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REPORT

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LINKING GREEN ECONOMIES & SUSTAINABLE LIVELIHOODS FOR RURAL WELLBEING IN ASIA



Over 60 million people depend on the river for their daily livelihood

**“Prospects for the Future”
Supported by The Toyota Foundation Asian Neighbors Program**

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Regional Network)
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INTRODUCTION

Decades of growth have brought tangible economic and social progress globally but this has happened at increasingly high costs. Socially and economically, we see overall higher inequality, persistent poverty and vulnerability. Environmentally, we see the depletion and overexploitation of natural resources, the degradation of key ecosystem services like water, and loss of biodiversity. These conditions are directly undermining our well-being and triggering more competition over natural resources. Poor governance, as well as the interests of large agri-businesses and extractive industries, risk exacerbating the scarcity of resources and disproportionately affecting the security of millions of smallholders and the rural poor. The effects of climate change will further aggravate these economic and environmental inequities.

Globally, the call for a strategic shift in the economic paradigm has been made. The risks and challenges have also become the concern of governments that see state budgets and balances increasingly afflicted by environmental and social costs. In the world of development and conservation NGOs, engagement with these issues has stepped up based on the realization that stronger resilience and livelihood security of local people and the rural poor are basic conditions for environmental, social and economic sustainability.

In Asia and the Pacific, around 60% of the people, and three quarters of the extreme poor, live in rural areas. Rural areas play an important part as the 'food supplier and carbon sink' for this fast-growing region. The focus of this discussion and policy recommendations is the rural poor who depend more directly on natural resources for their livelihoods.

1.1 The economics of the environment

The Prosperity without Growth (2009), Life Beyond Growth (2012), The Economics of Ecosystems and Biodiversity or TEEB (2008), and The Future We Want (2012) are some key reports that recognize, with different intensity and perspectives, that development has not always generated prosperity and improved quality of life for all. Growth has brought benefits, at best, unequally. A fifth of the world's population earns just 2% of the global income. Inequality is higher in the OECD nations than it was 20 years ago (Prosperity without Growth, 2009). The latest report on MDGs (2013) shows that some impressive progress has been made (e.g., number of people living in extreme poverty has decreased by 50%) but also that 'accelerated progress and bolder actions are needed in many areas,' including environmental sustainability or MDG 7, one of the least achieved overall goals. Deforestation is highlighted as taking its toll on the safety net of the rural poor who are highly dependent on forests for food and other resources. Marine fish stock is also overexploited and thus threatening the food security of coastal communities. Access to drinking water for the rural poor remains a concern. Aid money is less and disparities exist (rural-urban gaps; schooling for poorer children; gender-based inequalities).

The reports highlight that we live beyond the earth's means. Globally, humanity is already using fifty per cent more natural resources than the earth can regenerate in one year. But high income regions are using five times the amount of resources than those of the lowest income countries. Thus, not only are we living beyond the earth's means but we are also distributing these unsustainable proceeds inequitably (WWF Living Planet Report 2012; HDI 2011).

