



## Poverty and Conservation Learning Group

### Monthly Journal Digest

#### Issue 4: January 2013

This Journal Digest is a PCLG information service is intended to keep readers up to date with new journal articles on issues relating to biodiversity conservation and poverty alleviation as they are published. This is produced on a monthly basis, covering articles that have been published in the previous month. We have grouped articles into three key themes: biodiversity conservation and poverty; ecosystem service and poverty; biodiversity, poverty and climate change. Please note that in the majority of cases, because of copyright issues, the summaries provided are *not* the official abstracts of the articles.

Our current watch list includes: African Journal of Ecology; Agricultural Ecosystems and Environment; Agricultural Sciences News; Ambio; Animal Conservation; Antipode; Biodiversity; Biodiversity Conservation; Biological Conservation; Conservation and Society; Conservation Biology; Conservation Letters; Development and Change; Diversity and Distributions; Environment: Science and Policy for Sustainable Development; Ecological Economics; Ecology; Ecology and Society; Ecosystem Services & Management; Environment and History; Environmental Conservation; Environmental Ethics; Ethics and the Environment; Frontiers in Ecology and the Environment; Global Environmental Change; Human Dimensions of Wildlife; Human Ecology; International Journal of Biodiversity Science; International Journal of Environmental Studies; Journal for Nature Conservation; Journal of Environment and Development; Journal of International Wildlife Law; Journal of Natural Resources and Policy Research; Journal of Political Ecology; Local Environment; Management of Environmental Quality; Natural Resources Forum; Nature; Oryx; Oxford Review of Economic Policy; PNAS; Science; Society and Natural Resources; Trends in Ecology and Evolution; Tropical Conservation Science; Wildlife Research; World Development.

We would welcome your feedback on the usefulness of this service and your suggestions on key journals that we should add to our watch list to ensure we provide the most comprehensive service possible.

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Brewer, T. D., J. E. Cinner, A. Green, R. L. Pressey (2013); Effects of Human Population Density and Proximity to Markets on Coral Reef Fishes Vulnerable to Extinction by Fishing; *Conservation Biology*; Advanced Online Publication: 2 January 2013.

Widespread habitat degradation and unsustainable fishing are causing severe depletion of stocks of reef fish, despite the fact that coral reef fisheries are crucial to the livelihoods of tens of millions of people. In order to achieve the sustainable management of coral reef fisheries it is important to understand how social and economic factors which include human population density, access to external markets, and modernization interact with fishing and habitat degradation affect fish stocks. This study uses national social and economic data, fish survey data, and path analyses to assess if these factors explain the variation in biomass of coral reef fishes among 25 sites in Solomon Islands. Fish are categorised into three groups (low, medium and high vulnerability) based on their life-history characteristics which are linked to their vulnerability to extinction as a result of fishing. The biomass of fish with low vulnerability was positively related to habitat condition, while the biomass of fishes with high vulnerability was negatively related to fishing carried out with efficient gear. Use of efficient gear was positively and strongly related to market proximity as well as population density. Results suggest that external markets and local population pressure and negatively impact vulnerable reef fish. Fish species of medium vulnerability may be relatively resilient to both habitat degradation and fishing as their biomass was not explained either by habitat condition or fishing intensity.

Wiley-Blackwell; <http://dx.doi.org/10.1111/j.1523-1739.2012.01963.x>

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Butler, J. R. A., Tawake, A., Skewes, T., Tawake, L., McGrath, V. (2013); Integrating Traditional Ecological Knowledge and Fisheries Management in the Torres Strait, Australia: the Catalytic Role of Turtles and Dugong as Cultural Keystone Species; *Ecology & Society* Vol. 17(4), Article 34.

