described as forming part of the Tanzania-CDM organizational structure in the Guide are yet to be made operational.</p> <p>The PFM component of the Forestry Program (2002) allows villagers to a.) gain ownership and control over adjacent tracts of forest (through Village Land Forest Reserves) and b.) enter into management and use agreements with government and the private sector (through JFM); both of which could, in theory, form the basis for selling ecosystem services management activities.</p>	<p>for the specific purpose of preserving, among other things, flora, fauna and wildlife corridors (National Environment Act section 160)</p> <p>The 1994 Marine Parks and Reserves Act allows for Village Council management of marine parks.</p> <p>Unlike its predecessor the 1974 Wildlife Conservation Act, the new Wildlife Policy (1998) provides a foundation for community participation in wildlife conservation and management. In particular, it calls for the creation of wildlife management areas (WMAs) which give local communities some control over wildlife resources on their lands and entitles them to benefit directly from these resources (for example, through private PES contracts). WMAs are defined in the policy as "an area declared by the Minister to be so and set aside by village governments for the purpose of biological natural resource conservation" (MNRT, 1998:34). In turn, communities may lease trophy hunting or game viewing concessions to tourist outfitters or themselves engage in hunting for food. In essence, they are a ‘new’ kind of CBO promoted by GoT.</p> <p>(http://www.lead.or.tz/publications/wildlife_policy/community_interests.php Last accessed March 2006). Unfortunately, WMAs are encumbered by a number of legal and administrative setbacks. See sections below on administrative and legal obstacles to PES, and on community organizations’ right to sell ecosystem services for more details</p>	<p>policies from different government sectors; and the National Environmental Management Council (NEMC) in its capacity to enforce environmental obligations across different ministries (Kulindwa, 2005). At present, the need for cross-sectoral coordination and policy streamlining on water regulation and management is pressing (see box below on ‘obstacles to sales of water ecosystem services’).</p> <ul style="list-style-type: none"> Finally, the National Environmental Management Act (2004) provides a broad framework for the use of ‘economic instruments’ (section 80 of the Act) to create financial incentive and disincentives to further the sustainable use of natural resources (e.g. taxes, rebates, subsidies, fines and user charges) and to internalize environmental costs. Their definition of economic instruments includes ‘market creation’ for natural and environmental resource management, but no further details are provided. Ecosystem service markets are not mentioned. This same Act makes provisions for granting <i>environmental easements</i> (proposed by NEMC, legally registered under the Ministry of Lands and Human Settlements) which can be designated for the specific purpose of preserving, among other things, the ‘quality and flow of water in a dam, lake, river, or aquifer’ (National Environment Act, section 160) <p>Wetlands: Wetlands fall under various policy rubrics, including the National Water Policy, the Wildlife Management Act, the Environmental Management Act and the Village Lands Act. There is a National Wetlands Strategy in the making, but it remains to be seen if it provides any PES guidelines. The Village Land Act Bill (1999) allows for co-ownership of fresh water wetlands by adjacent communities, enabling villagers to enter into PES contracts, at least in principle</p>
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<p>DO LAWS, REGULATIONS, AND ADMIN. RULES SERVE AS OBSTACLES TO SALES OF THIS ECOSYSTEM SERVICE?</p> <p><i>(IF YES, PLEASE SPECIFY)</i></p>	<p>In some cases, yes.</p> <p>The law is ambiguous about the extent and nature of legal procedures and requirements necessary to enter into private/GoT and private/local community contracts, especially where the contract involves the management and/or use of the land and its natural resources (e.g. carbon sequestration contracts with VLFRs). See the section below on community organizations' right to enter into private contracts for more details.</p> <p>Private contracts pertaining to natural resource management on public lands (i.e. private enterprise/GoT management agreements, concessions, easements, permits) are considered a particularly risky area of Tanzanian contract law (LEAT). Even where the regulations and procedures pertaining to such agreements are clear, procedures and the rule of law are not always followed. This is particularly the case where the land is deemed rich in natural resources, or the benefits to be accrued from it are significant. Part of the reason for this is that there is a long standing institutional culture revolving around the conviction that Tanzania's land and its natural resources ultimately belong to GoT.</p> <p>Another potential obstacle to carbon PES activities in Tanzania is the fact that LULUCF CDM projects have been placed at the bottom of the list of priorities in the National CDM Implementation Guide. Moreover, LULUCF projects have been excluded from the more rapid cycle of approval pertaining to the category 'small-scale project activities'. Reasons stated unofficially include the belief that Tanzania should follow the global CDM hierarchy of priorities. Based on the fact that</p>	<p>In some cases, yes.</p> <p>The law is ambiguous about the extent and nature of legal procedures and requirements necessary to enter into private/local community contracts, especially where the contract involves the management and/or use of the land and its natural resources (e.g. biodiversity PES). See the section below on community organizations' right to enter into private contracts for details.</p> <p>Private contracts pertaining to natural resource management on public lands (i.e. private enterprise/GoT management agreements, concessions, easements, permits) are considered a particularly risky area of Tanzanian contract law (LEAT). Even where the regulations and procedures pertaining to such agreements are clear, procedures and rule of law are not always followed. This is particularly the case where the land is deemed rich in natural resources, or the benefits to be accrued from it are significant. Part of the reason for this is that there is a long standing institutional culture revolving around the conviction that Tanzania's land and its natural resources ultimately belong to GoT.</p> <p>An illustrative case is that of regulations pertaining to private contracts on WMA lands. The 2002 Wildlife Management Areas Regulations state that the Director of Game/Wildlife-WD/MNRT (second in command to the Minister) must not only approve any private investment made within a WMA, but 'shall have the powers to withdraw or revoke any investment agreement' (part VIII). This may add considerably to risks perceived by potential investors. Even where organizations comply with GoT stipulated procedures and requirements, they may find their contracts annulled or permits refused by upper-echelon</p>	<p>While the framework of laws and administrative rules in the water sector is more conducive towards PES activities than is the case for carbon and biodiversity, the obstacle lies in the conditions under which these laws and rules are implemented.</p> <ul style="list-style-type: none"> • In practice, regional Water Basin Authorities do not carry out river basin management activities pertaining to water quality. One problem is insufficient funding. The proportion the Basin Authorities receive from the Ministry of Water and Livestock Development is unknown. Moreover, many 'users' are inadequately charged or default on payments (see point immediately below). Then, there is some question as to whether that funding which is available is spent effectively. Finally, while the Basin Authorities have the technical expertise to manage and regulate water flows, the organization lacks the expertise to carry out environmental management activities of the kind that would be necessary to improve, or mitigate the threats to, water quality • Water Basin Authority controls over water fees payment defaulters are weak and ineffective. For example, there is a culture of non-payment for water for a range of users including urban domestic and irrigation users. Moreover, user fees are not do not apply evenly to all users, creating resentment amongst those who do pay, and increasing the motivation amongst others to default on payments (Turpie et al., 2003) • There is a clear need to coordinate and streamline water policies and regulations in
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	<p>Agricultural and Forestry related CDM projects have been slow to start globally, it is deduced that LULUCF projects are not as desirable, and should therefore not be a Tanzanian priority. Instead, fuel-switching projects are seen to offer the greatest potential returns (VPO-DOE)</p>	<p>individuals within Ministries who are either legally bestowed– as is the case with the Director of Wildlife – or bestow themselves with, the power to override the law and at times exercise this power on an ad-hoc basis (for examples of this see Nshala, 1999). Indeed, in LEAT’s view, that Tanzania’s new Wildlife Policy represents a step forward in that it recognizes, for the first time, the need to empower local communities by giving them wildlife user rights and management opportunities, it also cautions that communities need <i>normative</i> authority and access rights to both wildlife and benefits derived from their use, to effectively capitalize on those opportunities (http://www.lead.or.tz/publications/wildlife.policy/community.interests.php Last visited March 2006, my italics). In effect, WMA Regulations contain a great deal about the responsibilities and obligations of local communities, but nothing about their rights and guarantees vis a vis the state. This unequal power relationship, coupled with lack of sufficient detail on the specifics of benefit-sharing arrangements between villagers and GoT, has resulted in some defective transactions. For example, the WMA-share of tourist hunting quotas has, in some cases, deviated considerably from that stipulated in the initial agreement, to the detriment of local communities (see Mbomipa WMA case study). Moreover, lack of precise information on expected financial income flows makes it difficult for WMAs to create reliable business plans. Other obstacles associated with WMAs are i) the costs and complexity of putting WMAs into practice, which either discourages communities from establishing such areas or renders them dependent on significant long-term sources of outside capital (e.g. from donors) (Walsh, 2001) and ii) insecure tenure: the new Lands Act Bill (1999) does not secure tenure rights for landowners near protected areas. This could detrimentally affect these landowners’ ability to secure private contracts for environmental services, and</p>	<p>different sectors and government jurisdictions. Among the most urgent are i) the need to clarify the decision-making hierarchy between the stipulations of the Environmental Management Act and the those of the Water Act and ii) the need to increase coordination between district and water basin by-laws (river basin stakeholders, personal communication)</p> <ul style="list-style-type: none"> • The law is ambiguous about the extent and nature of legal procedures and requirements necessitated prior to entering into private/local community contracts, especially where the contract involves the management and/or use of the land and its natural resources (e.g. high priority catchment areas). See section below on community organizations’ right to enter into private contracts for details <p>Private contracts pertaining to natural resource management on public lands (ie private enterprise/GoT management agreements, concessions, easements, permits) are considered a particularly risky area of Tanzanian contract law (LEAT). While the regulations and procedures pertaining to such agreements may be clear, rule of law is not always followed. This is particularly the case where the land is deemed rich in natural resources, or the benefits to be accrued from it are significant. Part of the reason for this is that there is a long standing institutional culture revolving around the belief that Tanzania’s land and its natural resources ultimately belong to GoT</p>
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		<p>increases the vulnerability of tribal groups that are traditionally discriminated against, such as poor pastoralist communities on the buffer zones of the northern Tanzanian nat'l.</p> <p>(http://www.lead.or.tz/publications/wildlife.policy/community.interests.php Last visited March 2006).</p> <p>Finally, the Wildlife Policy of Tanzania continues with the statement that all wildlife in Tanzania is owned by the state. This declaration is not coupled with detailed rules about the conditions under which this regulation is to be applied. As a result, it allows members of GoT to impede or interfere with communities' right to benefit from biodiversity resources in VLFRs or WMAs.</p>	
DO LANDOWNERS HAVE A CLEAR, LEGAL RIGHT TO SELL ECOSYSTEM SERVICES?	Yes, according to the Land Policy (1995) Village Land Act (1999) and Land Act (1999)	Yes, according to the Land Policy (1995) Village Land Act (1999) and Land Act (1999). However, as mentioned above, landowners near protected areas have risky tenure status. Moreover, all wildlife is property of the Tanzanian state. The implications of this for receiving payments for wildlife and other biodiversity management on private or community land are unclear.	Yes, according to the Land Policy (1995) Village Land Act and Land Act (1999)
DO COMMUNITY ORGANIZATIONS HAVE LEGAL RIGHTS TO: - SELL? - TO APPROVE / REJECT DEALS? (PLEASE SPECIFY LAWS)	Local government legislation in Tanzania states that Village Councils (VCs) are the smallest and most basic unit of local government, endows them with an autonomous legal personality and vests them with powers to manage natural resources in village lands (LEAT www.lead.or.tz Last visited March 2006). Moreover, traditional or customary lands were recognized as legal as far back as 1928, in the Land Ordinance (Tanzania's basic land law). A number of legal clarifications since the 1980s have confirmed customary lands as being on equal footing to the state's granted rights of occupancy (see www.lead.or.tz/publications/wildlife.policy/tenure.issues.php Last visited in March 2006). In sum, Village Councils are independent entities free to enter into private contracts, and their land – as well	Local government legislation in Tanzania states that Village Councils (VCs) are the smallest and most basic unit of local government, endows them with an autonomous legal personality and vests them with powers to manage natural resources in village lands (LEAT www.lead.or.tz Last visited March 2006). Moreover, traditional or customary lands were recognized as legal as far back as 1928, in the Land Ordinance (Tanzania's basic land law). A number of legal clarifications since the 1980s have confirmed customary lands as being on equal footing to the state's granted rights of occupancy (see www.lead.or.tz/publications/wildlife.policy/tenure.issues.php Last visited in March 2006). In sum, Village Councils are independent entities free to enter into private contracts, and their land – as well any management arrangements therein – should be	Of particular import to water PES, is the fact that local government legislation in Tanzania endows Local Government entities (such as towns and municipalities) with autonomous legal personality and therefore vests them with the power to enter into private agreements with individuals or organizations. The law also endows Village Councils (VCs) –the most basic units of local government – with autonomous legal personality, and vests them with powers to manage natural resources in village lands (LEAT www.lead.or.tz Last visited March 2006). Moreover, traditional or customary lands are recognized as legal in Tanzania's 1928 Land Ordinance (Tanzania's basic land law). A number of legal clarifications since the 1980s have confirmed customary lands as being on

