Table: List of abstracts of articles in the MF Bulletin, January 2010 issue

	Title	Author	Country	Type of PES	Abstracts
1	Paying for Environmental Services: Using the Contingent Valuation Method to Estimate Willingness to Pay for Conservation in the Sho'llet Forest, Peru	Gabriella Torres Alva (London School of Economics)	Peru (Latin America)	Water (shed)	In Sho'llet Forest, Peru, the contingent valuation survey method was used to assess low-income people's willingness to pay for ES, especially in addressing the impact of construction of high voltage electricity towers on the forest. After clearance thirteen years ago, no vegetation has grown in the cleared path **Lessons learnt** are not yet available. However *this study may have contributed to the methodological development for quantifying willingness to pay in PES mechanisms.*
2	A Case of Voluntary Collection for Environmental Services, Zapalinamé, Mexico	Cecilia Ochoa Blackaller (Profaunna)	Mexico (North America)	water	In Sierra de Zapaliname, Mexico, the NGO Profaunna raised funds from voluntary payments on water bills since 2002 for conservation activities such as controlling forest fires, reforestation, environmental education. The monthly income is about 110,000 Mexican Pesos (approx USD 9.000). In 2008, the Comision Nacional Forestal agreed to provide matching funds to the amount raised voluntarily for the next five years. This case shows that matching voluntary and government support can do wonders. However the sustainability of voluntary payments is an issues as it is not mandatory.
3	Conservation of water sources in Moyobamba: A brief review of the first experience in payments for ecosystem services	Fernado Leon (Ministry of Environment, Peru) Isabel Renner (Sustainable Rural Development Programme/GTX, Peru)	Peru (Latin America)	Water	In the Alto Mayo valley , Moyobamba, Peru a payment mechanism was introduced for sustainable forest use and reduction of water contamination by livestock and coffee wash. A committee was set-up by inhabitants of Moyobamba from the public meeting to implement the PES scheme. A fee on the water bill was introduced in August 2009. Income is managed by the steering committee. The regional government of San Martin covers the high transaction costs of the switch from slash and burn to agroforestry. This case shows that government involvement is a key for success. It is not clear to what extent the fee is voluntary.
4	Valuing Watersheds in Rural Landscapes: A Case Study from Nepal	Navraj Pradhan (ICIMOD) Isabelle Providoli (ICIMOD) Bimal Regmi, Gandhiv Kafle (LIBIRD)	Nepal (Asia)	Water	The Rupa Lake Fisheries and Rehabilitation Cooperative in Nepal is involved in an PES scheme to reduce sedimentation and pollution of the lake and its wetlands, improve the water quality, increase fish production and generate alternative income. The Cooperative makes direct and indirect payments to different upstream groups (community forestry groups, schools and communities) for watershed management activities. Communities adopted agroforesty, organic farming, build check dams and use bioengineering for flood and landslide control, engage in alternative income activities such as bee keeping and goat rearing. It has benefited 5.000 households and improved their socio-economic status since 2006. The payments to the cooperative are reported to be voluntary. The PES scheme seems to be a successful example of PES scheme.