In many developing regions of Melanesia, fishers' traditional ecological knowledge (TEK) has been integrated with western science and management knowledge (SMK) to generate innovative and effective fisheries management. Previous research suggests that three factors initiate this process: depleted fishery stocks, limited SMK, and ownership of resources by local communities. In other contexts the extent of power-sharing through co-management, and the cultural significance of species may also be important determinants of knowledge integration. Here we assess the role of these factors in the application of TEK in the Torres Strait Islands, Australia, where commercial and subsistence fisheries are fundamental to the Indigenous Melanesian culture and livelihoods. In 2009 we surveyed fishery managers and scientists who revealed that TEK had only been recently and sparingly applied in four fisheries (turtle, dugong, lobster, and hand collectables), and only two of the seven species concerned had a combination of depleted stocks, low SMK, and high community ownership. Instead, co-management characteristics and the cultural value of species were the primary determinants of TEK application. We suggest that turtles and dugong are cultural keystone species that simultaneously provide important ecosystem services to both islanders' livelihoods and international conservation interests. Combined with their ecological scale these species have catalyzed co-management between indigenous and government stakeholders, precipitating the application of TEK in other fisheries of lesser cultural importance. We discuss modifications to governance required to enable knowledge integration to evolve further through adaptive co-management, and its role in enhancing fisheries management and thus the resilience of the Torres

Strait social-ecological system. Our study highlights the potential utility of cultural keystone species in stimulating cross-cultural resource governance in developed economies such as Australia.

Resilience Alliance; <http://dx.doi.org/10.5751/ES-05165-170434>

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Islama, K. K., G.M. Rahman, T. Fujiwaraa & N. Satoa (2012); People's participation in forest conservation and livelihoods improvement: experience from a forestry project in Bangladesh; *International Journal of Biodiversity Science, Ecosystem Services & Management*; Advance Online Publication; 6 December 2012.

Many forest projects in Bangladesh have been launched with the aim of involving local people in the forest resource management, however only a few of these have been sustained. As a result of this the Forest Department (FD) of Bangladesh started a project in the Madhupur Sal forest area to protect forests as well as improve the livelihoods of people dependent on the forest in a sustainable way. The authors analysed the extent and nature of people's participation, looking at empirical data. Results showed that the most basic achievement of the project was that it built capacity of the forest-dependent families and encroachers. Social relationships, natural assets, and the utilisation of human capital through alternative livelihood strategies provided security as well as improved livelihood assets of participants. The FD introduced a large amount of incentives, including making participants paid community forest workers and dismissing past offences made by participants, which established a good relationship with the FD and helped to mobilise their participation. The protection of encroacher intervention in Sal forests and substantial re-forestation went hand-in-hand in a synergistic way, which made the project initially successful. However the future sustainability of the project is dependent on the FD paying more attention to community empowerment issues.

Taylor & Francis; <http://dx.doi.org/10.1080/21513732.2012.748692>

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Kabubo–Mariara, J. (2013); Forest-poverty nexus: Exploring the contribution of forests to rural livelihoods in Kenya; *Natural Resources Forum*; Advance Online Publication: 22 January 2013.

The author looks at how forests contribute to the livelihoods of communities in Kenya and assesses survey data on resource extraction and people's economic reliance on the forest. Results indicate that rich and poor households are reliant on forests, and that involvement in forest activities within forest user groups is more based on a household's monetary income rather than their asset income. The results indicate that forests support poor people's living standards by diversifying household income sources, and point to the role that household heterogeneity in private resource endowments has in influencing dependence on forests. Other determinants of forest dependence include farm size and participation in collective action. The results indicate that forest management policy should be balanced between forest conservation and facilitating poor households' access to forests.

Wiley-Blackwell; <http://dx.doi.org/10.1111/1477-8947.12003>

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Knapp E. J., Why poaching pays: a summary of risks and benefits illegal hunters face in Western Serengeti, Tanzania; *Tropical Conservation Science* Vol.5 (4); Pages 434-445.

Illegal hunting poses a considerable threat to the wildlife of Serengeti National Park and its affiliated protected areas. Techniques for successful mitigation of this threat are heavily debated. Bottom-up community-based initiatives aim to curb poaching by linking local communities with wildlife conservation. Top-down anti-poaching enforcement of protected areas seeks to maintain wildlife populations through fines and prison sentences given to arrested poachers. Poverty stands as the major driver of illegal hunting as households vie for income and sustenance. Livelihoods of illegal hunters have been augmented considerably through revenue generated from bushmeat sales. Illegal hunters use bushmeat both for supplementing household protein and for economic gain. Obtaining bushmeat carries risks in the form of personal injury, fines, and/or prison sentences, if arrested. This paper compares these costs and benefits through a summary of the monetary benefits, bodily injuries, fines, and prison sentences that individuals endured over their poaching careers. Data were collected from 104 individuals, all of whom voluntarily admitted active or recent involvement in illegal hunting activities.