	<p>any management arrangements therein – should be recognized and protected by Tanzanian law. In practice, however, this autonomy and security has not always been guaranteed. Indeed, some senior members of GoT insist to date that VCs are fully accountable to the Ministry of Lands and Human Settlements and require approval from this Ministry before entering into private contracts with investors. Legal practitioners, on the other hand, clarify that, according to the law, VCs only need approval of the Ministry of Lands if and when they sell portions of their land, and only when sales involve areas larger than 250has (LEAT, 2006).</p> <p>The authority of Village Councils is particularly at risk when they preside over areas rich in natural resources. In the case of carbon sequestration projects, the risk is increased by the long term nature of such agreements (typically 30 years). To reduce the risks involved, many organizations entering into management contracts on village land have chosen to i.) group villagers into legally recognized CBO organizations (as in the case of TIST) and ii.) invest in securing a land title over the relevant lands (this implies changing the legal status of the village land in question from ‘declared’ customary land to ‘certified’ land, via a Certificate of Land obtained through the Ministry of Lands and Human Settlements).</p> <p>Finally, depending on whether the Village Council(s) is in a wetland area, Village Land Forest Reserve or community-based Wildlife Management Area, the investor (in this case ‘buyer’) needs to comply with regulations of the sector Ministry or Ministries responsible for this land use zone (e.g. Forestry, Water, Wildlife, VPO/DOE). Worse still, different ministries are not always in agreement as to who has the right of</p>	<p>recognized and protected by Tanzanian law. In practice, however, this autonomy and security has not always been guaranteed. Indeed, some senior members of GoT insist to date that VCs are fully accountable to the Ministry of Lands and Human Settlements and require approval from this Ministry before entering into private contracts with investors. Legal practitioners, on the other hand, clarify that, according to the law, VCs only need approval of the Ministry of Lands if and when they sell portions of their land, and only when sales involve areas larger than 250has (LEAT, 2006).</p> <p>The authority of Village Councils is particularly at risk when these preside over areas rich in natural resources. To reduce the risks involved, many organizations entering into management contracts on village land have chosen to i) grouping villagers into legally recognized CBO organizations (as in the case of TIST) and ii) invest in securing a land title over the relevant lands (this implies changing the legal status of the village land in question from ‘declared’ customary land to ‘certified’ land, via a Certificate of Land obtained through the Ministry of Lands and Human Settlements).</p> <p>Finally, depending on whether the Village Council(s) is in a wetland area, Village Land Forest Reserve or community-based Wildlife Management Area, the investor (in this case, ‘buyer’) needs to comply with regulations of the sector Ministry or Ministries responsible for this land use zone (e.g. Forestry, Water, Wildlife, VPO/DOE). Worse still, different ministries are not always in agreement as to who has the right of jurisdiction over certain areas, especially if these are coveted areas declared as being of high resource value (e.g. ‘fragile’, ‘rich in biodiversity’ etc). Wetlands are a case in point, as they can fall under the Forestry sector (e.g. areas rich in mangroves), Wildlife Division and/or VPO/DOE (areas rich in biodiversity), the Water</p>	<p>equal footing to the state’s granted rights of occupancy (see www.lead.or.tz/publications/wildlife.policy/tenure_issues.php Last visited in March 2006). Thus, Village Councils are independent entities free to enter into private contracts, and their land – as well any management arrangements therein – should be recognized and protected by Tanzanian law. In practice, however, this autonomy and security has not always been guaranteed. Indeed, some senior members of GoT insist that VCs are fully accountable to the Ministry of Lands and Human Settlements and require approval from this Ministry before entering into private contracts with investors. Legal experts, however, argue that VCs only need approval of the Ministry of Lands if and when they sell portions of their land and only when sales involve areas larger than 250has.</p> <p>The authority of Village Councils is particularly at risk when these preside over areas rich in natural resources. To reduce the risks involved, many organizations entering into management contracts on village land have chosen to i) group villagers into legally recognized CBO organizations (as in the case of TIST) and ii) invest in securing a land title over the relevant lands (this implies changing the legal status of the village land in question from ‘declared’ customary land to ‘certified’ land, via a Certificate of Land obtained through the Ministry of Lands and Human Settlements).</p> <p>Finally, depending on whether the Village Council(s) is in a wetland area, Village Land Forest Reserve or community-based Wildlife Management Area, the investor (in this case, ‘buyer’) needs to comply with regulations of the</p>
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	<p>jurisdiction over certain areas, especially if these are coveted areas declared as being of high resource value (e.g. ‘fragile’, ‘rich in biodiversity’, etc.). Wetlands are a case in point, as they can fall under the Forestry sector (e.g. areas rich in mangroves), Wildlife Division and/or VPO/DOE (areas rich in biodiversity), the Water sector, the Fisheries sector and even the Marine Parks and Reserves authorities (due to the role played by some wetland/delta areas in the reproduction of ocean fish populations).</p> <p>In addition, regulations set by different ministries are often unclear, confusing or deterring when it comes to the permits and other procedures required to enter into private contracts on village land. For example, the Forest Act provides no time frame within which concession applications in Village Land Forest Reserves will be processed, and no provisions for an appeal. Then, there are various alternative routes for establishing private contracts in community forests, via JFMs, forest permits and concessions, each with their own land area and contract-time limitations, whose tender procedures and overall rationale are not always clear (Mellenthien, 2005). Yet another potential PES option is to secure an environmental easement through the National Environmental Management Council and the Ministry of Lands, for the purposes of ecosystem protection and restoration (see section 156, <i>Easment Orders</i>, of the 2004 Environmental Management Act). Moreover, most permits and tenders include an EIA (Environmental Impact Assessments) requirement, but standards and guidelines are often unclear or unavailable (e.g. in the case of tenders for forestry concessions).</p> <p>Finally, the 2002 Wildlife Management Areas</p>	<p>sector, the Fisheries sector and even the Marine Parks and Reserves authorities (due to the role played by some wetland/delta areas in the reproduction of ocean fish populations).</p> <p>In addition, regulations set by different ministries are often unclear, confusing or deterring when it comes to permits and other procedures required to enter into private contracts on village land. For example, as mentioned above, the 2002 WMA regulations give too much power to the Director of Game/Wildlife-WD/MNRT (second in command to the Minister). Similarly, the Forest Act provides no time frame within which concession applications in Village Land Forest Reserves will be processed, and no provisions for an appeal. In addition, there are at least three alternative routes for establishing private contracts in community forests, via JFMs, forest permits and concessions, each with their own land area and contract-time limitations, whose tender procedures and overall rationale are not always clear (Mellenthien, 2005). Yet another potential PES option is to secure an environmental easement through the National Environmental Management Council and the Ministry of Lands, for the purposes of ecosystem protection and restoration (see section 156, <i>Easment Orders</i>, of the 2004 Environmental Management Act). Finally, most permits and tenders include an EIA (Environmental Impact Assessments) requirement, but standards and guidelines are often unclear or unavailable (eg in the case of tenders for forestry concessions. Source: Mellenthien, 2005)</p>	<p>sector Ministry or Ministries responsible for this land use zone (e.g. Forestry, Water, Wildlife, VPO/DOE). Worse still, different ministries are not always in agreement as to who has the right of jurisdiction over certain areas, especially if these are coveted areas declared as being of high resource value (e.g. ‘fragile’, ‘rich in biodiversity’ etc.). One of the most complicated areas are wetlands, which can fall under the Forestry sector (e.g. areas rich in mangroves), Wildlife Division and/or VPO/DOE (areas rich in biodiversity), the Water sector, the Fisheries sector and even the Marine Parks and Reserves authorities (due to the role played by some wetland/delta areas in the reproduction of ocean fish populations).</p> <p>In addition, the regulations set by different ministries are often unclear, confusing or deterring when it comes to permits and other procedures required to enter into private contracts on village land. For example, the Forest Act provides no time frame within which concession applications in Village Land Forest Reserves will be processed, and no provisions for an appeal. Then, there are various alternative routes for establishing private contracts in community forests, via JFMs, forest permits and concessions, each with their own land area and contract-time limitations, whose tender procedures and overall rationale are not always clear (Mellenthien 2005). Another potential PES option is to secure an environmental easement through the National Environmental Management Council and the Ministry of Lands, for the purposes of ecosystem protection and restoration (see section 156, <i>Easment Orders</i>, of the 2004 Environmental Management Act). Finally, most permits and tenders include an</p>
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	Regulations state that any private investment contract with a WMA Association must be limited to a 3 year-renewable period – thereby potentially limiting the possibility for WMAs to attract LULUCF carbon sequestration contracts for tracts of land designated to sustainable forestry or enrichment planting		EIA (Environmental Impact Assessments) requirement, but standards and guidelines are often unclear or unavailable (eg in the case of tenders for forestry concessions. Source: Mellenthien, 2005)
ARE THERE GOVERNMENT AGENCIES THAT EXIST TO REGULATE AND MANAGE THE ECOSYSTEM SERVICES (E.G. CARBON OFFICE, EIA OFFICE, ETC.)? (IF SO, PLEASE SPECIFY)	The Vice President's Office Division of Environment (VPO- DOE) is in charge of regulating carbon PES projects, including those under CDM. So far, it has issued a "CDM Implementation Guide" for potential investors (Oct 2004). The Carbon DNA (Designated National Authority) is the Assistant Director of the DOE- VPO, First Floor IPS building, Azikiwe Street, Dar es Salaam Email: sotchair@africaonline.co.tz The VPO-DOE also Chairs the National CDM Steering Committee and hosts the CDM Secretariat (to date these bodies only exist on paper)	No	No
IS THERE ANY INVOLVEMENT OF GOV. IN DECREASING RISKS ASSOC. WITH PES (E.G. GOV'T BACKED INSURANCE, GUARENTEES, ETC.)?	No	No	No
ARE ANY ADDITIONAL LAWS, REGULATIONS, OR ADMINISTRATIVE RULES NEEDED TO SUPPORT GROWTH OF	Yes <ul style="list-style-type: none"> Need to operationalize the institutional structure for regulating CDM initiatives, as specified in the 2004 CDM Implementation Guide. E.g. set up the Steering Committee, Executive Board and Secretariat Need for broad CDM legal and regulatory frameworks, including a review and harmonization of relevant micro and macro 	Yes <ul style="list-style-type: none"> Need to: (i) review the question of state ownership of wildlife in the Wildlife Policy with the objective of rendering rural communities and government co-owners and co-managers of wildlife resources on village lands (the legal framework should devolve power and rights to communities to reflect an equal partner relationship), (ii) provide simple legal guidelines and procedures for establishing 	Yes <ul style="list-style-type: none"> Need for Guidelines for water PES activities in <i>all</i> water resource areas, especially wetlands Need for greater regulatory coordination between different government sectors and jurisdictions concerned with water management (for an outline of the problem, see paragraph two under laws, regulations

<p>ECOSYSTEM SERVICE PAYMENTS / MARKETS?</p> <p><i>(If YES, PLEASE SPECIFY)</i></p>	<p>policies (DFID/CEEST CDM workshop, 2002 www.ceest.com accessed March 2006)</p> <ul style="list-style-type: none"> • Need for a GoT focal point for communicating between the private sector, non-profit organizations and different line ministries on CDM procedures and other issues that may arise • Need for an East African regional regulatory authority (CEEST, 2002) • Need for CDM market and business guidelines • Need for a national and regional power (energy) master plan (CEEST, 2002) 	<p>WMAs and other wildlife user agreements, licenses and easements (iii) recognize and reinforce the many roles and responsibilities of Tanzania's citizens, civil society and local NGOs in wildlife management and local-level sustainable development (Lawyer's Environmental Action Team http://www.lead.or.tz/publications/wildlife.policy/mending.gaps.php. Last visited March 2006).</p> <ul style="list-style-type: none"> • Need for a regulatory framework and clear guidelines pertaining to private contracts aimed at biodiversity management outside of WMAs • Need for clearer legal stipulations pertaining to private contracts with WMAs, in particular, regarding benefit sharing arrangements of any proceeds obtained • Need to establish a policy and legal framework stipulating the rights of communities under WMAs vis a vis GoT and other actors 	<p>and admin. rules that serve as obstacles to water PES, above)</p> <ul style="list-style-type: none"> • Need for a regulatory framework and clear guidelines pertaining to private contracts for water PES • Need for greater regulation and control over the collection of user fees by regional Water Basin Authorities, and a more even distribution of those fees
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STEP 3:

DOCUMENT EXISTENCE OF AND NEED FOR SUPPORTING INSTITUTIONS

ECOSYSTEM SERVICES			
	Carbon	Biodiversity	Water
<p>ARE THERE ANY INSTITUTIONS THAT SUPPORT / HELP WITH SALES OF THIS ECOSYSTEM SERVICE?</p> <p><i>IF YES, PLEASE SPECIFY BY:</i></p> <ul style="list-style-type: none"> - GOVERNMENT AGENCIES? - PRIVATE COMPANIES / CONSULTANCIES? - NGOs? - QUANGOS? 	<p>Some NGOs (e.g. the Tanzania Forest Conservation Group, CARE, WWF and IUCN), which have long acted as “ecosystem service modifiers,” are beginning to act as “ecosystem service intermediaries” within the context of particular projects. However, there are no institutions which specialize in this role and can be approached by “ecosystem service sellers/modifiers” or “buyers/beneficiaries” to help develop deals.</p> <p>Ecosystem service intermediaries can be defined as: People (public authorities, non-governmental organizations, projects) that directly or indirectly shape interactions among ecosystem service modifiers, ecosystem service beneficiaries, and the ecosystem itself (Brent, 2006; see Annex 7 for more details).</p> <p>Ecosystem service modifiers (i.e. potential sellers) can be defined as entities (individual, family, group, community) whose actions modify the quantity or quality of the ecosystem services available to ecosystem service users. These can be characterized by a) location viz-a-viz the ecosystem, b) cause-effect relationships between actions of the modifiers and changes in the ecosystem, c) rights to modify the structure of the ecosystem and to benefit from the changes it generates, d) discretion over the way the ecosystem is used and managed, e) level of human well-being, poverty and deprivation, f) demographic composition (age, gender, ethnicity) and/or g) type and strength of their social organization (<i>ibid.</i>).</p> <p>Ecosystem service beneficiaries (i.e. potential buyers) can be defined as entities (individual, family, group, community) who benefit from the ecosystem services generated by an ecosystem. These can be characterized by a) the types of ecosystem services they benefit from b) location, c) degree and type of dependence on the ecosystem service, d) access to alternative supplies, e) level and trends of human well-being/deprivation, f) strength and type of property rights to the ecosystem service, g) discretion over the way that ecosystem is used and managed, h) demographic composition (age, gender, ethnicity), i) type and strength of social organization and/or j) action resources viz the ecosystem services and their relations with others (<i>ibid.</i>).</p>		
<p>IF ANY, WHAT OTHER INSTITUTIONS ARE NEEDED TO SUPPORT / HELP WITH SALES OF THIS ECOSYSTEM SERVICE?</p> <p><i>IF YES, PLEASE SPECIFY BY:</i></p> <ul style="list-style-type: none"> - GOVERNMENT AGENCIES? - PRIVATE COMPANIES / CONSULTANCIES? 	<p>Yes.</p> <ul style="list-style-type: none"> • Need for a legal office providing contractual and other market advice on CDM and carbon PES projects and related activities (private/government/NGO). If government, this could be situated in the Tanzania Investment Centre (TIC). • Need for a public information office providing CDM and open market guidelines and information (government) • Need for a national broker assisting 	<p>Yes.</p> <ul style="list-style-type: none"> • Need for a legal office providing contractual and other advice on biodiversity PES projects and related activities (private/government/NGO) • Need for a national broker assisting projects and programs find buyers in the biodiversity market (private/INGO) • Need for financial planning assistance for private and public sector organizations on how to formulate business plans for PES projects (INGO/private/public) • Need for technical assistance on biodiversity 	<p>Yes.</p> <ul style="list-style-type: none"> • Need for a legal office providing contractual and other advice on water PES projects and related activities (private/government/NGO) • Need for financial and technical assistance for private and public sector organizations on how to formulate business and management plans for water PES projects (INGO/private/public) • Need for a public access library or office with information on water PES mechanisms as envisioned for, and applied in, Tanzania (government/public/INGO/ NGO)

<ul style="list-style-type: none"> - <i>NGOs?</i> - <i>QUANGOs?</i> 	<p>projects and programs to find buyers in the carbon market (private/INGO)</p> <ul style="list-style-type: none"> • Need for technical assistance on CDM and related project proposals and project design (e.g. calculating carbon base levels, additionality, leakage, targeted levels of CO2 removal and/or capture) as well as on verification ,monitoring, and evaluation procedures (EPMS, personal communication April 2006; TIST, personal communication March 2006; DFID/CEEST CDM workshop, 2002 www.ceest.com last accessed March 2006) (INGO/private/public) • Need for financial planning assistance for private and public sector organizations on how to formulate business plans for carbon PES projects (private/INGO/public) • Need for capacity building for project managers on technical aspects of carbon sequestration (TIST-UMET Director of Training, personal communication 2006) (private/public/NGO) 	<p>PES project proposals and project design (e.g. calculating biodiversity base-levels and projected increases, producing economic valuations of biodiversity, etc.), as well as on verification ,monitoring, and evaluation procedures (EPMS, personal communication April 2006; TIST, personal communication March 2006; DFID/CEEST CDM workshop, 2002 www.ceest.com last accessed March 2006) (INGO/private/public)</p>	
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STEP 4:

ASSESS LOCAL INVOLVEMENT IN PAYMENTS FOR ECOSYSTEM SERVICES

CURRENT ECOSYSTEM SERVICE PAYMENT OR MARKET	<p>(A) DOES THE PROJECT SITE HAVE LOCAL ORGANIZATIONS AND PARTICIPATORY DEVELOPMENT PROGRAMS IN PLACE?</p> <p>(B) IF YES, HOW LONG HAVE THEY BEEN IN PLACE?</p> <p>(C) IF YES, HOW ARE THESE ORG'S ENGAGED IN PAYMENTS FOR ECOSYSTEM SERVICES?</p>	HAVE COMMUNITY REPRESENTATIVES BEEN SELECTED AND AUTHORIZED TO NEGOTIATE WITH OUTSIDERS?	<p>Do LOCAL PEOPLE DECIDE HOW INCOMING ECOSYSTEM SERVICES FUNDS WILL BE SPENT?</p> <p>(If SO, WHAT IS THE PROCESS AND WHO IS INVOLVED?)</p>	<p>ARE LOCAL PEOPLE—including WOMEN—PARTICIPATING IN THE ENTIRE PROJECT LIFECYCLE?</p> <p>(INCLUDING, DESIGN, IMPLEMENTATION, MONITORING, AND FINANCIAL BENEFIT ACCRUAL)</p>	<p>ARE THERE ANY EXISTING ANALYSES ON LOCAL BENEFITS FROM PROJECT?</p> <p>(SUCH AS: CONTRIBUTIONS TO: HOUSEHOLD INCOME, LOCAL ORGANIZATIONS, ETC.)</p> <p>(If YES, PLEASE SPECIFY)</p>	<p>(A) HAS A FINANCIAL ANALYSIS OF THE PROGRAM BEEN CONDUCTED?</p> <p>(B) HAVE ASSESSMENTS BEEN MADE OF RISKS AT A LOCAL LEVEL ASSOCIATED WITH PROJECT?</p>
Carbon sequestration PES						
<p>Carbon Project 1:</p> <p><i>The International Small Group Tree Planting Program (TIST)</i></p>	<p>A. TIST-UMET is encouraging small farmers' groups (which currently have 6-12 members each) to form CBOs</p> <p>B. These CBOs are a very recent idea, those that have formed have been in existence not more than a year</p> <p>C. TIST-UMET CBOs are involved in carbon PES through TIST by planting trees. However, they are independent entities in their own right</p>	<p>Yes. Two elected representatives from each of 10-50 Farmers' Groups (numbering 6-12 farmers each group) are required to gather at monthly "Node Meetings" where they are met by an UMET staff member. At such Meetings, the UMET staff member provides Farmer Group representatives with a monthly newsletter and with payment vouchers. In turn, the representatives, bring a 'monthly report form' based on which the UMET staff member enters information into his/her palm pilot</p>	No.	<p>70% of project participants are women. Participating Farmers' Groups are only included in the implementation phase. They are free to sign a contract with TIST, or to terminate that contract, but to continue they must abide by TIST-UMET terms and conditions (see doc. containing TIST contract with farmers in Annex 6)</p>	<p>Other than a USAID progress report mentioned by UMET (not made available) there have been no formal analyses of local benefits from the project (Clean Air Action Corporation representative, personal communication)</p> <p>Note: TIST has earned a bad reputation in Tanzania because its payments to farmers are regarded as</p>	<p>Financial analyses and risk assessments are likely to have been carried out in-house by Clean Air Action Corporation as part of standard procedures. Details are not available.</p> <p>Note: In CAAP's view, total payments made to farmers (approx. USD 63,000) amount to a lot more than it gained from the</p>

		<p>computer. Vouchers are automatically generated by computer every time three report forms are entered in a row (thus – if forms are entered on a regular basis – the UMET-TIST program provides farmers with Quarterly payments). As mentioned above, payments are made through CDRB bank accounts which each farmers' group is required to open. Note that CDRB has begun to operate through SACCOS (local savings and credit organizations) in some remote rural areas of Tanzania, including Morogoro</p>			<p>unreasonably low and not economically competitive - in terms of labor and time - compared to alternative economic options available. For example, an article in the July-Sept 2005 edition of Kakakuona, the international edition of the Tanzania Wildlife Quarterly, reports that payments to farmers - as reported by the latter - amount to 200 Tsh (USD 0.16) per tree per ten year period. Meanwhile, a farmer can get more than Tsh 2,000 (USD 1.6) for selling that same tree for timber, poles or fuel wood (Kilahama, 2005)</p>	<p>WB open market contract (48,000 USD according to the managing director, Ben Henneke). In fact, CAAB currently estimates that it has paid farmers over USD 50,000 more than the carbon is worth (CAAC representative, personal communication)*. The company is still hoping to make back some of its investment. In the meantime, it does not intend to pay farmers more than the above mentioned 'incentive' of 0.02 USD per tree per year</p> <p>*According to CAAC, they have paid farmers a lot more than the carbon is worth on the market partly because estimates of the net value of TIST carbon sequestration in Tanzania keep being re-adjusted</p>
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						downwards and partly due to the low price per carbon tonnage on the market E.g. the last offer they received under the Bio Carbon Fund was USD 3.75 per ton, less fees payable on delivery sometime between 2008 and 2012
Carbon Project 2: <i>The Participatory Environmental Management Programme (PEMA). This is a planned project component which aims to carry out pro-poor carbon sequestration PES in Wami River catchment highland forests</i>	A. Yes, the PEMA Programme itself, and its NGO counterpart TFCG, as well as Village Councils, Village Environmental Committees, the FBD/MNRT Catchment Authorities and District Councils (through their Forestry and Natural Resource Officers). B. The PEMA Programme began in 2005 and plans to continue until at least 2010. TFCG has been operational for some twenty years. The Village and District Councils exist since Tanzania's independence. The Village Environmental Committees are more recent: some were created by the Wami Mbiki WMA Programme, others have been made operational under PEMA. C. N/a; Project is in planning	Not specifically. However, the Village Environmental Committees have been receiving organizational training aimed at increasing their capacity to hold meetings, establish agendas and quorums and make decisions in ways which are transparent and accountable to their members	N/A since the project has not yet begun. Nonetheless, PEMA intends to involve villagers and their local organizations in all negotiations pertaining to spending of ecosystem services funds. PEMA would like to see a proportion of payments spent on (i) 'village development' (schools, health dispensaries and other infrastructure), (ii) small business development aimed at diversifying	N/A since the project has not yet begun. However, PEMA is hiring a gender officer during Phase II (beginning December 2006). The officer will provide gender training for Village Environmental Committees, local government officials and partner NGOs	N/A since the project has not yet begun. However, planned pro-poor benefits include: (i) increased resilience of farming systems to locally observed climate change, including reduced rain fall and soil moisture, (ii) improved soil management, (iii) carbon sequestration cash flows to individual households and/or village organizations, (iv) income diversification through sale of timber and non timber products, (v) small enterprise	A and B. Not yet

	stages		local peoples' incomes and (iii) credit and savings schemes		training and development, (vi) credits and savings schemes training and development, and (vii) capacity building for local villagers, government officials and partner NGOs on biodiversity and carbon PES (see column below on training and capacity building for details)	
Carbon Project 3: <i>Kilombero Valley Teak Co. Ltd</i>	A. Although Kilombero Valley Teak Co. has not committed to ISO Certification on Social issues specifically; it carries out a social agenda which includes efforts at building a good rapport with adjacent communities. Thus, the company gives some financial aid to 9 villages adjacent to the company land*, involves local people in various economic activities, and assists them with capacity building aimed at diversifying their livelihood activities and income sources. To channel these activities, the company works (i) directly with Village Councils (for delivering funds and group contracts) (ii) legally registered village-based small enterprises (a pre-	Yes. The company works with a number of village-based groups, any of which could be incorporated into a PES contract. Alternatively, a new group could be formed for that purpose. At present, the company works with villagers through (i) Village Council chairmen (all decisions brought forth are subject to prior approval by 50% of the Village Council, via meetings with a set minimum quorum); (ii) village-based registered small enterprises (iii) a joint-venture honey production enterprise, which is 'owned' by the member villagers and operates through a specialized Committee comprised of Company and village members	Unknown. This would depend on the nature of the PES mechanism set in place. However, at present, village councils are consulted wherever decisions are seen to affect villagers. For example, on decisions pertaining to the maintenance and protection of wildlife corridors	Levels of local participation would depend on the PES arrangement. At present, villagers are only involved on a consultative basis. However, when it comes to the joint honey production venture, villagers are the 'co-owners' and thus participate in all aspects of the project cycle. With regard to gender, there are specific seats made available to women in the Village Council meetings. Their occupancy and use are determined by the Council itself. In	Not for any PES activity. However, a 'social survey' is conducted every 2 years	Not for any PES activity. However, the company has a business plan which is regularly updated, and the ISO 14001 Certification requires annual third party auditing by a 4-member team, one of whom audits the economic component

	<p>requisite set by the company before finalizing certain contracts) (iii) a joint-venture honey production enterprise</p> <p>B. Village Councils have been in place for decades, but the small village-based businesses are linked to the advent of the company and were formed after its arrival in 1993.</p> <p>C. Information on proposed plans not yet available.</p> <p>* Financial aid to adjacent villages: the company has divided its total land area (28,000ha) into 9 portions, each corresponding to one of the 9 adjacent local villages, and contributes USD 2 per hectare per year to each of the villages. The money is earmarked for village infrastructural improvements (e.g. health centers, class rooms) and, as mentioned above, channeled through the Village Councils</p>			<p>addition, the Company itself targets women's participation in its community health clinic development projects</p>		
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Biodiversity PES								
<p>Biodiversity service 1:</p> <p><i>Community-based Wildlife Management Areas (WMAs), case study: Wami Mbiki WMA in Morogoro</i></p>	<p>A. Yes. All WMAs are required to legally register as CBOs (in this case Associations) B. Wami Mbiki Society (WBS) and Mbomipa Association have been in existence for at least five years. They do not predate the WMA process. C. WMA registered Associations are the ‘sellers’ of ecosystem services, to a significant degree this refers to biodiversity protection and maintenance, but potentially also to carbon sequestration and water protection</p>	<p>Yes. All WMA management decisions are made in conjunction with community representatives. In the case of Wami Mbiki, Villagers are represented in the Wami Mbiki Society Council and Executive Committee (which are separate from the Wami Mbiki Society Board of Trustees and from the Wami Mbiki Secretariat). Every year, each village elects 2 representatives to act in the WBS Council (totaling 48 representatives). The WBS Council meets 3x/year and includes sub-committees</p>	<p>Generally yes. In the case of Wami Mbiki: a sub-group of the WBS EC oversees the WBS Secretariat (the latter which consists of the WBS Management Staff) via monthly meetings in which key decisions and activities are discussed. Moreover, the EC is included in all meetings of import with donors, the Secretariat and/or the Board of Trustees (Technical Adviser, pers. comm.).</p> <p>Note: Detailed procedures for community participation at different levels of</p>	<p>This is not a requirement of the WMAs. As a result, the extent to which local village members are included in decision-making processes is left to the discretion of the individual WMAs and their implementing parties.</p> <p>In the case of Wami Mbiki, local people have been included in every stage of the project cycle, from design to financial benefit accrual. Examples of decision-making processes that villagers have been directly involved in: creation and approval of the WBS Constitution,</p>	<p>Yes. Most pilot WMAs have been receiving donor support and these donors require regular evaluations of the programs they sponsor.</p> <p>The Wami Mbiki program has produced a Mid-Term Review (2003) which includes an evaluation of the impact and benefits of the project to local communities. Direct benefits to local people identified included village infrastructural improvements such as construction of school buildings, health dispensaries and teacher housing, as well as job-</p>	<p>A-B. Whether or not a financial analysis is conducted will depend on the strength of each WMA program.</p> <p>Wami Mbiki has formulated a Business Plan (2005), which includes a risk assessment.</p> <p>Mbomipa has produced a document detailing ‘lessons learnt’ from the development of community owned natural resource based enterprises (Walsh 2001b) and an Economics Report (Lee 2000)</p> <p>Information on other WMAs not available</p>	<p><i>Community-based Wildlife Management Areas (WMAs), case study: Wami Mbiki WMA in Morogoro</i></p>	<p>A. Yes. All WMAs are required to legally register as CBOs (in this case Associations) B. Wami Mbiki Society (WBS) and Mbomipa Association have been in existence for at least five years. They do not predate the WMA process. C. WMA registered Associations are the ‘sellers’ of ecosystem services, to a significant degree this refers to biodiversity protection and maintenance, but potentially also to carbon sequestration and water protection</p>

		<p>dealing with specific issues. Council reps. do not need to be Village Council members. In addition, the WBS Council elects a 12 member Executive Committee (EC) which meets 3x a year.</p> <p>Mbomipa works through elected representatives in Village Natural Resource Committees (details not available)</p> <p>Note: Nothing is said about villagers' or Associations' management and decision making rights in the WMA 2002 Regulations</p>	<p>decision-making are not included in the WMA 2002 Regulations</p>	<p>development of the Ten Year Strategic Plan and formulation of a WBS Business Plan. In addition, the WBS constitution states that that at least 1/3 of elected WBS Council members should be women. However, this mandate is not enforced so the proportion of women in the Council is typically under 1/3 (Technical Adviser).</p> <p>In Mbomipa, 25% of Village Natural Resource Committee members (the institution through which villagers were represented in the WMA) are women (Walsh, 2003).</p> <p>Note: Detailed procedures for community</p>	<p>creation via hiring of WBS management staff. In addition, individual household incomes have risen indirectly via the reduction of household quotas for village infrastructure projects. Human capital has increased via training of village scouts, Village Councils and Natural Resource Management Committees. Finally, the program has invested in environmental education in primary schools. Note: the WBS Business Plan attempts to take into account the need to continue programs on a self-sufficient basis, once donor funding ends. The program has had its share of challenges,</p>			
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				<p>participation at different levels of decision-making are not included in the WMA 2002 Regulations. Moreover, the regulations include no specifications on gendered participation in WMA management</p>	<p>including unreliable communication between the WBS and Village Councils, and between both these organizations and the villagers themselves (Technical Adviser, pers. comm.)</p> <p>The Mbomipa program has produced both a Review (Murphry, 2000) and a Final Report (Walsh, 2003). These reports outline that the Mbomipa program increased local peoples' ability to benefit from their natural resource base (e.g. by diversifying services offered to tourists, building lodges and developing a market from woodland products). The</p>			
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					<p>sale of hunting quotas has been the single largest income earner, and, as mentioned above in the column above “How Is The Deal Structured”, 60% of this income has been spent on maintaining the Association staff and its game scouts. The remaining 40% of funds has been spent on village infrastructural improvements. The above reports also point to the non-monetary benefits of the program to communities, such as securing their rights over the natural resource base, and straightening village governance processes. With regard to challenges, they identify the need for greater inter</p>			
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					and intra-village communication, the inclusion of some stakeholders (e.g. pastoralists) and to conflicts between differing factions of village government			
Water PES								
Water Project 1: <i>International Union for the Conservation of Nature – Water and Nature Initiative (IUCN-WANI) Pangani River Basin Demonstration Site Project. The water PES activity is a component of this project and still in proposal stage</i>	No information available	Information not available	Information not available	Information not available	Information not available	Information not available	Yes. IUCN commissioned two economic studies: the first was a 2003 Pangani Basin economic valuation study funded by Dfid and conducted by Turpie, et. al. The second was a 2005 Pangani Basin willingness to pay study led by Professor K. Kulindwa from UDSM (see bibliography for details on both)	

<p>Water Project 2:</p> <p>“Equitable Payments for Watershed Services.” This project is being implemented by CARE, WWF, IIED (The International Institute for Environment and Development) in the Ruvu and Sigi River Basins. Contact person: Dr. Balaram Thapa, CARE-TZ</p>	<p>A. Yes, the initiative is being implemented as a component within larger ICD projects led, in the case of the Ruvu River Basin, by CARE-TZ and, in the case of the Sigi River Basin, by WWF-TPO. Both of these projects work closely with village and other local authorities.</p> <p>B. CARE-TZ’s Ruvu River Basin ‘Uluguru Mountains Environmental Management and Conservation Project’ began in 2003 and TFCG/WWF’s Sigi River ‘East Usambara Forest Landscape Restoration Project’ began in 2004, building on a TFCG project started in 1995.</p> <p>C. N/A since the project has not yet begun</p>	<p>N/A since the project has not yet begun</p>	<p>N/A since the project has not yet begun.</p> <p>Nonetheless, the project intends to involve villagers and their local organizations in all negotiations pertaining to spending of ecosystem services funds</p>	<p>The programme document specifically prioritizes the participation of women and other marginalized social groups in decisions-making processes (World Wildlife Fund et al., 2005)</p>	<p>N/A since the project has not yet begun.</p> <p>However, planned pro-poor benefits include: (i) increased resilience of farming systems to locally observed climate change, including reduced rain fall and soil moisture, (ii) improved soil management, (iii) capacity building for local villagers, government officials and partner NGOs on water PES (see column below on training and capacity building for details)</p>	<p>A and B. Not yet</p>
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Other Ecosystem Service Projects: N/A