5	Payment for Forest Environmental Services: A Pilot Government Policy in the Dong Nai River Basin, Vietnam	Nguyen Tuan Phu Nguyen Chi Thanh (Ministry of Agriculture and Rural Development, Vietnam)	Vietnam (Asia)	Water (shed)	In 2009, the Vietnam government initiated a policy to conserve soil, water, natural landscapes and biodiversity in the Dong Nai River System. The Prime Minister of Vietnam issued a Decision 380 dated 10 April 2009 on the policy for payments for forest environmental services. During the pilot in Lam Dong province, a fee has been imposed of 20 VND/KWh and 40 VND/m3 of water supplied and 1% of revenues from selected hotels in Dat Lat city. The Forest Protection and Development Fund of Lam Dong province controls incomes and pays providers of forest environmental services USD 15/hectare/year. In the first 9 months of 2009, total payment was USD 1.5 million. About 3,000 local households received payments protecting 220,000 hectares of forest. *This is a good example of how a pilot work can influence policy development/refinement.*
6	Protecting Environmental Services in Vittel, France: A Business Opportunity for the Private Sector	Danièle Perrot-Maître (*IIED)*	France (Europe)	Water Agriculture	The Vittel water company, owned by Nestle, provides incentives to farmers in France to change their farming practices from intensive to extensive farming in order to reduce nitrate contamination of water sources. As incentives for farmers Vittel took over ownership of land from creditors and provided indebted farmers with long term use right. Payments amounted to 200 Euros/ha/ year for a five-year transition period. Success factors were the presence of strict legislation on mineral spring water and the formation of a locally based intermediary institution.Moreover Vittel entered into dialogues with farmers on the needs and concerns. The result is that Vittel was able to protect its strong brand connections to "Grande Source" area. *This is good example of engagement of the private sector in PES. Although the case study has specificities that may not apply elsewhere.*

7	Payments for the protection of watershed services: A potential tool for improving protection of "paper parks" in Latin America?	Catherine Schloegel *(Foundation of Cordillera Tropical in Cuenca, Ecuador)*	Ecuador	Water (shed)	In Ecuador the organization Fundacion Cordillera Tropical (FCT) convinced in 2008 the Hydroelectric company Hidropaute to support the conservation of the six Nudo del Azuay watersheds and reduce sedimentation of the Daniel Palacios Dam. Direct payments of $30/hectare/year were made to landowners in upstream watersheds for adopting conservation practices. Payments were derived from petroleum profits and therefore the long term sustainability needs to be reviewed. *This is an example of how PES can be modified (or needs to broaden its definition – based on trust, and co-benefitting and co-investment*
8	Complementary Environmental Service Reward Programmes for Sustainable Mosaic Landscapes in the Sierra Madre de Chiapas, Mexico	Yatziri Zepeda, Goetz Schroth, Ricardo Hernandez (*Conservation International)*	Mexico (North America)	Water (shed)	The National Forest Commission (CONAFOR) initiated a PES program in Sierra Madre (SM)-Mexico focusing on Hydrological Environmental Services Program (PASH). It provides 22 to 29USD/hectare/year and in the period 2003- 2008, USD 380 million has been paid to communities and small landowners for avoiding deforestation and watershed protection. In addition, the involvement of local NGOs such as cooperative Ambio in collaboration with partners has designed and implemented the Scolel' Tel project, which uses the Plan Vivo system to certify carbon projects with farming communities in Chiapas and Oaxaca, Mexico. Ambio's BioClimate Fund – a market place for sellers and buyers of credits, which is still growing – has sold over 77,000 credits between 1997-2006. The challenge for the project is to target buyers for the multiple benefits of Plan Vivo (climate change mitigation, poverty alleviation, and biodiversity conservation) to garner a higher price per credit.