Mongabay; [http://tropicalconservationscience.mongabay.com/content/v5/TCS-2012\\_Vol\\_5\(4\)\\_434-445\\_Knapp.pdf](http://tropicalconservationscience.mongabay.com/content/v5/TCS-2012_Vol_5(4)_434-445_Knapp.pdf)

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Lang, L. M., & S. Paul (2013); Displacement and Erosion of Informal Risk-Sharing: Evidence from Nepal; *World Development*; Advance Online Publication: 7 January 2013.

The effects that displacement has on informal networks and institutions have received limited attention, despite the fact that they are essential risk-coping mechanisms for impoverished communities. This study looks at indigenous households who were displaced from the Shuklaphanta Wildlife Reserve in Nepal. The authors see this as an inadequate land compensation scheme that led to patrilineal kinship relationships being adversely affected and household partitions. The erosion of these informal risk-coping mechanisms led to a vicious cycle of poverty - poor harvests in resettled communities and increasing conflicts over the limited land, and the breakdown of patron-client system that governed permanent agriculture.

Elsevier; <http://dx.doi.org/10.1016/j.worlddev.2012.11.012>

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Mgawe, P., M. Borgerhoff Mulder , T. Caro, A. Martin and C. Kiffner (2012); Factors affecting bushmeat consumption in the Katavi-Rukwa ecosystem of Tanzania; *Tropical Conservation Science* Vol.5 (4):446-462.

Bushmeat consumption and trade are major problems for wildlife conservation in East Africa. To evaluate recognized drivers of bushmeat consumption, we used structured interviews of 435 households in 11 villages within an ethnically diverse division in rural western Tanzania; the study included both indigenous people and an immigrant population that has moved into the area over the last 40 years. We found that the number of wild animal carcasses reported to be entering villages was greater in villages situated nearer to nationally protected areas. In the indigenous sample, bushmeat consumption was more common in richer than in poorer households, challenging ideas that increasing the availability of alternative protein would necessarily reduce consumption of bushmeat. In the immigrant sample, we found the opposite pattern. We recommend that outreach programs be targeted at both hunters and consumers living near protected area boundaries; that careful evaluations be made of whether wealthy or poor are eating bushmeat; and that protein supplementation be considered more cautiously in solving the problem of bushmeat demand. Our

findings highlight complexities of implementing practical solutions to bushmeat consumption in Africa.

Mongabay; [http://tropicalconservationscience.mongabay.com/content/v5/TCS-2012\\_Vol\\_5\(4\)\\_446-462\\_Mgawe.pdf](http://tropicalconservationscience.mongabay.com/content/v5/TCS-2012_Vol_5(4)_446-462_Mgawe.pdf)

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Miller, D.C., A. Agrawal, J. Timmons Roberts (2013); Biodiversity, Governance, and the Allocation of International Aid for Conservation; *Conservation Letters*; Advance Online Publication: 14 August 2012.

There is only a limited systematic knowledge about the magnitude of allocation of international funding flows to aid biodiversity conservation in the developing world. The authors present a comprehensive assessment of official donor assistance for biodiversity from 1980-2008 using the recently released AidData compilation. They find that aid for biodiversity increased at the beginning of the 1990s, however that donor commitments at the 1992 Rio Earth Summit have not been met, and estimates of current aid are likely to be overstated. The authors state that aid has been well targeted as the allocation of biodiversity aid is positively linked with the number of threatened species in recipient countries, after taking wealth, national population and country size into account. It is also positively associated with indicators of good governance. The results give an empirical measure of progress toward conservation funding targets as well as a baseline that future flows can be compared against and the information needed to analyse the effectiveness of biodiversity aid.

Wiley-Blackwell; <http://dx.doi.org/10.1111/j.1755-263X.2012.00270.x>

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Mwakaje, A. G., E. Manyasa, N. Wawire, M. Muchai, D. Ongare, C. Mugoya, C. W. Masiga, A. Nikundiwe (2013); Community Based Conservation, Income Governance and Poverty Alleviation in Tanzania: The Case of Serengeti Ecosystem; *The Journal of Environment & Development*; Advance Online Publication: 15 January 2013.