Bundled and stacked PES

Bundled services 1: <i>Joint Forest Management Agreements (JFM)</i>	<p>A. There are a few national and international NGOs and some GOs supporting JFM implementation. National NGOs include WCS and TFCG, international NGOs include WWF- TZ and GOs include EUCAMP. These are all conservation-oriented organizations.</p> <p>B. All of these organizations have been around for many years, and predate the advent of PFM</p> <p>C. The organizations play a supportive role. They may provide information on PFM, coordinate meetings or provide technical assistance and capacity building (for instance, to help villagers carry out resource assessments, surveying, delimiting and monitoring the JFM forest area)</p>	Yes. GoT consults and communicates with villagers through the Village Environmental Committee (sometimes called the Village Forest Committee or Natural Resource Management Committee). Gender representation is taken into account when electing committee representatives (Senior Advisor, PFM, FBD/MNRT)	To a very limited degree. JFM is a GoT policy and villagers' rights and responsibilities vis a vis the jointly management forest resources are largely dictated by the Forest Act (2002). In theory, the nature and extent of villagers' right to access and benefit from forest products is negotiated on a case by case basis. In practice, however, there has been very little room for negotiation on the villagers' part (FBD/MNRT). GoT has been said to be 'devolving responsibilities' instead of devolving rights. A better deal for villages could probably be obtained in Production Forests	To a large degree, Village Environmental Committees are involved in implementing and monitoring the JFM agreement. To a limited degree, they are involved in designing the agreement and in benefiting from the resulting rights of access to forest resources. In many cases, formalizing access rights has actually <i>reduced</i> villagers' access to resources, by declaring them illegal (FBD/MNRT). Gender representation is taken into account when electing committee representatives (Senior Advisor, PFM, FBD/MNRT).	<p>A. Yes, both independent and GoT analyses.</p> <p>See http://www.nfp.co.tz/html/infopages/participatory_forestmg.html for GoT papers including: "Lessons Learnt on Participatory Forest Management"; "Lessons Learnt from UTUMI project Lindi Region"; "The way forward of Participatory Forest Management in Korogwe and Muheza District"; "Lessons Learnt through the National Forestry Programme". See also Blomley and Ramadhani (2005) in the bibliography (Annex 4)</p>	<p>A. Not applicable</p> <p>B. No</p>
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			which have relatively low biodiversity value. However, JFM has so far focused only on high biodiversity forest reserve areas	However, there is no follow up mechanism to ensure that women's participation is meaningful (e.g. that they participate in major discussions, or in multiple JFM components)		
Bundled services 2: Community Based Forest Management (CBFM)	<p>A. There are a few national and international NGOs and some GOs supporting CBFM implementation. National NGOs include WCS and TFCG, international NGOs include WWF- Tanzania and GOs include EUCAMP. These are all conservation-oriented organizations.</p> <p>B. All of these organizations have been around for many years, and predate the advent of PFM</p> <p>C. The organizations play a supportive role. They may provide information on PFM, coordinate meetings or provide technical assistance and capacity building (for instance, to help villagers carry out resource assessments, surveying, delimiting and monitoring the Village or Community Forest Reserve)</p>	<p>Yes. GoT consults and communicates with villagers through the Village Environmental Committee (sometimes called the Village Forest Committee or Natural Resource Management Committee)</p> <p>Note: Some CBFM projects have been created with sub-groups within villages (this is permitted by law and results in a "Community Forest Reserve (CFR)" instead of a "Village Forest Reserve"). Such sub-groups have had mixed results: in unfavorable cases, they have been composed of individuals who have exploited the CFR for their own gain (e.g. by selling firewood and timber cutting rights, charcoal production licenses etc.). Such groups have relied on the neglect of District Government staff and other responsible GoT authorities</p>	Yes. Village Environmental Committees have a large say in the benefits they will accrue from the transfer of ownership of forest resources. That said, the forest management Bi-Laws and Management Plan must endorse sustainable forestry	Village Environmental Committees are involved in all aspects of the project cycle: design, implementation, monitoring and benefit accrual. Gender representation is taken into account when electing committee representatives (Senior Advisor, PFM, FBD/MNRT). However, there is no follow up mechanism to ensure that women's participation is meaningful (e.g. that they take part in decision-making, participate multiple components of CBFM, etc)	<p>A. Yes, both independent and GoT analyses.</p> <p>See http://www.nfp.co.tz/html/infopages/participatory_forestmg.html for GoT papers including: "Lessons Learnt on Participatory Forest Management"; "Lessons Learnt from UTUMI project Lindi Region"; "The way forward of Participatory Forest Management in Korogwe and Muheza District"; "Lessons Learnt through the National Forestry Programme". See also Blomley and Ramadhani (2005) in the annex bibliography</p>	<p>A. Not applicable</p> <p>B. No</p>

STEP 5:

EXAMINE MARKET INFORMATION FLOW & PAYMENT FOR ECOSYSTEM SERVICES EXPERTISE

ECOSYSTEM SERVICES			
	Carbon	Biodiversity	Water
<p>HAS A NATIONAL ASSESSMENT OF POTENTIAL, FUTURE SITES FOR ECOSYSTEM SERVICE DEALS BEEN CONDUCTED?</p> <p><i>(If YES, PLEASE PROVIDE DETAILS.)</i></p>	<p>Not directly.</p> <p>However, UNDP- Tanzania Program Office is in the process of reviewing proposals for a consultancy study entitled ‘Establishing mechanism for Payments for Carbon Environmental Services in the Eastern Arc Mountains, Tanzania’ (March 2006).</p> <p>In 2002 CEEST (Center for Energy, Environment, Science and Technology) carried out a GTZ-funded study of the potential for integrated power development in East Africa. This study included an assessment of CDM opportunities. It highlighted the potential of small hydro projects, and recommended bundling individual country projects into regional power programs</p> <p>In addition, there have been some economic valuations of Tanzanian forests. FBD/MNRT has published a “Resource economic analysis of catchment forest reserves in Tanzania” (2003). Such economic valuations, especially if they are broken down by economic sectors and/or ecosystem services, can help assess opportunity costs of carbon, biodiversity and other PES projects as well as increase the bargaining power</p>	<p>No</p> <p>There have been some economic valuations of Tanzanian forests which relate only tangentially to biodiversity PES. Thus, FBD/MNRT has published a “Resource economic analysis of catchment forest reserves in Tanzania” (2003). Such economic valuations, especially if they are broken down by economic sectors and/or ecosystem services, can help assess opportunity costs of carbon, biodiversity and other PES projects as well as increase the bargaining power of service sellers</p>	<p>No.</p> <p>However, there are a number of studies – completed, planned or in process – on the potential for Water PES in various Tanzanian river basins. For instance, one “Feasibility Study to Design PES Mechanisms for the Pangani River Basin” and two catchment-level “Willingness to Pay” assessments were produced in 2005, with PWES in mind. The Pangani River Basin study was funded by IUCN and led by Professor K. Kulindwa from UDSM (Kulindwa, 2005). The willingness to pay studies were funded by the CEPF (Critical Ecosystems Partnership Fund), and carried out by WWF-TZ for the Sigi River Catchment, Tanga, Tanzania (Mwanyoka, 2005) and for the Ruvu River in the Uluguru Mountains, Tanzania (Kumbute, 2005). All three (Pangani, Sigi and Ruvu) studies report a willingness on the part of users to pay for water environmental services. The Pangani River study reported greater willingness to pay among users subject to greater water conflicts. In addition, an economic valuation study of the Pangani River Basin was commissioned in 2003 by IUCN with Dfid funding (see Turpie et. al, 2003 in the bibliography for details).</p> <p>Among the studies scheduled to begin soon are a) a Pangani River flows and economic costs study, again funded by IUCN and b) a ‘willingness to pay’ and ‘willingness to sell’ study of the Ruvu and Wami River Basins by PREM (Poverty Reduction and Environmental Management, a research project of the Institute for Environmental Studies, Free University of Amsterdam), with funding from CARE/WWF/IIED (deadline for Ruvu study: September 2006) c) an economic costs and benefits study of the Great Ruaha River basin by WWF-Tanzania</p> <p>Note: The conclusion that Pangani and Rufiji water users are generally willing to pay for water services has been questioned by the Pangani River Basin Authority and others, who claim that it is hard enough to</p>

	of service sellers		collect the extant and very low user fees from their customers, let alone a potentially higher fee for a water PES activity. Moreover, for varying reasons, some of the larger water users on these river basins (e.g. TANESCO) have expressed reluctance to participate in water PES schemes (see Annex 5 for more details on TANESCO's views)
HAS A NATIONAL ASSESSMENT OF BUYERS BEEN CONDUCTED? <i>(If YES, PLEASE PROVIDE DETAILS.)</i>	No	No	No
IS THERE A PLACE THAT BUYERS AND INVESTORS CAN GO TO / CALL ABOUT ECOSYSTEM SERVICES DEALS & PRICES?	No	No	No
ARE THERE TRAINING AND EDUCATION RESOURCES RELATED TO ECOSYSTEM SERVICES AND PAYMENTS?	No. There have been about three CDM-related workshops in the period between 2002 and 2004, mostly catering to high-level members of GoT, select university faculty and 1-2 energy-related national NGOs, and coordinated through the DNA (VPO-DOE). However, there is almost no record or impact of these capacity building efforts, which included: 1. 2004: UNCTAD-sponsored workshop with a CDM training component (report not available) 2. 2004: UNDP/GEF funded workshop to launch the "National CDM Implementation Guide" (currently referred to as CDM Guidelines). The objective was to	No	No

	<p>familiarize national stakeholders with the guidelines, and to encourage CDM projects in Tanzania</p> <p>3. 2002: DFID sponsored CDM workshop entitled “Encouraging CDM Energy Projects to Aid Poverty Alleviation”, held in Dar es Salaam through CEEST (Center for Energy, Environment, Science and Technology). The objective of the workshop was to explain the institutional structure of the UNFCCC for the CDM, to encourage networking by Tanzanian agencies and to identify the needs to specific target groups, including industry, government, private sector and local communities and to identify and remove barriers to CDM in country</p> <p>The above DFID workshop launched an 18-month project whose objectives were to encourage poverty focused energy projects that promote sustainable development and reduce GHG emissions and to build capacity in host countries. The project’s main in- country component consisted of assessing a range of potential energy projects, and analyzing them in terms of their potential for poverty reduction, technology transfer, and for their environmental and social benefits. The result was a DFID report: “Encouraging CDM energy projects to aid poverty alleviation, Summary Report to UK DFID</p>		
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	(2003)” with five attachments (UK contact: KG Begg, Institute of Sustainable Development, university of de Montfort, Leicester kbegg@dmu.ac.uk). None of the DIFD final report documents are accessible, whether on the web or within Tanzanian partner institutions. There has apparently been no practical outcome in terms of CDM small scale energy projects in Tanzania (Ministry of Energy and Minerals renewable energy office; CEEST)		
IS THERE ANY INFORMATION AVAILABLE ON RISKS AND/OR RISK MANAGEMENT ASSOCIATED WITH PAYMENTS FOR ECOSYSTEM SERVICES?	No	No	No
ARE THERE EXPERTS IN ECOSYSTEM SERVICE MONITORING & EVALUATION IN-COUNTRY?	No	No	No

STEP 6:**LIST AVAILABLE TECHNICAL ASSISTANCE**

(such as, training, ongoing advising / support, in-service programs, etc.)

ECOSYSTEM SERVICES			
	Technical Assistance Related to Carbon	Technical Assistance Related to Biodiversity	Technical Assistance Related to Water
IS THERE ANY CURRENT TECHNICAL ASSISTANCE IN IDENTIFYING AND ESTABLISHING ECOSYSTEM SERVICE PAYMENTS AND MARKETS? (e.g., training, ongoing advising / support, etc.)	<p>No, but certain individuals are developing the skills to measure and monitor carbon for CDM and related activities. See below under 'providers'</p> <p>CEEST (Center for Energy, Environment and Technology) has the technical expertise to carry out emissions calculations, as well as impact, cost-benefit and sustainability analyses carbon PES programs. Indeed, this NGO has offered to be the 'technical arm' of the CDM Executive Board (currently housed within GoT's VPO-DOE) in their CDM-program selection process</p> <p>Finally, while FRONTIER Tanzania (www. Frontier.ac.uk Dar es Salaam) does not currently have the ability to conduct carbon sequestration monitoring, they have data from marked vegetation plots collected throughout Tanzania, and are willing to make such data available to other</p>	<p>Not specifically.</p> <p>However, FRONTIER Tanzania (www. Frontier.ac.uk) have the expertise to do biodiversity measuring, monitoring and verification activities. The organization does baseline survey work of flora and fauna, and has data from marked vegetation plots collected throughout Tanzania, which they are willing to make available to other organizations (Principal Investigator, Frontier Tanzania)</p>	<p>No, but certain individuals are in the process of developing technical expertise in Water PES. For contact names and institutions, see below under 'providers'</p>

	organizations (Principal Investigator, Frontier Tanzania). Among their many current services, they carry out biodiversity monitoring for the Kiombero Valley Teak Company Ltd.		
IF YES, SPECIFY: TYPES OF TECHNICAL ASSISTANCE	See above	See above	Mainly cost-benefits assessments for water PES
PROVIDERS (CONTACT NAMES & ORGANIZATIONS)	<p>Burgeoning carbon ‘experts’ include Richard Muyungi (the National DA on CDM), VPO-DOE; Pantaleo Munishi and Zahabu Eliakimu, SUA for tree- based carbon sequestration monitoring;; Hubert Meena, CEEST and Dr. Oscar Kibazohi at EPMS (Environmental Protection and Management Services)/Chemical Engineering Dep. UDSM for GHG mitigation calculations; Dr. Charles Ehrhart, PEMA; Dr. Neil Burgess CMEAMF (see Annex 3 for details). These technicians are professionals housed within their own institutions but may sell their expertise on a case by case basis.</p> <p>CEEST (Center for Energy, Environment and Technology) and FRONTIER Tanzania (www.Frontier.ac.uk Dar es Salaam) have other mandates, but hold the potential to institutionalize expertise in, and offer technical services for, carbon PES.</p>	No biodiversity PES experts	Burgeoning water ‘experts’ include Dr. Kassim Kulindwa-UDSM; Dr. George Jambiya, WWF-Tanzania; Dr. Charles Ehrhart, PEMA; Dr. Neil Burgess CMEAMF (see Annex 3 for contact details)

WHO PAYS (BUYERS, SELLERS, GOVERNMENT)	So far, only the University of Twente, Netherlands has paid for technical work, and only for project-specific carbon-related research	None	So far, only donors such as IUCN, CARE, WWF and IIED have paid for technical expertise in water PES, and only for research purposes
WHO HAS ACCESS (WHO USES, WHERE, HOW OFTEN, ETC.)	This burgeoning area of expertise has so far only been accessed by researchers. For example, there is a one-off study in progress which aims to measure levels of carbon sequestration by Village Land Forest Reserves in Morogoro. It is being carried out with funding from the University of Twente (contact: Margaret Skutsch), and in partnership with SUA, Tanzania.	FRONTIER services are mainly employed by international donors or others with funding to carry out biodiversity research	This burgeoning area of expertise has so far only been utilized by select development projects or programs within conservation-and-development oriented INGOs (see above under national assessments of water PES for details)

STEP 7:

IDENTIFY ALL POTENTIAL SOURCES OF FINANCING

(such as, loans, grants, subsidies, in-kind payments, etc.)