9	Using water funds to finance watershed conservation in the Andes and Costa Rica	Silvia Benitez, Alfonso Blanco, Jorge Cole, Mercedes Ibanez, Juan Lose Rodriguez *(The Nature Conservancy)* Stephan Halloy (*The Nature Conservancy and Universidad Nacional de Chilecito, Argentina*)	Latin America	Water Co2	The Nature Conservancy promote water funds to protect land and water, biodiversity, social justice and distributional justice. The institutional mechanism was established which aims to bring together water users to pay for conservation on the voluntary basis. The funds are then used for water benefits, landscape restoration, fundraising and governance. In Ecuador, Fondo para la Conservación del Agua (FONAG) help to ensure long term water services for the population of Quito. It receives money from government, privation companies and NGOs. The project achieved an endowment of $5.4 million from 2000 to 2008.In Terraba Watershed of Costa Rica, the communities received support from private sector such as pineapple grower and PINDECO (Pineapple Development Corporation) for forest fire control and reforestation. *This is an example of how PES can be more than financial benefits – benefit sharing and co-investment*
10	Local governmental-led PES for watershed protection: Cases from the Philippines	Delia C. Catacutan *(World Agroforestry Centre)* Grace Vilamor (*World Agroforestry Centre and Center for Development Research, University of Bonn)* Caroline D Pinon *(World Agroforestry Centre)*	Philippines (Asia)	Water	The article describes two case studies in the Philippines to conserve watersheds. The city government in Baticulan Watershed on N-E Negros levied a fee of PhP 0.75 on water bills. A portion of the amount is allocated to the Watershed Development and Environmental Protection Fund, which supports the implementation of the City Master Development Plan. The remaining fund was used for watershed rehabilitation. In Manupali Watershed, the Local Government enacted a policy to conserve farming. The incentives were provided to the individuals and groups that meet the criteria for sustainable agriculture. A success factor is the developments of locally transacted agreements which have more potential in meeting voluntary and conditionality criteria of an effective PES system. Caution is required to ensure that both buyers and sellers are aware of the reasons for PES not yet another tax scheme.
11	The Cloud Forests of Quillosara: A Local Government Initiative to Establish a Compensation Mechanism for Environmental Services in Ecuador	Robert Yaguache, Mario Cossio (*SNV)*	Ecuador	Water	Loja province, Ecuador suffered from deforestation and water scarcity. Celica's City Hall initiative established a process to rehabilitate the water ecosystem. A committee for environmental services was created to implement a water protection policy through water billing and attracting external financing. For 320 hectares of land, compensation was provided of USD 0.09/m^3 and the remaining 290 hectares purchased from external sources. The funds were used for leasing and purchase of land, building of infrastructure and environmental education. By 2008, 28 hectare have been protected and 100 hectares purchased.
12	Using Payments for Environmental Services to improve conservation in a Tunisian Watershed	Lelia Croitoru *(World Bank) Hamed Daly Hassen (INRGREF)*	Tunisia (Africa)	Water (shed)	A PES approach in the Barbara Watershed was incorporated in the conservation policy of the Tunisian government It promoted adoption of conservation measures such as building stone walls and planting acacia in gullies in watershed area. The Office for Sylvo- Pastoral Development of North Wet subsidized 80% of investments for the conservation measures. However as the compensation was below opportunity cost, farmers didn't adopt new practices. The lesson learnt from this case are the following: - pay for trees that survive instead of trees planted

					- pay should be sufficient to make the practice attractive for farmers, between TDN 100-200/ha/ year - payment every 5 years rather than a one-time payment in the beginning, - introduce a PES scheme to convince water users to pay for the services that they are already receiving for free; - strengthen the user rights over lands in gullies to ensure that benefits from acacia are not collectively owned. User-financed PES mechanism could be established where the downstream users pay to the upstream farmers for conserving the watershed. *The project provides useful and practical recommendations/guidelines.*
13	Payment for Environmental Services for Sustainable Water Management in Loktak Lake, Manipur	Ritesh Kumar *(*Wetlands *Int.-S.Asia)*	India (Asia)	Water (shed)	The Loktak RUPES II initiative in Manipur, India was launched to promote sustainable water management for ecological restoration and poverty alleviation. Total annual benefits from the lake in 2006-2007 were assessed at Rs 600 million, indicating a significant underestimation of the contribution of Loktak Lake to the regional economy. Actual cost of hydropower generation is 400% more than presently charged (Rs 5.16/unit against Rs 0.96/unit actually charged). The hydropower-producing company and the lake management authority are potential buyers and sellers of sustainably supply of water for hydropower, thus providing a suitable PES instrument to complement ongoing conservation efforts and rationalise water use for various developmental purposes. The lesson learnt is the importance of identifying underestimation of the overall contribution of environmental services. This is likely to be applicable in similar PES-like environments
14	Compensation for Hydrological Services in Bolivia: The Comarapa Municipal Water Fund	Maria Teresa Vargas, Mauricio Forno, Stephanie Secomb and Julian Torrico (Fundacion Natura Bolivia, Bolivia)	Bolivia (Latin America)	Water	Bolivia's Comarapa watershed faces constant pressure from soil erosion, increased sedimentation, contamination, and loss of fertility and biodiversity. In February 2008 local authorities approved the creation of a Water Fund, with the objective of sustaining and reviving the environmental services of the watershed through conservation of native forest and restoration of degraded ecosystems. The Caballero Public Services Cooperative Ltd., a pre-existing entity with legitimacy and administrative capacity, administers the Fund. Resources are derived from the annual contribution of the Municipal Government, a local NGO and from contributions of members of the water cooperative. In its first two years, the fund collected US $22,400 from domestic water users, which compensated 10 families for putting 628 hectares of cloud forest under permanent conservation. The size and type of each compensation package was negotiated with each farmer.