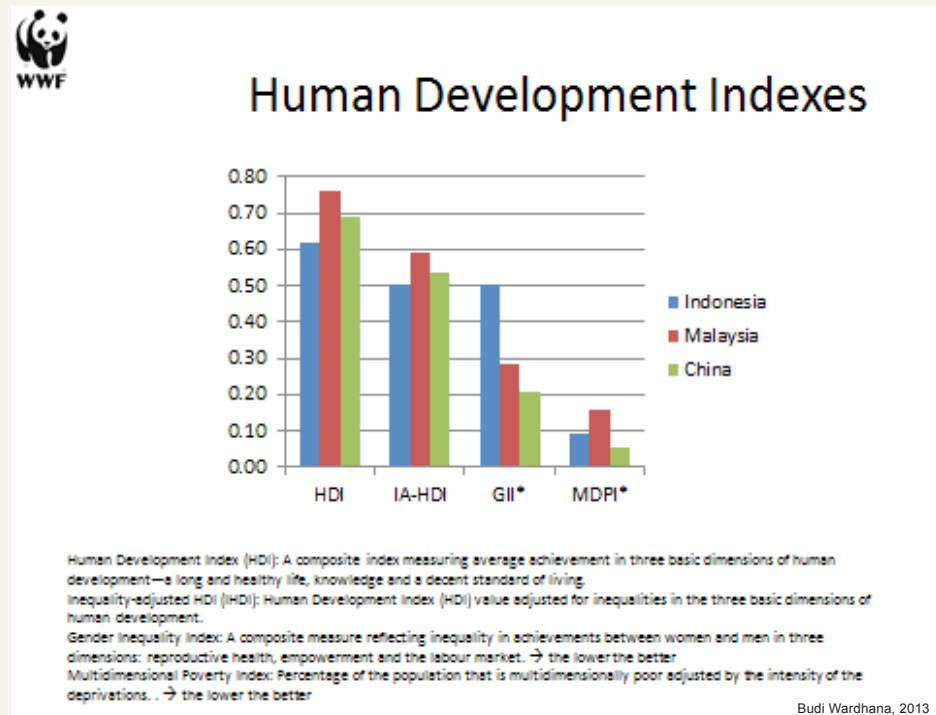


River in Malaysia

The existing injustices will have to be tackled if we are to meet the development needs of current and future generations in a world of finite natural resources, growing population, and a changing climate. Economic growth=equals-prosperity is, in the words of the report *Prosperity without Growth* (2009), a myth that most societies cling on to. It also remains a myth to the extent that growth is neither regulated nor conditioned to deliver with equity and equality. The other side of the myth is that there is only one winning economic paradigm with scarcity as its axiom. But there are alternative ways to conceptualize and organize economies. Decades ago, an anthropologist, Marshall Sahlins, analyzed the livelihoods of hunter-gatherers and called their society “The Original Affluent Society” (1972), where material goals were easily satisfied based on a simple production system and finite wants. This created affluence and prodigality, as opposed to scarcity, within the society. Nowadays, the myth of endless growth faces the reality of degraded natural systems and increasing scarcity of resources. A radical adjustment is required to be able to manage effectively and fairly, the competing human demands on land, water, soil and habitats without undermining crucial ecosystem functions and the sources of livelihoods of millions of people (TEEB 2008; WWF UK 2012). Many of the ‘hidden’ values of nature are not reflected in government budgets and market prices. This means that the costs caused to the environment are externalities borne by the society as a whole, especially by the most vulnerable groups and future generations.

A different vision of growth, one that is fair, inclusive and within planetary boundaries is critical. It requires innovative technologies and sustainable natural resource management to meet the energy, food and water needs, especially of the most vulnerable and marginalized. It also requires using land and other resources

more efficiently, reducing waste, reclaiming degraded lands, and shifting away from resource-intensive consumption and production patterns. Secure tenure and access to natural resources are imperative to sustain the livelihoods of local and rural communities.



1.2 The costs of growth

Today, countries around the world are facing what are really two sides of the same challenge. On the one hand, foster development to close the widening gap between the rich and the poor, and richer and poorer countries. On the other hand, limit excessive consumption and exploitation in order to manage effectively and equitably the competing human demands on land, water, and ecosystem services. Business as usual will come with enormous costs, including environmental destruction. However, it is only when nature is factored in as a component of the ‘capital’ directly contributing to growth, and environmental losses are translated into economic costs, that countries and the private sector start to pay attention.

The following are categories of costs:

1. *The cost of abusing the natural basis of growth and impairing essential ecosystem services* to be felt over the long term.
2. *The cost of natural disasters.* Natural disasters affect the economy directly and immediately (e.g. destroyed assets; victims) as well as over the long-term (e.g., people and companies lose their means of production and access to markets). Governments need to shoulder increasingly higher costs for post-disaster recovery and reconstruction. As stated by the World Bank: “East Asia Pacific is the region that is most affected by cyclones, tsunamis, earthquakes and floods. To confront these challenges, governments need to be prepared for the unexpected and undertake major investments in disaster risk management and resilience.” (UN ESCAP 2011). Small island states and territories are particularly exposed to the rise of sea level causing coastal inundation, soil erosion, and the intrusion of

saline waters into surface and groundwater. As much as 61% of losses from natural disasters have been sustained by the East Asia and Pacific Region and more than 1.6 billion people have been affected by disasters in the region since 2000. Also, more people in the lower and middle income group are likely to be affected.

