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Relevance and applicability of the Latin American experience for the development of benefit sharing mechanisms for payment of environmental services at the forest-pasture interface in Southeast and East Asia

This paper analyses the relevance and applicability for Asia of the concept of payments for environmental services at the forest pasture interface of the LEAD-Latin American project "Integrated Silvo-Pastoral Approaches to Ecosystem Management", in terms of land use change, environmental services (especially carbon sequestration) and socio-economic development and; explores the possibilities for the implementation of a benefit sharing payment scheme to compensate farmers for environmental services that can be applied in South East and East Asian countries. The introduction of direct payments for environmental services provided by improved silvo-pastoral systems is highly relevant in Southeast and East Asia for certain agro-ecological zones. The socio, economic and political differences of both regions indicate that for South East and East Asian countries it will be necessary the development of the benefit sharing mechanism for environmental services in communal lands together with the development and strengthening of the institutional, legislative and policy framework.

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Moving into the first decades of the new millennium, the World is expected to experience a continued surge in the demand for meat and milk, particularly in the developing countries – a phenomenon dubbed the Livestock Revolution. Given the production systems dominating today and those expected to dominate in the near future, the foreseen expansion of livestock production and consumption will be one of the greatest influences on the natural resources of the World, especially in the developing countries, where the increase in production and consumption of meat and milk will by far be the greatest. Globally, pasture areas are estimated to be increasing by 0.3% per year. At the same time as coming under increased pressure from expanding livestock production, the natural resources are already, and will continue to be, under direct pressure from the growing population in particularly Asia and Sub-Saharan Africa, where projected milk and meat production is also foreseen to increase most rapidly. The accelerated livestock production will demand a similar increase in production of feed and fodder, again putting additional pressure on the land resource.

Already, land-based systems provide a large share of the total livestock output, namely 89% of beef and veal. About one-quarter of the world's total land area is used for grazing livestock. In addition, about one fifth of the world's arable land is used for growing cereals for livestock feed. Livestock production is the world's largest land user and may soon be its most important agricultural activity in terms of economic output.

One of the largest and most important challenges associated with the livestock revolution will thus be to allow for increased livestock production without compromising the natural resources necessary for that production. Careful policy design, including introduction of direct payments for environmental services, is the primary tool for securing that this dual purpose is met. The practical organisation and implementation of such payment schemes is still in its infancy on a global level, but previous experience with positive incentives and compensation schemes, as well as the existing initial experience with payments for environmental services, has already generated valuable momentum.

In global terms, South America and Asia have the most cattle. Latin American countries are among the most advanced with regard to promoting more environmentally friendly production systems in terms of positive and negative incentives, and particularly when it comes to direct payments for environmental services. Costa Rica especially is the poster child for the successful implementation of such schemes, which are primarily focused on reforestation and maintenance of forest cover for the purpose of carbon sequestration and biodiversity conservation. Examples from watershed services and landscape beauty are fairly frequent as well. It is therefore relevant to investigate whether the experience gained on this continent can be useful in the possible introduction of similar schemes in Southeast and East Asia.

This does not imply however, that experience does not already exist in Asia. Examples from watershed, scenic beauty, biodiversity and carbon sequestration services do exist from a variety of Asian countries, although the majority of cases are project or site-specific and relatively scattered still. In all continents the experience with payments for environmental services is bound to forest ecosystems, including agro-forestry systems. The latter is typically the closest anyone has come to paying for environmental services rendered by silvo-pastoral systems, meaning this is a relatively new venture globally.