15	Using Waste Land for Afforestation: Assessing the Results of the First Registered CDM Forestry Project	Chogying Chen (*University of Singapore)*	China (Asia)	Carbon	The CDM/AR project in the Guangxi Zhuang Autonomous Region China, established in 2006, focuses on carbon sequestration and afforestation. Over 4.000 hectares of multifunctional trees were planted in waste land. Rewards flow from buyers of Certified Emission Reductions (CER) to the Afforestation Entities (AE) as well as to the local households. Poor households benefit to the same degree as well-off households, since the wastelands belong to the collective, not to individuals. They benefit in 6 ways: rent from AE, incomes from selling turpentine, firewood and CERs, and incomes from participating in tree planting and management activities. The project's sustainability may be point of attention given the low investment by the AEs.
16	Delivering Environmental Services in Landscapes: Lessons Learned from Experience with PES through IUCN's Livelihoods and Landscapes Strategy	David Huberman; Gill Shepherd *(IUCN)*	Guatemala (Latin America) Niger (Africa)	CO2 water	The article describes n IUCNs experience with PES projects on Livelihood and Landscape Strategy (LLS). It pleads for a landscape approach to PES in reconciling global, national and local aspects, integrating social, cultural, geographic, legal, political, historical and economic concerns, and integrating water and carbon markets in forested landscapes. The carbon and water related approach can be adopted in Guatemala having forest landscapes and wetland. In the Guinean landscape of upper Tinkisso basin, Niger a pilot study has been proposed for a local level PES scheme to preserve forest cover in degraded hills. Recommendations include: - target carbon-motivated incentives to areas where water related ecosystem services are delivered (e.g. filtration, flow regulation, storm buffering) and use the carbon market to support conservation efforts - the carbon market will only contribute to the sustainable development of forest landscapes when the governance structures ensure an equitable distribution of benefits - institutional capacity needs to be strengthening if carbon-related opportunities are to be seized; - create 'landscape labels' that can be used to market different goods and services provided in a given area; - the landscape level integration of different ecosystem goods and services could serve as a means of capturing tourism –related benefits;

17	Organic Farming: Enhancing Environmental Services from Farmland in Austria	Gerhard Hovorka Thomas Dax *(Federal Institute for Less-Favoured and Mountainous Areas, Austria)*	Austria (Europe)	Agriculture	In Austria organic farming boomed since the early nineties with over 70% of organic farms located in mountain regions. Organic farms comply with the EU regulation for production, labelling and inspection. Production is monitored by independent control agencies. The label 'from organic production' supports marketing and promotion of organic goods. The support for organic farming under the Agri-Environmental Programme is a core element of the PES program in Austria. In 2008, the compensation averaged 240 Euros/hectare or 4.640 Euro per organic farm with a total of 88.5 million Euros (17% of the AEP). The lesson learnt is that organic farming can work as a PES but requires *a certification process, auditing* and creating demand for premium-priced organic products. Govt. Subsidies like AEP may be needed to compensate for these additional risks and tasks. This example shows that organic farming in mountain regions can be a basis for sustainable mountain development with adequate government support and controlling and marketing measures in place.