3. *The cost of social conflicts.* Local conflicts over land and resources are likely to increase due to agribusiness, timber exploitation, expansion of mining operations, encroachment upon customary lands and ban or prevent local residents from accessing resources. Social costs also include transaction costs and the value of the resources destroyed in the process.
4. *The cost (with long-term impact) associated* with people deprived of their main sources of livelihoods, and hence increase in poverty. Governments have to allocate additional social spending to provide for the larger number of poor.
5. *The opportunity cost* of local residents who have to forego benefits from extraction, harvesting and trade of NTFP, and the fees and shares derived from the exploitation of their customary lands by enterprises owned by outsiders. These costs are not fully replaced by benefits from alternative forms of employment in plantations, for example.

1.3 Main development and environmental challenges in Asia

Countries and societies in Asia have experienced fast growth. Asia-Pacific has become a vast consumer market, but, similarly to other parts of the world, a very unequal one.

Poverty

More than half the region's economically active population works in agriculture, fisheries or forestry sectors. The percentage of poverty (measured as less than \$1.25/day) is still high or over one fifth of the population. Lack of basic sanitation, lack of electricity and modern fuels for cooking, and the high prevalence of communicable diseases (TB and malaria) continue to be enormous challenges (Asia Pacific Human Development 2010, 2012). There is high rural poverty (communities relatively isolated and with no adequate services nor access to markets, and highly dependent on natural resources and fragile ecosystems for their livelihoods), but also growing urban poverty as countries in Asia will continue to urbanize rapidly with the risk of creating large slum dwellers where access to basic services can be limited and irregular.



Women welcome group for a community based tourism initiative in Nepal

© Tara Gyawali / WWF-Nepal

Social exclusion, gender and children inequality

According to the last MDGs report (2013), progress has been made in the region as a whole with regard to women and girls' education. The gap in labor force and political participation are also narrowing, but it is still below global average (18.4%). Women in the region are still more vulnerable to poverty than men because of lower incomes and limits in accessing economic opportunities. Women account for most of the unpaid work in the informal sector. Basic issues such as rights (entitlements to property and access to justice) and violence against women remain unaddressed in the legislation of several countries (Asia Pacific Human Development 2010, 2012). The World Economic Forum's index of gender parity in economic participation (labor force) is still high. This is in contrast with the evidence that gender parity would be an important factor in increasing the GDP.

Many economies have failed to provide employment opportunities for the youth. A large number of children are out of primary schools. The achievement of MDG 5 is still behind with regard to some vital targets, particularly child and maternal mortality in some countries of the southern part of the continent.



Forest restoration work in Indonesia

1.4 Three pillars of sustainability

Development need not be conducted at the expense of the environment. A sound environment is essential to human well-being and development. An inclusive and equitable governance of natural resources is a key part of the structural transformation that has to happen to secure future sustainability and prosperity for all.

It was the seminal work of the “Economics of Ecosystems and Biodiversity” TEEB report (2008) that helped demonstrate conclusively that economies cannot ignore the natural capital any longer and need to equip their economic growth plans and oversight mechanisms with tools to value and account for natural resources as a basis of economic sustainability. This requires fundamental changes in the way we think about development and its intersection with the environment. It raises the need to intensify and extend the ways in which policies, public and private investments can



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Traditional livestock pen in the Trans-Himalayas

better foster sustainable development and advance a greener and more equitable system for the economies. The TEEB report has also affected conservation work in numerous countries at once by pushing the limits of conservation beyond its traditional domain of species conservation and protected areas to embrace broader economic and social concerns.

While we all depend on natural services and resources, the poor usually rely on them more directly for their livelihoods and therefore are most vulnerable to environmental degradation and natural disasters. Rural and coastal livelihoods are directly affected by the loss of ecosystem services and biodiversity. The Millennium Ecosystem Assessment (2005) estimates that over 62% of ecosystem services are degraded, with the natural resources critical for livelihood security for the world's poorest in rapid decline.

The Sustainable Development Summit in Rio (Rio+ 20, 2012) was expected to be the catalyst event to bring together and integrate what have been so far two largely separate agendas: environment and development. Environmental sustainability has to be integrated with poverty eradication and social justice efforts to ensure that we keep within the earth's means, share the resources more equitably, and abate unfair levels of consumption among and within countries.