ECOSYSTEM SERVICES			
	Carbon	Biodiversity	Water
WHAT TYPE AND SOURCE OF FINANCING IS AVAILABLE FOR ECOSYSTEM SERVICE PAYMENT / MARKET: <ul style="list-style-type: none"> - PROJECT PLANNING? - TRANSACTIONS? - TECHNICAL ASSISTANCE? - BUSINESS PLANNING? - OPERATIONS? - RISK MANAGEMENT? - OTHER? 	<p>The National Environmental Management Act makes provisions for a National Environmental Trust Fund (part XVIII of the Act) with some public funding channels that could, potentially, be used to pay for PES activities</p> <p>TASAF (Tanzania Social Action Fund) is also a potential source of public funding for PES activities.</p>	<p>The National Environmental Management Act makes provisions for a National Environmental Trust Fund (part XVIII of the Act) with some public funding channels that could, potentially, be used to pay for PES activities</p> <p>TASAF (Tanzania Social Action Fund) is a potential source of public funding for PES activities. See below, far left columns for more details on TASAF and the National Environmental Trust</p> <p>Ecotourism activities whose proceeds, or part of whose proceeds, are used explicitly and specifically to pay for environmental management services through an independent contract with a ‘seller’, and subject to independent verification</p> <p>The Eastern Arc Endowment Fund (EAMCEF, www.easternarc.or.tz/tf.htm) is a long-term, joint WB/GEF/GoT funding initiative operating as a Not-for-profit NGO. It could be a potential ecosystem services ‘buyer’. In theory, it could also act as a broker between Tanzanian sellers and overseas buyers</p> <p>The Tanzania Forest Fund (section X, 79 of the 2002 Forest Act) – is mandated to fund conservation, research and education ‘to assist and enable Tanzanians to benefit from international initiatives and international funds directed to biodiversity and sustainable development of forest resources in general’ and could potentially be used to stimulate biodiversity PES activities. At present, however, the Forest Fund it</p>	<p>Funding sources for water PES are so far limited to abstraction fees paid by users through public revenue collection systems in their respective river or wetland water-shed areas. At most these funds may be supplemented by national revenues or by public funds</p> <p>At a regional scale, funds for water PES could be channeled through regional Water Basin Authorities whose institutional fee collecting procedures have been ‘enhanced’ for PES purposes (Kulindwa 2005)</p> <p>Whether channeled through Water Basin Authorities or otherwise, levees earmarked for sustainable water management could be charged on various categories of water consumers such as domestic users, irrigators, hydropower generating facilities, and industrial water bottling</p> <p>The National Environmental Management Act makes provisions for a National Environmental Trust Fund (part XVIII of the Act) the purpose of which is, among other things, to promote ‘community based environmental management programs’ (section 214 of the Act). This could potentially serve as a source of public funding for community based water PES activities. See below, far left columns for more details on this Fund. Note: there is no specific National Level “Fund” dedicated to wetlands</p> <p>Other potential sources of (public or private) funding identified for water PES in Tanzania include:</p> <ul style="list-style-type: none"> • Donations and grants

		exists only on paper.	<ul style="list-style-type: none"> • Proceeds from ecotourism • Carbon sequestration proceeds • Fines charged to defaulters (e.g. water polluters) • Tradable pollution permits and water rights • Watershed conservation fees (sources: Kulindwa, 2005; Turpie et al., 2003) <p>Finally, as mentioned above, the potential for private, independent water PES contracts is currently being assessed but no specific sources of funding have been identified to date</p>
<p><i>IF YES, SPECIFY FOR EACH AREA OF AVAILABLE FINANCING:</i></p> <p>WHERE / FROM WHOM?</p>	<p>The National Environmental Trust Fund is designed to channel money from government including income from Parliament, from levees charged by any fee prescribed under the Environmental Management Act, from self-financing projects, and from grants and donations. In principle, debt relief funds could also be channeled into the Trust.</p> <p>TASAF is a World Bank- funded Village Development Fund created under Mpaka's Presidency and operating out of the President's Office</p>	<p>EAMCEF's mission is to 'foster conservation of forest biodiversity in the Eastern Arc Mountains through investment in community development projects, funding protected areas management and supporting applied biodiversity research programs'. The interest generated from this Trust Fund is to be invested in biodiversity conservation in the Eastern Arc Mountains</p> <p>The Forest Fund is to be financed by a levee of 2% from <i>any fee</i> in the Forest Act (2002), a levee of 3% of any royalties payable under the act, sales of confiscated forest produce, and any income generated by the fund including donations and grants.</p> <p>See far left column for details on the Environmental Trust Fund and TASAF</p>	See far left column for details on the Environmental Trust Fund
<p>WHAT IS NEEDED TO QUALIFY?</p>	<p>The National Environmental Trust Fund's objectives are to a) promote 'community based environmental management programs' b) fund research c) foster capacity building d) confer environmental awards d) provide scholarships e) provide grants to assist community based environmental management programs f) cover the costs of meetings for the</p>	<p>EAMCEF is currently prioritizing the East Usambara and Udzungwa Mountains as locations, and the following activities: a) Community based conservation activities for improvement of rural livelihoods of forest-adjacent communities b) applied biodiversity research relevant to the conservation of biodiversity in the priority Eastern Arc Mountains and c) management of forest reserves and protected areas to strengthen the management capabilities of FBD and other responsible institutions. In addition, projects must result in direct</p>	See far left column for details on the Environmental Trust Fund

	<p>Trust Fund Committee and Board of Trustees (section 214 Environmental Management Act). Specific details on the requirements to qualify for funding are not provided</p> <p>TASAF funds are only awarded to Village Councils. To qualify, VCs must submit a project proposal. If approved, 25% of total costs will be covered by the Fund</p>	<p>benefit to biodiversity conservation in the Easter Arc mountains and funding should be complementary to other funding available for conservation and development activities (www.easternarc.or.tz/tf.htm#Funding%20Criteria last visited May 15, 2006)</p> <p>The Forest Fund aims to a) promote awareness of the need to maintain and protect forest resources through education and training b) develop community forestry directed towards the conservation and protection of forest resources c) fund research in forestry d) assist Tanzania to benefit from international initiatives and funds directed towards the conservation and protection of biological resources e) promote public debate and discussion on forestry issues, in particular, the process of making EIAs and f-g) assist groups and individuals to comply with, and advance the purposes of, the Act (Forest Act, 2002)</p> <p>See far left column for details on the Environmental Trust Fund and TASAF</p>	
HOW MUCH? (UPWARD LIMIT TO SUPPORT)	<p>National Environmental Trust Fund: not specified</p> <p>TASAF: covers up to 25% of village project funds</p>	<p>EAMCEF: not specified</p> <p>Forest Fund: not specified</p> <p>See far left column for details on the Environmental Trust Fund and TASAF</p>	<p>See far left column for details on the Environmental Trust Fund</p>
CONTACT INFORMATION	Not available	Not available	Not available

STEP 8A:

DETAIL PROJECT-BY-PROJECT SUPPORT SERVICES FOR MARKET ACTORS

(including, existence of in-country providers and their availability (e.g., country-wide, capital city only, etc.))

CURRENT ECOSYSTEM SERVICE PAYMENT OR MARKET	FINANCING (Provision of necessary capital / operating funds)	MEASUREMENT (Valuation of ecosystem service)	MONITORING (Regular collection & analysis of data to ensure accountability)	VERIFICATION (Process of review to ensure accuracy of information)	BUSINESS ADVISORY SERVICES (Financial advice, etc.)	REGISTRIES (Collection & configuration of information in a database)	CERTIFICATION (Examination of an ecosystem service or product according to a set of guidelines)	RISK MNGM'T. (Addressing financial and other risks associated w/ engaging in PES)	TRAINING & CAPACITY BUILDING (Increasing the pool of people interested in and able to act on PES)
Carbon sequestration PES									
Carbon Project 1: <i>The International Small Group Tree Planting Program (TIST)</i>	Clean Air Action Corporation has invested approximately USD 4million globally on TIST. In addition, the corporation has received approximately USD 3 million in from USAID and Dow Chemicals, representing at total global investment of USD 7 million (C. Williams, CAAC representative, pers. Comm.). The Corporation has used these funds to finance the TIST program in	No	There is no independent monitoring. Clean Air Action Corporation carries out its own monitoring through UMET 'quantifiers' financed and their internal 'auditors', financed and trained by the corporation. 'Quantifiers' count the number of trees planted, record the species,	Did not rely on in-country services (these were not available). As mentioned above, the World Bank sent an intermediary to Tanzania from South America to verify TIST activities. However, additional information was not provided	TIST and CAAP received some limited assistance from the Tanzania Investment Center, a one- stop information and assistance office set up by GoT to assist foreign investors. They received some legal advice pertaining to setting up operations in Tanzania but no advice specific to PES	No	No	No	No

	<p>Tanzania. This included registering UMET (the national counterpart), designing their Project Document, setting up an office in Morogoro, training office staff (including training officers, auditors and quantifiers), training farmers, creating a website, and providing equipment including conference call capabilities, Palm Computers, Computers, GPS units and other miscellaneous equipment. In addition, CAAP says it has paid 'thousands' of dollars in forgiven loans to farmers (CAAP representative, personal communication)</p>		<p>estimate the age of trees and enter their position/the position of each grove into portable GPS units, from which data is then synchronized into a larger database. Auditors check the quantifiers' work every six months</p>		<p>or carbon sequestration</p>					
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Carbon Project 2: <i>The Participatory Environmental Management Programme (PEMA).</i> <i>A planned project component which aims to carry out pro-poor carbon sequestration PES in Wami River catchment highland forests</i>	Funding support for the PEMA programme comes from DANIDA	ICRAF is expected to provide technical support with carbon measures and related activities	The project anticipates building the capacity of TFCG to assume responsibility for monitoring.	The institution that will carry out verification has not yet been identified.	CCBA	None	Certification will be facilitated by CCBA	CCBA	PEMA plans to provide information on carbon and biodiversity PES to local ‘sellers’, TCFG (their local partner NGO) and local catchment authorities, the district forestry officer and the natural resources officer. PES capacity building sessions are scheduled to take place in July of this year. Note: one of PEMA’s major challenges for this training is finding individuals with the capacity to translate complex scientific and technical concepts and information in such a way as to make it accessible and understandable to local people – be they government officials or villagers
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Carbon Project 3: <i>Kilombero Valley Teak Company Ltd. – potential seller</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Biodiversity PES									
Biodiversity Project 3: <i>Community-based Wildlife Management Areas (WMAs), case study: Wami Mbiki WMA in Morogoro</i>	Note: Since this service payment is non-monetary, only non-market support services are listed Most pilot WMAs have depended on donor funding for their first years of establishment. Wami Mbiki is funded by DANIDA and the Danish Hunters’ Association (DHS). Mbomipa was funded by DFID until 2003. Other donors include: Africare (Uyumbu and Ipole WMA), NORAD (Ikoma and Tarime WMAs), GTZ (Liwale, Jukumu, Namtumbo and Ngarambe/Tapica WMAs), AWF (Makame, Enduimet and Buruge WMAs) and WWF (Ngarambe/ Tapica and Iwale WMAs)	No.	Yes. WMA Regulations (2002) require WMA Associations to carry out ‘basic resource monitoring’. However, all of this monitoring is organized internally (while programme donors are often involved, no ‘third party independent’ monitoring has taken place) Wami Mbiki and Mbomipa have carried out aerial surveys of animal populations, as well as creating participatory ecological monitoring systems through their respective Game Scouts subdivisions	As with other similar initiatives in this inventory, no independent observer – in the sense specified in the definition of PES transactions used by Forest Trends and others (Waage, Inbar and Jenkins, 2005) – has been allocated	No.	No.	No.	No.	

Water PES									
Water Project 1: <i>International Union for the Conservation of Nature – Water and Nature Initiative (IUCN-WANI) Pangani River Basin Demonstration Site Project. The water PES activity is a component of this project and still in proposal stage</i>	The IUCN-WANI Pangani River Basin Demonstration Site / Management Project is receiving funds from various sources, including DfID, WWC, UNDP and GEF	The Pagnani Basin Economic valuation studies relied on the technical expertise of consulting firms including Southern Waters and Ecological and Resource Economics Consulting (University of Capetown, South Africa) and Tanzanian academics including Dr. Ngaga (Forest Economics Department, SUA) and Dr. Kassim Kulindwa (Economic Research Bureau, UDSM)	None yet	None yet	Information not available	Information not available	Information not available	Information not available	Information not available

Water Project 2: “Equitable Payments for Watershed Services.” This project is being implemented by CARE, WWF, IIED (The International Institute for Environment and Development) in the Ruvu and Sigi River Basins. Contact person: Dr. Balaram Thapa, CARE-TZ)	DANIDA and DGIS are funding this five-country initiative. DANIDA is funding the programme in Tanzania	PREM (Poverty Reduction and Environmental Management, a research project of the Institute for Environmental Studies, Free University of Amsterdam) is expected to provide technical support such as willingness to pay evaluations. However, the extent and nature of PREM’s contribution to this programme is still under negotiation	Not yet determined	The institution that will carry out verification has not yet been identified. However, one possibility is the Regional River Water Basin Authorities	The initiative has a business advisor based in the Netherlands	The Tanzania programme is in an information gathering stage. Findings will be made broadly available – including on the internet	None	Not yet determined	The project plans to provide information on water PES to local ‘sellers’, TCFG (their local partner NGO) and local catchment authorities, the district forestry officer and the natural resources officer. PES capacity building sessions are scheduled to take place in July 2006
Other Ecosystem Service Projects									
Bundled and stacked PES									
<i>Bundled Services 1:</i> Joint Forest Management Agreements (JFM)	Note: Since this service payment is non-monetary, only non-market support services are	No. The FBD/MNRT has a Division of Forest Measuring but it usually only gets involved in measuring and assessing forest	A basic nationwide PFM monitoring service is in planning	No. Note: There is no independent verifier	No. There are limited legal services available <i>specifically for PFM:</i> (i) Land titling :	No	No	No	No. There is no training or capacity building on PFM’s relationship to PES or its potential to attract PES programs. The