18	Using a Biogas Scheme to Control Soil Erosion on Sloping Lands, North Vietnam -	D. Orange, L. Dardenne, Nguyen Duy Phoung, P. Jouquet, Tran Duc Toan (*International Water Management Institute, Vietnam)*	Vietnam (Asia)	Agriculture	To address the problem of animal waste in Hoa Binh Province of North Viet Nam, a PES-like scheme for pig farmers has been developed since 2006. Biogas technology is promoted to manage liquid waste, control odours, and to improve well beings. The use of biodigesters will compel farmers to change farming system and result in provision of environmental services and increased household income. This is a pilot and expected benefits include non-contamination of water sources, elimination of stench, improvement of nitrogen cycling, and control of soil erosion through use of compost in marginal sloping areas.
19	Introduction to the SARD-M Project: An Initiative of FAO, Rome, for Remuneration of Positive Externalities in Mountain Regions	Jean Gault (SARD-FAO)	France and Switzerland (Europe)	Agriculture	The SARD-M project's Adelboden Group in October 2007 issued a set of recommendations on 'policies' and 'institutions and processes' for the remuneration of positive externalities generated by agricultural and rural activities in mountain regions. Main recommendation are: - focus on identifying a buyer; - the level of remuneration must be higher than the opportunity cost of the provider and lower than the benefits of the user - transaction costs must be as low as possible - the remuneration system must be compatible with WTO agreements, i.e. trade non-distortive.
20	Can Payments support Environmental Services from Farmland?	Frank van Schoubroeck (*ILEIA)* Mathilde Maijer (*Consultant)*	Tunisia	Agriculture	The ILEA paper compares the ecosystem services in the Gafsa oasis in Tunisia, provided by mono-cropping families with those of multi-cropping families. it contains an hypothesises about what impacts various PES mechanisms – direct payments and subsidies; ecolabels; and tax mechanisms and tradable permits - might have and draws lessons from that. Lessons learnt are - The multi-cropping system binds carbon more than mono cropping system - The family with long term lease contract replicated traditional farming methods with good ecosystem services, the family with a short term contract was in no position to invest in different crop layers and even destroyed them to get at least a short term benefit from the land they had in use; - in general, more than de jure land rights, de facto control is decisive for a PES scheme.
21	Honeybees as Providers of Pollination Services	Uma Partap (*ICIMOD)*	Hindu Kush Himalayan Region (Asia)	Agriculture	The article is based on pollination services of honeybees in Hindu- Kush Himalayan region. The study carried out by ICIMOD reveals that honeybees are essential for pollination mechanism and increases the crop productivity. In Himanchal Pardesh, the beekeepers are paid US $ 12/one colony of honeybees for apple pollination during each flowering season by the farmers. In the countries of HKH region, the use of beekeeping for crop cultivation is relatively new effort and the pollination services increases the production of apple and other fruit crops by 20-50 percent
22	The Voluntary Gopher Tortoise Habitat Credit Trading System	Todd Gartner (American Forest Foundation)	USA (North America)	Biodiversity	In Georgia and Alabama, USA, the American Forest Foundation and Longleaf Alliance implement a habitat credit trading system on family forestlands. It aimed to develop a voluntary incentive approach for conservation of non-listed species such as gopher tortoise by generating new income options for private landowners. This was to address the primary causes for gopher tortoise decline, conserve a suite of other species, while providing valuable environmental services as conservation of forests, timber products. Success factors are the set up of an advisory group of stakeholders for consultations throughout the entire process. as well as a framework for monitoring, evaluation and adaptation protocols.