Protected areas make up 27% of Tanzania's land and contribute to 17.5% of its GDP. This study looks into who benefits from conservation, focusing on surveys carried out around the Serengeti ecosystem in 20 villages in Serengeti and Loliondo. Results show that villagers receive inadequate benefits compared to the costs they incur. The governance of income presents a great challenge at the village level, resulting from a lack of capacity to manage large amounts of money and a lack of planning, accountability and transparency. The authors recommend that communities should be allowed to extract resources in protected areas and that income allocation to communities is increased although external audits of village funds should also be conducted. Youth should be encouraged to seek higher education and attend wildlife technical colleges in order to learn the values of wildlife. Finally the governance structure must be improved and become more gender equitable, participatory, transparent, fully accountable and to all citizens and communities.

SAGE; <http://dx.doi.org/10.1177/1070496512471949>

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Roe, D. (2013); Has biodiversity fallen off the development agenda? A case study of the UK Department for International Development; *Oryx*; Vol. 47 (1); Pages 113-121.

Since the early 2000s increasing attention has been paid to the relationship between biodiversity conservation and poverty reduction and a debate has ensued over various aspects of this relationship. One element of this debate has been concerned with an apparent lack of attention to biodiversity conservation on the international development agenda following the prioritization of poverty reduction. This paper explores whether this lack of attention is real or perceived by reviewing changes in biodiversity policy within the UK Department for International Development (DFID). It is clear that attention to biodiversity within DFID policy has changed significantly over time. There was strong support for wildlife conservation until the 1990s, including technical assistance, funding for integrated conservation and development projects (ICDPs), and community-based conservation. By the 2000s, however, the main focus had switched from funding wildlife conservation to mainstreaming biodiversity concerns into development policy. The degree to which the explicit focus on poverty reduction that emerged in the late 1990s drove this change is debatable. Changes in aid architecture, UK politics and clearer differentiations between the roles of DFID and the Department for Environment, Food and Rural Affairs (DEFRA) in addressing biodiversity concerns have also shaped DFID's policy. Meanwhile, the political traction afforded to climate change demonstrates that it is possible for environmental issues to sit alongside poverty reduction in international development policy. However, communicating the societal implications of biodiversity loss has proved to be more challenging than for climate change. Better understanding of the mechanisms by which development assistance is disbursed would help the conservation community identify key opportunities for engagement.

Cambridge Journals; <http://dx.doi.org/10.1017/S0030605312000543>

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Tacsonia, L., S. Mahantya & H. Suicha (2013); The Livelihood Impacts of Payments for Environmental Services and Implications for REDD+; *Society & Natural Resources*; Advance Online Publication: 3 January 2013.

International discussions on payment for environmental services (PES) schemes and reducing emissions from deforestation and forest degradation (REDD+) are seen as an important mechanism to provide local incentives for the enhancement and conservation of carbon stocks, however there are concerns about their impact on local livelihoods. This paper uses a comparative case study approach to assess the livelihood impacts of seven existing PES schemes and reviews the lessons learned for the design of REDD+. Results show that PES schemes provided some livelihood benefits and built individual participants' as well as community institutions' capacity and in some cases contributed to income. Finally some suggestions are made about the design of PES for REDD+ schemes, which focus on individual versus collective contracts, payment schedules and amounts, conditionality and permanence, property and access rights, as well as the role that intermediaries play.

Taylor & Francis Online; <http://dx.doi.org/10.1080/08941920.2012.724151>

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Temudo, M. P. (2012); "The White Men Bought the Forests": Conservation and Contestation in Guinea-Bissau, Western Africa; *Conservation and Society* Vol. 10 (4): Pages 354-366.

Both fortress and community-based approaches to conservation have shown poor (sometimes negative) results in terms of environmental protection and poverty reduction. Either approach can also trigger grassroots resistance. This article is centered on an allegedly 'community-based' conservation and development project (and its successive follow-ups) intended to create a national park in Guinea-Bissau. It discusses how external agents have constructed the need for intervention, and explores the negative consequences of the practical solutions adopted for a non-existing problem, as well as the on-going shifting and multiple responses of local people. The article aims to demonstrate that supposedly community-based approaches can be as authoritarian and ineffective as fortress conservation, and that resistance generated by them can be fruitless in terms of collective empowerment and welfare, while also being harmful for the environment. The only genuine winner is the aid industry.

Medknow Publications; <http://dx.doi.org/10.4103/0972-4923.105563>

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