	<p>listed</p> <p>The principal PFM donors operating 'behind the scenes' are Danida (Danish Bilateral Aid), Ministry of Foreign Affairs (Finland) NORAD (Norwegian Bilateral Aid), who are funding Joint Forest Management in catchments and mangroves and SIDA (Swedish Bilateral Aid) via their Land Management Project in Babati and Singida districts</p>	<p>resources when there is a significant or large scale problem (e.g. reports of intense illegal activity in one area). Note: The transaction costs of verifying carbon increments in PFM forests are too high. According to FBD/MNRT officials, dozens of forests under PFM are resulting in carbon increments, but measuring costs are formidable due to the vast spread and isolation of these forests (transport costs alone would be prohibitive as far as the MNRT is concerned) In their regions of operation, some NGOs, such as TFCG, offer support with valuation activities such as village-level participatory resource assessments</p>	<p>In their regions of operation, some NGOs and INGOs offer support with village-level monitoring and patrolling activities. For example, TFCG has supported some villages in Ruvu South with a vehicle and fuel for monitoring purposes</p>		<p>GoT. NGOs and INGOs such as TFCG, WCST, WWF-TZ, EUCAMP, offer their support with boundary demarcation and mapping of PFM areas. However, they and villagers must ultimately go through local and national government authorities, as GoT is the only legal entity in Tanzania permitted to do land titling. (ii) Policy discussion: National organizations such as LEAT and LHRC contribute to national-level discussions and advocacy on PFM policies and laws</p>				<p>FBD/MNRT has an Extension and Publicity Unit which offers training guides and other resources <i>for PFM only</i>. Similarly, some NGOs, and INGOs supporting PFM implementation offer training and capacity building <i>on PFM only</i></p>
<p>Bundled Services 2:</p> <p>Community Based Forest Management (CBFM)</p>	<p>Note: Since this service payment is non-monetary, only non-</p>	<p>No. The FBD/MNRT has a Division of Forest Measuring but it usually only gets involved in</p>	<p>A basic nationwide PFM monitoring service is in</p>	<p>Note: There is no independent verifier</p>	<p>There are limited legal services available <i>specifically for PFM:</i></p>	<p>No</p>	<p>N/A</p>	<p>No</p>	<p>There is no training or capacity building on PFM's relationship to PES or its potential to</p>

	<p>market support services are listed. The principal PFM donors operating 'behind the scenes' are Danida (Danish Bilateral Aid), Ministry of Foreign Affairs (Finland) NORAD (Norwegian Bilateral Aid), who are funding Joint Forest Management in catchments and mangroves and SIDA (Swedish Bilateral Aid) via their Land Management Project in Babati and Singida districts</p>	<p>measuring and assessing forest resources when there is a significant or large scale problem (e.g. reports of intense illegal activity in one area). Note: The transaction costs of verifying carbon increments in PFM forests are too high. According to FBD/MNRT officials, dozens of forests under PFM are resulting in carbon increments, but measuring costs are formidable due to the vast spread and isolation of these forests (transport costs alone would be prohibitive). In their regions of operation, some NGOs, such as TFCG, offer support with valuation activities such as village-level participatory resource assessments</p>	<p>the planning stages</p> <p>In their regions of operation, some NGOs and INGOs offer support with village-level monitoring and patrolling activities. For example, TFCG has supported some villages in Ruvu South with a vehicle and fuel for monitoring purposes</p>		<p>(i) Land titling : GoT, NGOs and INGOs such as TFCG, WCST, WWF-TZ, EUCAMP, offer their support with demarcation and mapping of PFM areas, they and villagers must ultimately go through local and national government authorities, as GoT is the only legal entity in Tanzania permitted to do land titling. (ii) Policy discussion: organizations such as LEAT and LHRC contribute to national-level discussions and advocacy on PFM policies and laws</p>				<p>attract PES programs. The FBD/MNRT has an Extension and Publicity Unit which offers training guides and other resources <i>for PFM only</i>. Similarly, some NGOs and INGOs supporting PFM implementation offer training and capacity building <i>on PFM only</i></p>
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STEP 8B:**DOCUMENT NATIONALLY-AVAILABLE SUPPORT SERVICES FOR MARKET ACTORS**

ECOSYSTEM SERVICES				
	Carbon	Biodiversity	Water	Other?
ARE THERE SPECIFIC SUPPORT SERVICE-RELATED PROBLEMS / CONSTRAINTS?	No	No	No	
WHAT IS NEEDED TO IMPROVE SUPPORT SERVICES?				
ARE ADDITIONAL SUPPORT SERVICES NEEDED? If YES, SPECIFY.	See above, the section on 'existence of and need for supporting institutions', second row, under 'institutions needed to support with sales of ecosystem services'	See above, the section on 'existence of and need for supporting institutions', second row, under 'institutions needed to support with sales of ecosystem services'	See above, the section on 'existence of and need for supporting institutions', second row, under 'institutions needed to support with sales of ecosystem services'	

STEP 9:**LIST GOVERNMENTAL & NON-GOVERNMENTAL STANDARDS & GUIDELINES**

(specifically in relation to eligibility, performance, equity, environmental impact, reporting requirements, community and public input requirements, public comment, labor regulations, etc.)

NOTE: Please include specific mention / citation to specific acts, articles, and other materials.

ECOSYSTEM SERVICES				
	Carbon	Biodiversity	Water	Other?
DO ANY STANDARDS AND/OR GUIDELINES EXIST THAT GUIDE ECOSYSTEM SERVICE PAYMENTS AND MARKETS? (IF YES, PLEASE SPECIFY)	The only 'standards' available are in the 2004 CDM Implementation Guide (URT, 2004).	No	No	No
ARE STANDARDS AND/OR GUIDELINES NEEDED FOR ECOSYSTEM SERVICE PAYMENTS / MARKETS?	Yes, for all ecosystem service sectors. This is because agreements and contracts in the natural resource sector between private sector/GoT/local communities are regarded as notoriously unreliable	Yes, for all ecosystem service sectors. This is because agreements and contracts in the natural resource sector between private sector/GoT/local communities are regarded as notoriously unreliable	Yes, for all ecosystem service sectors. This is because agreements and contracts in the natural resource sector between private sector/GoT/local communities are regarded as notoriously unreliable.	
HAS THE COUNTRY SET SPECIFIC STANDARDS FOR CARBON PROJECTS UNDER THE CDM? (IF YES, PLEASE SPECIFY AND STATE WHO WAS INVOLVED)	The CDM Implementation Guide was published in 2004 by GoT/DOE. The publication was sponsored by an UNCTAD Carbon Market /ECI (Earth Council Institute in Geneva) Program aimed at building CDM capacity in LDCs including Tanzania, Uganda, Mozambique, Zambia and Malawi. The Tanzanian consultant for the GoT VPO-DOE was EPMS (Environmental Protection and Management Services)			

STEP 10:

ASSESS AWARENESS OF ECOSYSTEM SERVICE VALUES, PAYMENTS, AND MARKETS

ECOSYSTEM SERVICES				
	Carbon	Biodiversity	Water	Other?
WHAT IS THE LEVEL OF AWARENESS OF PES OPPORTUNITIES AMONG <ul style="list-style-type: none"> - NATIONAL BUSINESS COMMUNITY? - GOVERNMENT AGENCIES? - COMMUNITY ORGANIZATIONS? - NATIONAL NGOS? - INTERNATIONAL NGOS? 	<p>GoT: There is some (though very limited) understanding and awareness of PES activities and potentials within certain government sectors, and only among certain upper-level staff. These are mostly staff operating in the natural resource management sectors such as Ministry of Natural Resources and Tourism, VPO-Division of Environment and Ministry of Water and Livestock Development, and select staff in the Ministry of Energy and Minerals, Ministry of Finance, and Tanzania Investment Center (the latter is a GoT office designated to promote foreign investment)</p> <p>Private Sector: There is some limited awareness of the existence of PES among companies in the energy sector (e.g. EPMS), and among timber plantation companies with overseas staff and investors (e.g. Kilombero Valley Teak Co. Ltd. and Tanganyika Wattle Company). However, they so far a) see insufficient support available within Tanzanian institutions and b) lack the tools with which to search for and negotiate with international PES markets</p> <p>INGOs: The overall interest in PES is growing among many conservation INGOs, but members' understanding of the subject is still limited. Indeed, their</p>	<p>GoT: There is some (though very limited) understanding and awareness of biodiversity PES activities and potentials within certain government sectors, and only among certain upper-level staff. They are mostly in the natural resource management sectors such as Ministry of Natural Resources and Tourism, VPO-Division of Environment and Ministry of Water and Livestock Development</p> <p>Private Sector: There is some limited awareness of the existence of biodiversity PES among plantation companies with overseas staff and investors (e.g. Kilombero Valley Teak Co. Ltd. and Tanganyika Wattle Company). However, they so far a) see insufficient support available within Tanzanian institutions and b) lack the tools with which to search for and negotiate with international PES markets</p> <p>INGOs: Interest in biodiversity PES is growing among many conservation INGOs, but members' understanding of the subject is still extremely limited. Indeed, their knowledge is not adequate enough to prioritize PES on their agendas. To date, most of their (limited) focus has been on water PES, spearheaded by WWF, CARE and IUCN. In contrast, poverty and health sector INGOs have</p>	<p>GoT: There is some (though very limited) understanding and awareness of water PES activities and potentials within certain government sectors, and only among certain upper-level staff. They are mostly in the natural resource management sectors and include the VPO's Division of Environment, the Ministry of Water and Livestock Development, some regional Water Basin and Local Government Authorities, and GoT's electricity supply company, TANESCO</p> <p>Private Sector: Some private enterprises are becoming aware of the potential of water PES, if only through the recent research activities of INGOs investigating users' willingness to pay in various important Tanzanian river basins (see further above for details)</p> <p>INGOs: Interest in water PES is growing among conservation INGOs, but members' understanding of the subject is still limited. Indeed, their knowledge is not adequate enough to prioritize PES on their agendas. To date, most of their (limited) focus has been on water PES, spearheaded by WWF, CARE and IUCN. In contrast, poverty and health sector INGOs have neither knowledge nor understanding of PES. This is because the latter is</p>	

	<p>knowledge is not adequate enough to prioritize PES on their agendas. To date, most of their (limited) focus has been on water PES, spearheaded by WWF, CARE and IUCN. In contrast, poverty and health sector INGOs have neither knowledge nor understanding of PES. This is because the latter is largely regarded as a conservation mechanism, not a poverty reduction tool</p> <p>NGOs: There is some limited awareness of PES among a select number of NGOs dealing with natural resource management and energy issues. Examples include: TAATEDO, CEEST TFCG, WCST and LEAT. However, none of these has submitted a PES-related project proposal. NGOs in the poverty and health sector have neither knowledge nor understanding of PES</p>	<p>neither knowledge nor understanding of PES. This is because the latter is largely regarded as a conservation mechanism, not a poverty reduction tool</p> <p>NGOs: There is some limited awareness of biodiversity PES among a select number of NGOs dealing with the natural resource management issues such as TFCG, WCST and LEAT. However, none of these has submitted a biodiversity PES-related project proposal. NGOs in the poverty and health sector have neither knowledge nor understanding of PES</p>	<p>largely regarded as a conservation mechanism, not a poverty reduction tool</p> <p>NGOs: There is some limited awareness of water PES among a select number of NGOs dealing with the natural resource management issues such as TFCG, WCST and LEAT. However, none of these has submitted a PES-related project proposal. NGOs in the poverty and health sector have neither knowledge nor understanding of PES</p>	
<p>WHAT, IF ANY, ARE THE SOURCES OF CURRENT, AVAILABLE INFORMATION ON ECOSYSTEM SERVICE PAYMENTS / MARKETS?</p>	<p>Information is restricted and exclusive. What limited information exists is held by knowledgeable individuals in their respective government, private or public institutions</p> <p>The VPO DOE Office (First Floor IPS Building, Azikiwe St, Dar es Salaam, email: sotchair@africaonline.or.tz) is the Designated Focal Point for CDM initiatives. However, the Office does not have an information officer or equivalent available for the public. Moreover, although there have been some government-organized training sessions and workshops on CDM, only select individuals in government and business have been/are invited and the content of</p>	<p>Information tends to be of a restricted and exclusive nature. What limited information exists is held by knowledgeable individuals in their respective government, private or public institutions. There has been no information collected on biodiversity PES or its potential in-country</p>	<p>Information tends to be of a restricted and exclusive nature. What limited information exists is held by knowledgeable individuals in their respective government, private or public institutions. At present, printed information on water PES in Tanzania is limited to various studies carried out by donors (e.g. IUCN, GEF), and their contracted institutions (e.g. WWF Tanzania, UDSM). These studies are not available to the public</p>	

	sessions is not made public. This lack of information extends to copies of public documents, such as the CDM Implementation Guide, as they are not readily available on the web, in print or via soft copy (e.g. pdf)			
IF AVAILABLE INFORMATION, HOW ACCESSIBLE IS IT TO VARIOUS ACTORS? IN WHAT FORMAT DOES IT APPEAR? WHERE IS IT KEPT?	Not very accessible. There is no central library, website or public information desk. Some cursory information in the form of workshop reports is available on the websites of certain organizations (e.g. CEEST website). However, one needs to know what to look for	Non existent There are no knowledgeable ‘experts’ on Biodiversity PES in Tanzania	Not very accessible. There is no central library, website or public information desk. Some research reports are held by individuals and their institutions (such as WWF, IUCN and UDSM)	
WHO IS DISSEMINATING THIS INFORMATION?	The VPO DOE is planning to carry out some additional training sessions on CDM but attendance is by invitation only. CMEAMF (Conservation and Management of the Eastern Arc Mountain Forests – see Annex 3 for contacts) has taken the initiative of proposing a national PES task force based at VPO DOE. This task force is still in the planning stages	No person or institution is disseminating information on Biodiversity PES	No person or institution is disseminating information on Water PES	

REQUIRED ANNEXES

Annex 1. Overall SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats)

This annex should include an overall assessment of strengths, weaknesses, opportunities, and threats in terms of developing payments for ecosystem services within the country being inventoried.

Annex 2. Country Map with Locations of the Ecosystem Services Payments & Projects

Please also attach a map of the country in which the inventory was conducted that notes the location of the payments for ecosystem services payments and projects. The locations should all be numbered and a separate sheet should be attached with a list of the project numbers with the specific project names and locations (village, province, etc.).

Annex 3. Key Contacts

Please attach a list of key contact people related to the inventory information. For example, project leaders, experts, government officials, etc.

Annex 4. Bibliography

Provide a list of books, articles, websites, and other resources—separated into these four core categories—that would provide background material for the inventory.

OPTIONAL ANNEXES

Annex 5. Summary of Related Projects

This annex is where related ecosystem service projects should be listed if they do not fall within the formal definition of payments for ecosystem services (as explained at the beginning of this document). For example, related projects could include: CDM energy projects; green energy organizational efforts, and environmental certification initiatives.

Annex 6. Additional Descriptive Information on Projects (as available)

Please include any additional information that describes the projects and initiatives underway. Such information could include project briefs, reports, articles, etc. If attachments are included, please provide a list.

Annex 7. Characterization of Actors in Compensation for Ecosystem Services (only in this Inventory) This Annex briefly describes a useful PES conceptual framework created by S. Brent and shared at a recent World Agroforestry Center meeting held in Nairobi (2006). This framework is then applied to the institutions cited in this Inventory.

Annex 1.