23	Snow Leopards and 'Himalayan Homestays': Catalysts for Community-Based Conservation in Mountain Areas	Rinchen Wangchuk, Rodney Jackson, Brewer Lama *(The Snow Leopard Conservancy)*	India (Asia)	Biodiversity	In Ladakh and Sikkim, India, the Snow Leopard Conservancy (SLC) and Khangchendzonga Conservation Committee (KCC) carry out PES schemes for the conservation of the snow leopard. In the 'Himalayan Homestays" programme, households benefit from tourism in return for their conservation efforts. About 10-15% of homestay profits go into a village conservation fund that supports tree planting, garbage management and establishment of a village wildlife reserve. The fund can be accessed, to establish e.g. predator-proof corrals, pay a fulltime herder to guard livestock in high summer pastures, or insure livestock like yak through a national livestock Insurance scheme On average $230 is generated during four month tourism season. KCC in Sikkim worked at broader scale to conserve ecological balance. A lesson learned is that when economic returns are tangible communities assume their role as conservation partners and serve as effective environmental stewards.
24	Rewards for ecosystem services and collective land tenure: Lessons from Ecuador and Indonesia	Kelly Wendland (*University of Winscosin-Madison)* Lisa Naughton (U*niversity of Winscosin-Madison)* Luis Suarez (*Conservacion International – Ecuador)* Suyanto (*World Agroforestry Centre)*	Ecuador and Indonesia	Biodiversity water	Programs that provide direct rewards in exchange for ES offer potential advantages but also pose risks. Case studies from Ecuador and Indonesia highlight key land tenure issues and lessons for future projects:. The biodiversity-rich Gran Reserva Chachi in Northwestern Ecuador comprising 19,700 hectares of land faces pressures from timber companies and expansion of oil palm plantations with little economic benefits accruing to local communities. GTZ and Conservation International in collaboration with local communities created a biodiversity reserve with payments of USD 5/ ha/ year. Previously, the Subir project of USAID/Ecuador enabled displaced chachi people to acquire formal communal land titles to legitimize the establishment of the reserve. Training of community members in land rights and enforcement was necessary to increase their ability to enforce property rights and exclude encroachers. Illegal logging has declined. Significant investments have been made by partners to mediate the legal process when land invasions occur. In Lampung Provinces of Indonesia, the social forestry scheme "Hkm" was started to minimize conflict between farmers. In 2004, only 5 farmer groups obtained Hkm permits because the process was slow and costly (four years and cost $55/household). The Rewarding Upland People for Environmental Services (RUPES) project started in 2004 helping 18 farmer groups to obtain Hkm permits, serving as "reward" for forest management and watershed protection. The implementation of the project increased the income of participating farmers by 30% . *The lesson learnt is that PES can be successfully implemented in marginalized communal lands provided investments are made in land titling, providing legal support to defend communal titles and building local capacity to negotiate and monitor outcomes.*
25	Valuing Environmental Services for Recreation in the Margalla Hills National Park, Islamabad	Himayatullah Khan *(Institute of Development Studies, NWFP Agricultural University)*	Pakistan (Asia)	Tourism/ Landscape beauty	The study focuses on PES in the Margalla Hills National Park (MHNP) in Pakistan, covering 15,800 hectares on the outskirts of Islamabad. It reveals insufficient capture of potential park revenues and recommends an entrance fee of Rs 20 per visitor to enhance park revenues, based on the Individual Travel Cost Method. Imposing this fee would generate an annual revenue of Rs 11 million (3.5 million USD.) and could improve park services. The study underlines the importance of using nonmarket valuation techniques to estimate hitherto uncaptured and undercaptured economic benefits from environmental resources such as national parks.
26	Tourism and Payments for Environmental Services: The Outlook for a Stronger Business Case to Develop Rural Tourism in Bhutan	Nanda Ritsma (*SNV Bhutan)* John Hummel (*SNV Asia)* Phuntsho Gyeltshen (*Tourism Council of Bhutan)*	Bhutan Nepal	Tourism/Land scape beauty	This article focuses on a PES pilot on tourism in the Jigme Singye Wangchuk National Park of Bhutan in 2006. A Village Development Fund (VDF) was set up by collecting campsite fees which was used to pay for community development and activities as alternative energy sources, compensation for damage of harvest by wildlife and any other environmental activity. Village Tourism Management Committees (TMC) were responsible for the management of funds and minimizing negative effects of tourism and raised awareness of communities. Revenues from five villages along the trial increased from USD 10,000 (2006-2007) to USD 12,000 (2008-2009) This pilot project shows that communities can benefit from community managed tourism development. PES mechanisms were implicitly included and might be explicitly in future product and service designs.
27	From Poachers to Park Wardens: Revenue sharing scheme as an incentive for environmental protection in Rwanda	Ritah Tusabe, Straton Habyalimana *(SNV Rwanda)*	Rwanda, Africa	Landscape beauty Biodiversity	The Rwanda Development Board-Tourism and Conservation (RDB-TC) implement a PES scheme to provide alternative livelihoods to people excluded from Volcanoes National Park (VNP) and Nyungwe National Park (NNP) in Rwanda. It has disbursed USD 918959 (5% of tourism revenues from these protected areas) on community projects for environment protection, education, health care, water and sanitation, basic infrastructure, food security, and income generating activities since 2005. In 2007, projects income was estimated over USD 200,000. The project achieved reduced poaching, infringement and accessing of the parks. The community participation in tourism related activities increased as e.g. porterage, traditional dances, small and medium enterprises. A remark is there have not been deliberate efforts to collect baselines to measure improvement in biodiversity conservation and enhancement of community livelihoods. The challenge is to assess impact on the community level.

28	The Rhön Biosphere Reserve: Developing New Financing Options to Conserve a Traditional Agricultural Landscape	Richard Robinson, (*Euromontana)* *Laura Keenan (MFS)*	Germany (Europe)	Tourism/ Landscape beauty agriculture	Farmers in the Rhone Biosphere Reserve (BR) in Germany receive payments between 150-200Euro/ha/year for conserving land grazed by sheep and cattle and thereby achieve environmental and nature conservation objectives. Farmers converting to organic production get additional payments of about 250 Euros/ha/year for a transitional period. Farmers in hill and mountain areas can receive support via ' Less Favoured Area' payments under the EU RDR. Key success factors are : - a long term commitment by government - continuity of the governance structures - Institutional coordination between Bundeslander (federal states) as the Rhone BR spans several administrative boundaries - successful combination of top down (institutional) and bottom-up (participation) approaches; - a strong BR identity *This is a good example of co-investment.*
29	Khasi Community Landscape Restoration and Conservation Project: Mawhplang Lyngdohship, Meghalaya	Mark Poffenberger (*Community Forestry International)*	India (Asia)	Water(shed) CO2 Biodiversity agriculture	In Mawphlang in NE India Community Forestry International (CFI) tested the viability of PES for forest conservation and restoration. Local communities provide carbon , watersheds, and biodiversity services (old growth forests, rivers, and sacred groves). and receive payments of USD 32/hectare/ year. The cost of the project has been USD 78,000 from 2006 to 2009. The community used the funds to control forest fires, regenerate 169 ha of degraded forests and river embankments and finance women self help groups which finance small enterprises through low interest micro loans. Other outcomes of the project are: - closure of rock quarries that were devastating the sacred forest area and polluting downstream ground water - improvement and regeneration of 75 hectares of sacred forest dramatically - change of households of low value cows and goats for commercially valuable pigs and hybrid chickens with less environmental impact on the forest; - construction of fuel efficient smokeless stoves Success factors are: - the community resolution to initiate action to restore their forests the village chief, council of elders, was instrumental in closure of rock quarries - traditional rules protecting forests have been strengthened and discussed widely at communal meetings and gatherings. *This an example of how bundled PES can aid overall conservation-oriented development programs*
30	Payment for environmental services: The need for re-definition	Beria Leimona (*ICRAF SEA),* (*Wageningen Univ.)* Rudolf de Groot (*Wageningen Univ.)*		Methodology	The article focuses on various stages of development of the PES approach. In the early 80's, market based instruments were used to reduce cost of achieving environmental goals and widely promoted as a solution to environmental problems. This principle was applied in valuation of ecosystem services. In the early 2000's, popularity of PES increased for ES schemes mainly in developing countries of Asia and Africa. Lessons from RES initiatives in Asia are: - rewards in the form of human, social and physical capital (nonfinancial incentives) are often the most preferred and most feasible types of rewards; - higher levels of social cohesion and trust within the community and its external linkages are associated with lower transaction costs; - honest and trusted intermediaries for managing direct payments are one of the key success factors – the role of the government as regulator should be more pronounced and explicit for any PES scheme - need for awareness of social dynamics between participants and nonparticipants in designing a PES scheme to minimize jealousy and conflict. The paper concludes that Rewards for Environmental Services) schemes (RES) mechanisms should balance effectiveness and efficiency with fairness and pro-poor considerations. RES should be realistic, voluntary, conditional and pro-poor.