Overall SWOT Analysis: an overall assessment of strengths, weaknesses, opportunities and threats in terms of developing payments for ecosystem services in Tanzania

Abbreviations:

GoT = Government of Tanzania

PES = Payments for Ecosystem Services

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> Most GoT sectors have developed, or are in the process of developing, new policy documents. These policies - dating from the late nineties onwards – are tangibly more holistic, socially inclusive and environmentally conscious than their predecessors. Thus, they tend to contain the language of: cross-sectoral coordination, social and environmental sustainability, natural resource protection, community involvement in/co-ownership of natural resources and their management, pro-poor socio-economic development, mitigation of the detrimental 	<ul style="list-style-type: none"> The fact that so many policy documents are either recently published or still in process, results in a general scarcity of necessary legal and regulatory frameworks stemming from such policy documents, such as Ministerial Acts and Program Documents. Thus, many sectors are still lacking rules and regulations, while others have not operationalized their recently created laws and regulations Where policies and their accompanying legal and regulatory frameworks exist, these are not always clear in content and rationale There is no legal or regulatory framework for PES in any 	<ul style="list-style-type: none"> The fact that so many policy documents are in the process of being created can represent an opportunity to contribute to their content, and to the content of subsequent legal, regulatory and administrative frameworks Tanzania has relatively low population densities and vast tracts of land, with inhabitants who are poor, vulnerable, and in need of livelihood opportunities. Such people could benefit from fair and viable payments for environmental management services provision (such as tree planting or soil erosion reduction) 	<ul style="list-style-type: none"> The Tanzanian Government still operates within an institutional culture that holds the belief that it is the sole owner of the country's resources – be they forests, savannas, rivers, wetlands, deltas, or marine ecosystems. Some of the detrimental consequences of this prevalent institutional culture include: (i) lack of clarity about GoT/ non-GoT benefit sharing arrangements for areas rich in resources which have been designated to private or public non-governmental entities for their management and benefit (ii) lack of clarity about benefits gained from wildlife and

<p>effects of economic growth on society and environment, and of openness to private sector participation in natural resource management and socio-economic development</p>	<p>sector of Tanzanian government, whether this pertains to finances, natural resource management, energy or land</p> <ul style="list-style-type: none"> • Too much decision- making power is relegated to upper-echelon staff within GoT, and too many of these individuals exercise their power without due transparency or constancy • There is insufficient accountability and transparency in governance and inadequate adherence to the rule of law. Thus, even where policies and their accompanying legal and regulatory frameworks exist, rules are not always followed, while those who disobey or circumvent the rules are not always held accountable • There is a general lack of funding with which to finance PES information dissemination, legal advice or technical expertise to the public, and no private providers of these in Tanzania • Whether self-designated or 		<p>biodiversity by independent individuals, groups and communities – GoT still states that it owns all wildlife in Tanzania (iii) lack of transparency and rule of law in tender, application and permit processing for natural resource management areas (iv) too much decision-making power concentrated in particular GoT individuals, such as the Director of Wildlife or the Minister of Lands</p> <p>Among acquisitive individuals, Tanzania's natural resources are still regarded as the country's prime source of wealth. Private enterprises which gain from such natural resources– especially those owned by citizens with high-level connections – have too much influence over/ overlap with government. Incidents of bribery and illegal circumvention of the law are too frequent, creating a disincentive among others to follow due legal procedures</p>
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	<p>appointed, there is no public or private broker linking sellers of ecosystem services with overseas buyers (in contrast, see BEA International, Kenya at www.beainternational.org)</p> <ul style="list-style-type: none"> • There is limited awareness of PES among conservation, energy and natural resource oriented sectors of GoT, INGOS, NGOs and the private sector and virtually no awareness of PES among sectors of GoT, INGOS, NGOs and the private sector dealing with poverty reduction, economic growth, small enterprise development or health 		
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Annex 3.
Key Contacts
(in alphabetical order by organization or institution, beginning with the left-hand column)

CARE Tanzania Balaram Thapa Director of Programs Kinondoni Road, Dar es Salaam. bthapa@care.or.tz	Sokoine University of Agriculture (SUA) Department of Forest Mensuration and Management Zahabu Eliakimu Faculty of Forestry and Nature Conservation Zahabu@suanet.ac.tz Ph: +255 22 (0)23 2604648 Mob: +255 744 542 591
Center for Energy, Environment, Science and Technology (CEEST) Mr. Hubert Meena Ph: +255 22 2667569 Mob: +255 744 461835 hemeena@yahoo.com ; ceest@ceest.com	Tanzania Electricity Supply Company Ltd. (TANESCO) Mrs. Katyega and Ngula +255 22 2451130/39 mkatyega@tanESCO.co.tz
Central Water Board, Ministry of Water and Livestock Development Mr. Msuya Director of Water Resources Ph: +255 22 2450244	Tanzania Traditional Energy Development and Environment Organization (TaTEDO) SLP 32794, Dar es Salaam energy@tatedo.org ; ease@tatedo.org Ph: +255 22 2700438 www.tatedo.org
Conservation and Management of the Eastern Arc Mountain Forests (CMEAMF) Dr. Felician Kilahama Fkilahama2000@yahoo.co.uk Mob: +255 748 472836 Dr. Neil Buttler Neil.burgess@wwfus.org Mob: +255 744 924257	Techno Serve Tanzania Thomas Dixon, Ph: +255-27-250-9657 thomas.dixon@tnstanzania.org
Environmental Protection and Management Services (EPMS) EPMS / University of Dar es Salaam Chemical Engineering Department/ Dr. Oscar Kibazohi kibazohi@yahoo.com ; epms@bol.co.tz Ph: +255 22 2772030 Mob: +255 741 296 883	The International Small Tree Planting Program (TIST) / UMET Ltd. PO Box 6049, Morogoro Mob +255 748466545 Email: DennisMnyanyi@tist.org
Forestry and Beekeeping Division, Ministry of Natural Resources and Tourism	University of Dar es Salaam (UDSM)

<p>Evarist Nashanda Senior Forest Officer Catchment Forestry and Mangrove Management Ivory Room, Nyerere Rd. P.O. Box 11004, Dar es Salaam Tel +255 22 2865165 Mob +244 744 694031 Email: cmms@tfs.go.tz</p>	<p>Economic Research Bureau Dr. Kassim Kulindwa P.O. Box 35096 Kulindwa@ud.co.tz; Kulindwa@udsm.ac.tz Mob: +255 741 338845</p>
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Lawyers' Environmental Action Team (LEAT) www.leat.or.tz

The International Small Tree Planting Program (TIST) www.tist.org

Mbomipa Wildlife Management Area www.mbomipa.info/

Pangani River Basin Management Project www.panganibasin.com

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Tanzania President's Office (includes policy summaries) www.tanzania.go.tz/contacts.htm

Tanzania Vice President's Office (includes policy summaries)

www.tanzania.go.tz/vpoffice.htm

Annex 5

Summary of Related Projects

1. Renewable Energy: a review of sector potential for PES

1.1. Country-level Legal, Regulatory, & Administrative Context for Ecosystem Service Payments

Do national laws, regulations, and administrative rules support / help with sales of this ecosystem service?

Potentially, Yes.

The National Energy Policy (2000) commits itself to developing legal frameworks, institutional structures, financial and fiscal incentives and research and development initiatives in support of the Tanzanian renewable energy sector including hydro, geo-thermal, solar, biomass and wind energy (section 3.2.4.). Moreover, the Commerce Section of the Policy (3.1.6.) promotes fuel switching via the efficient use of alternative [including renewable] energy sources. The Ministry of Energy and Minerals is currently in the process of developing a national strategy for energy policy and implementation, the main objective of which is to improve the welfare and living standards of Tanzanians. The strategy aims, among other things, to promote the application of alternative energy sources (Shuma, 2006)

GoT's VPO-DOE, which currently oversees all CDM activities in Tanzania, has unofficially stated that fuel switching projects are its first priority for CDM in Tanzania. Official CDM Guidelines for Tanzania came out in October 2004 and a National Adaptation Program for Action on Climate Change (NAPA) is scheduled to be launched this year (2006) (see above for more details on the CDM guidelines). Unfortunately, the CDM Executive Board and Steering Committee described as part of the Tanzania-CDM organizational structure are yet to be made operational.

Do laws, regulations, and administrative rules serve as obstacles to sales of this ecosystem service?

In some cases, yes. For example, TaTEDO cites the lack of national legislation on the use of renewable energy as an obstacle to renewable energy initiatives such as biomass fuel (TaTEDO website www.bcstimes.com/dailytimes/viewnews.php?category=1&newsID=975, last accessed April 2006). Indeed, there is, as yet, no national energy strategy or program, and no legislative framework to articulate and operationalize the National Energy Policy. Though progress is being made, it is slow. So far, only the Rural Energy Act (2006) has been passed. It specifies the institutional arrangements for the Rural Energy Agency, Board, and Fund. A Board of Directors and CEO for the Agency are currently being recruited (Assistant Commissioner, renewable energy, Ministry of Energy and Minerals (MEM)).

In addition, some ‘investment disincentives’ for small-scale energy projects in the energy sector policies and regulations were identified by workshop participants at the DFID-sponsored workshop on CDM. E.g. they stated that investments in power generation of less than 100KVA do not qualify for investor tax holidays (DFID/CEEST, 2002).

1.2. Degree of government support in decreasing risks associated with PES.

No government agencies are involved in decreasing the risks associated with renewable energy payment contracts, and there are no agencies that exist to regulate such contracts.

1.3. Institutions and capacity building needed to support sales of ecosystem services:

- Need for a legal office providing contractual advice to renewable energy projects applying for CDM or related funding
- Need for financial planning assistance in creating business plans for renewable energy project proposals
- Need for a national broker organization assisting projects and programs to find buyers in the renewable energy market
- Need for capacity building among private and public sector organizations on how to develop proposals for, and access potential investors in, small scale renewable energy projects

1.3. Training and education resources related to ecosystem services and payments

The project ‘Partners for Africa’ (www.partners4africa.org), which is implemented in partnership with the European Energy Initiative for Poverty Eradication and Sustainable Development, held a Policy Dialog Conference on ‘The Role of Renewable Energy for Poverty Alleviation and Sustainable Development in Africa’ in Dar es Salaam in June 2005. CDM was one of the options mentioned for financing such programs. In addition, DFID sponsored a Dar es Salaam workshop aimed at encouraging CDM energy projects to aid poverty alleviation (DFID/CEEST 2002). However, despite these -albeit brief- attempts at capacity building, to date, no project proposal has been submitted for CDM funding, and there have been no open market agreements or contracts, in the area of renewable energy in Tanzania.

1.4. Risk management, monitoring and evaluation for energy-related PES

There is no information on risk management and no experts on renewable energy monitoring and evaluation in country.

1.5. Technical assistance

There is no technical assistance pertaining specifically to energy-related PES. However, TaTEDO (Tanzania Traditional Energy Development and Environment Organization www.tatedo.org) is a 15 year old, well-regarded national NGO that promotes sustainable energy technologies and practices among small communities and is interested in renewable energy development. For example, TaTEDO runs a renewable energy enterprise development program, and has been making concrete steps towards integrating renewable energy services for poverty reduction and environmental conservation into its rural development plans, catering to local development needs and opportunities (website note by the executive director, www.tatedo.org last accessed May 2006).

1.6. Potential sources of financing for energy PES

Renewable Energy: The Rural Energy Fund (REF), part of the Tanzania Rural Energy Agency, is a funding mechanism initiated in the Tanzanian Energy Policy (2000) and detailed in the Rural Energy Act (2005), part V. The REF does not specifically target renewable energy initiatives, but can be used to fund such projects. The Fund is intended as a repository of financial resources for communities, small entrepreneurs, and local governments investing in the provision of energy services in rural areas. However, the REF is also intended as a source of funding for the Rural Energy Agency and Board running costs and for staff allowances and remunerations.

Sources of funding for REF

The REF aims to be financed by an annual GoT budgetary allocation, contributions from international financial organizations, levies of up to 5% of commercial electricity generation on the national grid and on specified isolated systems (the latter as determined by the Minister in consultation with the Minister of Finance) and by fees earned by the Rural Energy Agency.

Requirements

REF grants are earmarked for subsidizing the capital costs of, and provide technical assistance and capacity building for, rural energy projects implemented by private and public entities, cooperatives and local community organizations. Innovative, pilot, or renewable energy projects may be funded by 'special purpose' funds channeled by development partners (section 22-2). Operating or debt service costs of projects do not qualify for funding. No other details are provided as to the qualifying requirements of projects, except for the fact that 'evaluation criteria' will be published in bid tender documents.

Upward Limits of Support: not specified

1.7. Market potential: list of renewable energy projects in Tanzania seeking CDM and other GHG-mitigation credit Payments, (i.e. ‘sellers’).

(i). **Improved cooking stove and charcoal production programs** – donor-financed and/or outsourced by the Renewable Energy department of the Ministry of Energy and Minerals (MEM) to local implementing partners, including TaTEDO (see above for details on TaTEDO). Improved charcoal production and cooking stoves reduce both the amount of fuel wood (and, potentially, native forest biomass) consumed and the amount of CO₂ released into the atmosphere. Cooking stoves also have a number of positive pro-poor ‘leakages’ or side-benefits, including improved respiratory health, reduced household fuel expenses and a decrease in women’s work load. The MEM is interested in obtaining GHG-mitigation credits for some of these improved charcoal production and cooking stove programs. However, they lack the technical background with which to submit a proposal (Assistant Commissioner for Renewable Energy, personal communication).

(ii). **Co-generation of electricity** (biomass-generated + grid) by sugar cane companies. The Renewable Energy department of the Ministry of Energy and Minerals has submitted a proposal to GEF to scale-up co-generation among sugar cane companies on a regional basis. The department is aware that this project could qualify for CDM and other GHG-reduction credits but lack the technical expertise required to submit such a proposal (Assistant Commissioner for Renewable Energy, personal communication).

(iii). **Fuel switching.** Seller: Pwani Region fuel-switching program through Environmental Protection and Management Services or EPMS (a Tanzanian private company). EPMS Contact: Dr. Oscar Kibazohi (kibazohi@udsm.ac.tz). The project is in its planning stages and no potential buyers have been identified or contacted to date. The planned location(s) for the project are Pwani (Coastal) Region high schools, health clinics and dispensaries. EPMS’ overall mission is to address poverty reduction and environmental conservation simultaneously.

Structure of the deal: the seller is offering to switch fuel sources for school and health facilities from diesel to solar power, resulting in a green house gas mitigation scheme. Once a buyer is found, the money would be used to finance the installment of solar power to replace current diesel generators. The schools and health facilities would be offered a discount on their fuel costs, the amount of which would depend on the nature of the deal struck with the buyer. Roles of institutions: EPMS intends to work in partnership with local institutions, and to share some of the benefits of their project with those institutions. It intends to work with local NGOs and CBOs, should their participation be relevant. Partner NGOs and CBOs would participate in the final stages of project planning, and in implementation. They would also receive payment for any services rendered. The end users (schools, dispensaries, etc.) would, in turn, benefit from the fuel switching program by gaining a discount on current fuel costs. Regardless, the details are yet to be worked out and contingent upon the nature of the contract secured by EPMS. Local analyses of project benefits: none. Financial analyses or risk analyses: none. Support services accessed: none; however, Dr. Kibazohi, Chemical Engineering Department, UDSM has some expertise in measuring GHG mitigation from fuel switching and use of improved stoves, among other activities.

2. Water PES for Hydro-Power by Tanzania's Electrical Supply Company: an example of system malfunction

TANESCO (the Tanzania Electricity Supply Company Ltd.) a GoT electrical supply company, pays an annual 'user fee' based on the total installed capacity of its hydropower stations, which is effectively 555 MW (561 officially, but some power is lost to old equipment and leakage) and represents 70% of the total electricity supply. All of TANESCO's current hydropower for Dar es Salaam is drawn from two river basins, Pangani and Rufiji. The fee is paid directly to the Director of Water Resources at the Ministry of Water and Livestock Development in Dar es Salaam. A certain proportion of that money is then channeled to the Water Basin Authorities in the Pangani and Rufiji River basins. The River Basin Authorities are then supposed to utilize these and other revenue funds to carry out various basin management activities, including maintaining water quality and regulating water flows.

In practice, however, the Water Basin Authorities do not carry out river basin water quality management activities. One problem is insufficient funding. The proportion the Basin Authorities receive from the Ministry of Water and Livestock Development is unknown. Moreover, many 'users' default on payments. Then, there is some question as to whether that funding which is available is spent effectively. Finally, while the Basin Authorities have the technical expertise to manage and regulate water flows, the organization lacks the expertise to carry out environmental management activities of the kind that would be necessary to improve, or mitigate the threats to, water quality.