31	Payments for Carbon Sequestration in the Philippines: Lessons and Implications	Rodel D. Lasco, Emma Abasolo, Grace Villamor World Agroforestry Centre (ICRAF)	Philippines (Asia)	CO_2	The article is on Clean Development Mechanism (CDM) carbon forestry projects in the Philippines for land management, adaptation to climate variability to secure food sources, and securing additional income for local community. The Tanay Rehabilitation Carbon Project of Laguna de Bay Community Wastershed has been under development for more than three years. The design and implementation of this project is supported by World Bank and involves establishment and management of 52 hectares of forest, consisting of pure forest plantation and agroforesrry areas. The project has signed an emission reduction purchase agreement with the Bank and for 20 years of project period, it will have total net carbon benefits of 20,800 tCO_2^{-e} with an estimated value of approximately USD 140,000 at USD 5/tCO_2^{-e} benefiting the local farmers and community through employment opportunity, environmental protection and additional income. In 2003, The Kalahan Forestry Carbon project in northern Luzon was selected as a pilot site by ICRAF , Rewarding Upland Poor for Environmental Services (RUPES) to develop carbon sequestration payment mechanism. ICRAF facilitated the community and Japanese Buyer where the buyer agreed to pay cost of registration and validation of project and to buy the credits at agreed price of USD 8/ tCO_2^{-e}. The project is targeting two types of carbon market: 1. Voluntary Carbon Market, with an aim to convert 900 ha of marginal and abandoned agriculture land to more productive tree based systems, and 2. Voluntary Carbon Offset market , in order to maintain 10,000 ha of secondary forest for production forest and carbonsequestrastion. Lessons Learnt: 1. Appropriate governmental institutions should be selected to identify eligible land for projects. 2. Link local project developers to potential buyers, and 3. Directly involve local community.
32	Valuing the Services provided by forest and agro ecosystems in the Central Himalaya, India	G.C.S. Negi, R.L. Semwal G.B. Pant Institute of Himalayan Environment and Development	India (Asia)	Forest	The project conducted by G.B. Pant Institute of Himalayan Environment and Development is based on Environmental Services of major forest ecosystems such as oak and pine forests in Uttarakhand of Central Himalayan Region. The specific ES offered by these two forest types are different. Studies show that in Nanpapo village, oak forest is valued at Rs 87, 615 ($ 1864) /tonne of fuelwood/year, Rs. 40,964 ($872) /tonne of fodder/year and Rs. 10, 450 ($222)/tonne of manuring leaves/ year. In Naugaon village, the annual monetary value of a tonne of fuelwood, fodder, and bedding leaves extracted from pine forest has been estimated at Rs 16,500 ($351), 22,138 ($471) and 6,050 ($129) respectively for the entire village.