TANESCO is understandably not very pleased with a) the fact that they pay user fees while many other stakeholders default and b) that there is little or no direct return to the company for those payments made. Some of TANESCO's conservation management requirements include 1. Monitoring and maintenance of salt levels and other corrosive materials in the water, 2. Weed and algal bloom control – a growing problem in Pangani Basin, 3. Sedimentation – a growing problem in both basins and 4. Water flow; the amount of water flowing down the rivers is going down to unsustainable levels, with detrimental effects on supplies of electricity to the national grid (R&D department, TANESCO). While part of this is due to recent drought, unsustainable levels of upstream water usage for agriculture and livestock are also to blame.

Significantly, TANESCO high-level staff expressed a clear disinterest in engaging the company in additional Payments for Water Services activities, whether through private or public deals. In their view, the company already has 'enough headaches' on the electricity service supply side. The last thing it needs is to start investing in up-river water basin management, the monitoring and verification of which are viewed as highly challenging. Water basin quality management is seen as the responsibility of other GoT organizations, such as the Ministry of Water and Livestock Development, through its Water Basin Authorities. To complicate matters further, any proposed private deal (say, with upriver private landowners or local government authorities) would have to be approved by the TANESCO Board of Directors, which is appointed by GoT, or by the Cabinet itself. Since these are effectively members of Government, the belief is that they would be reluctant to approve such proposals,

preferring to channel revenue payments through traditional routes. Indeed, there would be an active disincentive to approve such schemes if they represented a loss of revenue to the government.

3. Certification PES for ‘environmentally sustainable’ coffee: hopeful beginnings

TechnoServe (an international non-profit business development organization) is currently supporting one of their clients, the Association of Kilimanjaro Specialty Coffee Growers (KILICAFE), to achieve Starbucks CAFÉ Practices certification, which includes environmental standards. TechnoServe is also interested in exploring other means of supporting client businesses to profit from sales of environmental services, such as carbon sequestration. The first step towards KILICAFE certification took place in 2003 when they began marketing specialty coffee to international specialty buyers who increasingly demand evidence of environmental and social sustainability. KILICAFE is based in both northern and southern Tanzanian coffee growing regions and comprises over 90 small-scale farmer business groups.

4. The mystery of ‘Kilombero CDM’

There are references made in the literature [this consultant found only two such references, listed below and in the bibliography] to a certain Kilombero Forest Company Ltd., sometimes referred to as “Kilombero CDM” that apparently planted more than 12,000 hectares* of eucalypt and pine spp. in the Mufindi and Kilombero regions of Tanzania, then applied for CDM GHG carbon credits (OECD, 2003). The company is elsewhere described as the Escarpment Forest Company, a subsidiary of the Norwegian company Tree Farms. The Tanzania project was continued and/or initiated in 1996 solely because of the availability of carbon credits. Most references to this company’s activities in Tanzania are made within the context of reviews of emerging projects responding to international agreements and mechanisms for green house gas mitigation. According to the reviews, the company had managed to gather a fairly poor reputation for itself in Tanzania for not paying adequate amounts of rent and exploiting poor workers, among other things. For example,

...These private sector projects have raised numerous problems, the most important concerning land ownership rights and asymmetrical information. The two *TreeFarms* projects have been criticized by a Norwegian NGO (NorWatch www.fivh.no/norwatch) for paying very low land rents, given the profit potential of the carbon trade...The projects were accused of distorting competition between plantations and agricultural use. With regard to implementation, the companies provided financing for planting, but follow-up costs at the end of the project lifetimes have apparently not been fully considered (Karsenty et al., 2003).

And

...The Escarpment Forestry Company, which is a subsidiary of Norwegian company, Tree Farms, has planted 1,900 ha. [sic] of *Pinus patula* and *Eucalyptus saligna* in Sao Hill, Mufindi and Kilombero districts, being the beginning of proposed carbon trading forests. The company is also

supporting the Tanzania Greenhouse Gas Action Trust (TAGGAT). However, serious concerns have been expressed, locally and internationally, on socio-political, ecological and economic benefits of the carbon forests. For one thing, the company has paid a paltry land rent of US \$ 1.9 per ha. The negotiated 99 years land lease has important sovereignty implications. However, the most serious concern is that the operations will exploit cheap labour and will contribute to further marginalization of the rural poor (Owino, undated).

The mystery lies in the fact that, in the period during which research for this PES inventory was conducted (Dar es Salaam, 2006), nobody in either the Tanzanian government, non-profit or private sector ever made reference to it. Even the Kilombero Valley Teak Company Ltd, which operates in one of the supposed 'Kilombero CDM' project areas, has never heard of it.

*The company is elsewhere quoted as having planted slightly less than 2,000 ha but having plans to extend the area planted to more than 87,568 ha in various sites (Owino, undated and Karsenty et al., 2003).

Sources:

Karsenty A., C. Blanco, and T. Dufour. 2003. *Instruments Related to the United Nations Framework Convention on Climate Change and their Potential for Sustainable Forest Management in Africa*. CIRAD-Forêt, Paris, France/Forest Products Division, FAO, Rome [Note the original version in French was circulated in 2002]

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Annex 6.

Additional Descriptive Information on Projects

1. Kilombero Valley Teak Co. Ltd. Additional Information on Certification

ISO (International Organization for Standardization, www.iso.org) is a WTO-affiliated, non-UN based international organization which began in London in 1946 with the aim of setting industrial standards. It now coordinates a network of national standards institutes in 150 countries. The institution aims to provide a bridge between business needs and government regulations. Compliance is voluntary. ISO 14001 Certification is specifically designed to enable organizations to meet their environmental management challenges (e.g. minimize their harmful effects on the environment, by showing active and continuous improvements on their environmental performance).

2. Wildlife Management Areas: Step by Step Establishment Procedures

2.1. LEAT version

Vincent Shauri of the Lawyers' Environmental Action Team, Tanzania (LEAT) provides the following Step by Step Procedure for WMA Establishment:

In a few pilot projects, the Wildlife Division adopted a six step procedure: 1) First, village assemblies meet and make a resolution to form a WMA. 2) The resolution is then sent to the District Council for ratification. 3) Surveys of the WMA area are then carried out and a village landuse plan prepared and approved by the District Council. 4) The latter forwards the surveys and landuse plans to regional authorities and 5) to the Minister responsible for natural resources. 6) The Minister then makes a declaration that must be published in the government gazette to establish the village WMA. Procedures to establish WMAs or obtain licenses and easements are lengthy and will lead to unnecessary delays and bureaucratic red tape (Shauri, 1999) (<http://www.lead.or.tz/publications/wildlife.policy/community.interests.php> Last visited March 2006).

2.2. Corrections

The Technical Adviser for Wami Mbiki Society WMA made the following corrections and clarifications on the above version in April 2006:

There are two parallel processes required to establish a WMA, involving two separate government ministries:

i) Gazetting the WMA through the Ministry of Natural Resources and Tourism, which requires registering the WMA as an Association (effectively a CBO) and presenting the Land Use Plans approved by the Ministry of Lands and Human Settlements

ii) Obtaining approval of the Land Use Plan, and a Land Certificate, from the Ministry of Lands and Human Settlements

Corrections on the 6-step process

Step 2): The resolution to form a WMA does not require ratification from the District Council.

Step 3): Village Land Use Plans, which include boundary demarcations and descriptions, maps, and both general and specific management plans, must be approved by the *Ward* and District Councils, then forwarded to the *Ministry of Lands and Human Settlements* for approval.

3. The International Small Tree Planting Program(TIST) Greenhouse Gas Sale Agreement with Farmers. Source: TIST “New Group Information Packet, revised February 16, 2004”

Group: Village: TIST Group Number: District: TIST Group Center Code: Region:

This Small Group will transfer to I4EI “emission reduction credits” each year this agreement remains in effect. I4EI will pay the Small Groups 4/= per tree each quarter for each year this agreement remains in effect.

Terms and Definitions for this Agreement

1. CO₂ is a Greenhouse Gas (GhG) that needs to be removed from air.
2. Planting trees removes CO₂ from the air and stores it as carbon in the roots, trunk and limbs.
3. Sustainable agriculture (improved farming practices) also removes CO₂ from the air and stores it as carbon in the soil.
4. The removed CO₂ can be quantified and turned into “emission reduction credits” (ERCs), which can be sold.
5. I4EI will pay Small Groups to remove CO₂ from the air and store it as carbon in the trees and the soil.
6. For the first 20 years of this agreement, I4EI will pay Small Groups based on the number of live trees the Small Group has at the end of each calendar quarter. At the end of each calendar quarter, Small Groups will count the number of live trees they have and fill-out and submit to I4EI a complete and signed “Emission Reduction Credit” form (“ERC form”). I4EI shall pay to Small Groups 4/= per tree, based on the ERC form and any necessary corrections made by I4EI or independent auditors.
7. After 20 years, I4EI will continue to pay for 1/2 of the trees at the rate of 4/= per live tree per quarter and pay for 1/2 of the ERCs made during the year at the world market price established on the 20th anniversary of this agreement, and every 10th anniversary thereafter, less costs associated with quantification, verification and marketing the ERCs.
8. Small Groups own the trees, and the fruits, nuts, medicines and all other products from trees. I4EI and its transferees will own the rights to the stored carbon and, therefore, the CO₂ ERCs. If the Small Group cuts down the trees, the carbon is released and all of the CO₂ ERCs accrued to date for those cut-down trees will disappear. The groups should not cut down the trees or use the trees for firewood or timber, except when implementing best practices for agro-forestry such as trimming the trees.
9. In order for CO₂ ERCs to have value, they must be certified by the Small Group, I4EI, and

possibly another auditor. An ERC can be certified if:

- a. Records show that tree planting and improved agriculture began after 1 January 2000.
 - b. I4EI quantifiers and external validators can count the trees at the locations specified by the small groups, and can verify the improved agriculture practices of the group.
 - c. Small Groups sign forms to verify how many trees are alive, and how many hectares the group has using sustainable agriculture practices.
 - d. Small Groups records verify that the group planted the trees, and protects the trees.
10. I4EI will count how much carbon is stored so it can be verified, and the ERC sold.

Representations and Warranties

The Small Group will:

1. Plant trees and raise them to maturity. Some trees will live over 100 years!
2. Small group members will implement sustainable agriculture on at least 1 acre per member.
3. Replant trees that die, are burned, or destroyed by animals or people each year for the next 20 years.
4. Participate in TIST training and other programs to help develop and use best practices.
5. Transfer the ERCs that I4EI paid for to I4EI and not to another buyer.
6. Transfer this agreement, and any future ERCs from all group activities, to I4EI if the group stops working with I4EI.
7. Keep records on the number of acres using sustainable agriculture, the number of trees planted, when they were planted, and number surviving.
8. Take auditors and validators to visit all places where TIST trees are planted, when asked.
9. Notify I4EI when group members move or leave land where TIST trees are planted.
10. Maintain bank accounts with I4EI-authorized banks in order to receive payments.
11. Help I4EI describe to other groups how to do sustainable agriculture, how to plant many trees and keep them alive. I4EI will:
 1. Pay auditors to count trees at regular intervals, and will maintain data on GhG quantities.
 2. Maintain Small Group registration information.
 3. Record Small Group participation in training, tree planting, and sustainable agriculture.
 4. Make the ERCs a valuable asset for sale to Buyers.
 5. Obtain government permissions for ERC transfers.

Termination of this Agreement

I4EI may cancel this Agreement at any time and stop making payments to any group. If this happens, the small groups will then own the rights to any future ERCs not already paid for by I4EI. I4EI will cancel this agreement but retain rights to future ERCs if:

1. Small Groups fail to notify I4EI when membership drops below 4 members.
2. New landowners do not allow Small Groups to maintain trees and transfer ERCs to I4EI.
3. Small Groups refuse to supply required information on best practices and compliance with the program.
4. Small Groups have sold ERCs for TIST trees to another buyer.

Small Groups can end this agreement by:

1. Transferring the agreement to another Small Group.
2. Writing to I4EI that they have not received payment within 90 days of submitting their ERC form, and I4EI does not correct the payments within 90 days from the date of receiving the letter from the Small Group stating they have not received proper payment.

I4EI can transfer the rights in this agreement and any resulting ERCs to other organizations without consulting the small groups.

Signed,

(Authorized I4EI Representative, Authorized Small Group Representatives)

Annex 7.

Categorization of actors in compensation for ecosystem services: conceptual framework

Source: Brent, S. 2006 *Pan-tropical scoping study of compensation for ecosystem services: conceptual foundations*. Third draft, World Agroforestry Centre, Nairobi

Brent (2006) identifies three generic stakeholders in compensation for ecosystem services: ecosystem service modifiers, ecosystem service beneficiaries and ecosystem service intermediaries. Following is a summary description of each stakeholder type, and a table which categorizes the actors identified in the Tanzania PES inventory as per Brent's conceptual framework. Note that individual persons, communities or corporations may simultaneously be ecosystem service modifiers, beneficiaries or intermediaries.

Ecosystem service modifiers: Entities (individual, family, group, community) whose actions modify the quantity or quality of the ecosystem services available to ecosystem service users. These can be characterized by a) location viz-a-viz the ecosystem, b) cause-effect relationships between actions of the modifiers and changes in the ecosystem, c) rights to modify the structure of the ecosystem and to benefit from the changes it generates, d) discretion over the way the ecosystem is used and managed, e) level of human well-being, poverty and deprivation, f) demographic composition (age, gender, ethnicity) and/or g) type and strength of their social organization.

Ecosystem service beneficiaries: Entities (individual, family, group, community) who benefit from the ecosystem services generated by an ecosystem. These can be characterized by a) the types of ecosystem services they benefit from, b) location, c) degree and type of dependence on the ecosystem service, d) access to alternative supplies, e) level and trends of human well-being/deprivation, f) strength and type of property rights to the ecosystem service, g) discretion over the way that ecosystem is used and managed, h) demographic composition (age, gender, ethnicity), i) type and strength of social organization and/or j) action resources viz the ecosystem services and their relations with others.

Ecosystem service intermediaries: People (public authorities, non-governmental organizations, projects) that directly or indirectly shape interactions among ecosystem service modifiers, ecosystem service beneficiaries, and the ecosystem itself. These people can be characterized by a) their objectives and perspectives, b) their source of authority, and/or c) the type of influence they have on the behavior of ecosystem service modifiers and ecosystem service beneficiaries (Brent, 2006).

Categorization of actors in compensation for ecosystem services			
Individuals, families, groups, and communities included in the Tanzania national PES inventory, 2006	Ecosystem service modifiers	Ecosystem service beneficiaries	Ecosystem service intermediaries
Multi-lateral buyer: World Bank BioCarbon Fund			X
Bilateral and inter-governmental donors (e.g. IUCN, UNDP, DANIDA, NORAD, USAID, DHA,			X
National and International funds and grants (e.g. CEPF, National Forest Fund, TASAF, GEF, EAMCEF, Rural Energy Fund)			X
Government Ministries and Offices (e.g. MNRT, MEM, VPO, Water and Livestock Development, NEMC)			X
Academic Institutions (e.g. UDSM, SUA)			X
International NGOs (e.g. WWF, CARE)			X
National NGOs (e.g. WCST, TFCG, LEAT, TaTEDO, CEEST)	X		X
Private Company: Kilombero Valley Teak Co. Ltd.	X	X	
Private Company: EPMS Environmental Protection and Management Services	X		X
Government Company: TANESCO (Tanzania Electrical Supply Company)	X	X	
TIST (Private company/Development Project?)	X	X	
WMA associations	X	X	
Communities with JFM agreements	X	X	
Communities with VLFRs	X	X	
Environmental Product Certification projects (e.g. KILICAFE)	X	X	
Conservation programs (e.g. PEMA, EACAMP, CMEAMF)			X