This process has only started. Several consultations around the Post-2015 development agenda took place in 2012 and 2013. On May 30th 2013, the High Level Panel of Eminent Persons (HLPEP) released the final report, A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development. The report clearly states that the eradication of poverty in our time can only be achieved when development paths are set on a more sustainable and inclusive course, and when environmental resilience is secured and promoted globally. The report does highlight the need to integrate the development and environment agendas for our future and change the growth path in order to keep within planetary boundaries.

The recognition of the environmental failings of economic development is now coming from all sectors and parties in the society. Development and growth need to be transformed, and in some cases radically adjusted, to accommodate environment and social justice as key dimensions of growth and sustainability for a better future and lasting prosperity for all.



THE PROMISES OF GREEN ECONOMY



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Traditional landscape in northern Thailand

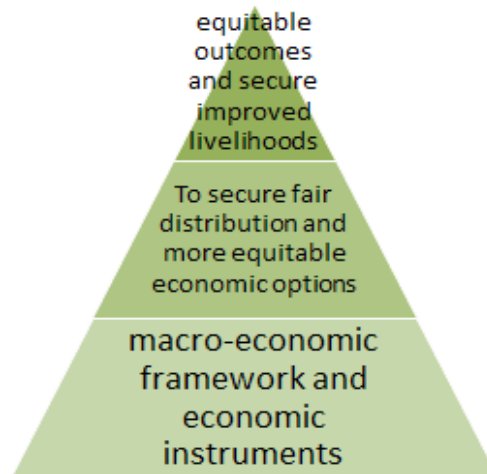
“Green economy” as an environment-based approach to economic development is not new. The term was first used by British environmental economists in 1989. It is now regarded, especially after the publication of the TEEB report and the Rio+ 20 Sustainable Development Summit, as the pathway and platform to achieve sustainable development and sustain equitable growth. Increasingly, international bodies, experts and governments are calling for a shift in the economic paradigm from ‘brown,’ or business as usual (BAU), to ‘green’ economies where:

- the natural capital is valued and effectively factored in as a means of production;
- financial investment, fiscal reform and technological transfer support sustainable growth, green jobs, and create conditions for low-carbon economy;
- a green economy is also seen as a way to restore equitable conditions, strengthen human and social capital, and secure good livelihoods for all.

There is no single definition or model of Green Economy. Single platforms are however emerging as repositories of multiple countries’ green economy plans, for example the “Global Green Growth Institute”. The Green Economy approach is expected to improve people’s wellbeing, restore, maintain and enhance the natural environment where people and other species need to survive and thrive. Green economies should be based on the principle of sustainability and equity within and between generations.



Green economy and Sustainable Livelihood Proxies



Budi Wardhana, 2013

2.1 Interpretations of Green Economy

In Asia-Pacific, several countries are experiencing similar circumstances:

- Population increase;
- Natural resource exploitation;
- Development priorities: growth, competitiveness, and poverty alleviation;
- Unequal distribution of benefits (rural communities)

Countries like India, Indonesia, and also Vietnam and others in the region, are considering approaches to lower-carbon production while sustaining growth and eradicating poverty. Many countries have started greening production, and are committed towards carbon emissions reduction. To meet growing food needs, countries across the region have demonstrated the potential for greener agricultural practices to increase agricultural output but also protect the natural environment, including: regulating the flooding of rice fields, zero-tillage farming, production and use of 'bio-char,' and agroforestry. A common paradigm is one of 'green growth with equity' (Indonesia), but budget for reduction of poverty is still minimal. There seems to be little focus on social equity in the official 'Beautiful China Vision' for green economy.

In 2015, ASEAN countries will merge into a single economic community in a region dominated by China and India. The ASEAN Economic Community (AEC) will integrate the free flow of goods, services, investment capital and labor liberalizing trade and equalizing tariffs. This is an opportunity to discuss sustainability standards/policies/incentives in preparation for integration.

WWF and governments in the Asia Pacific region are engaged in planning for green economy in the **Greater Mekong (GM) region**, WWF has launched an initiative to leverage the interests of decision-makers to enhance the framework conditions for achieving protection of natural capital and development objectives. Crucial to a green economy approach is to design and facilitate sustainable incentive and financing mechanisms, i.e. public and private budgets, markets and new forms of cooperation/partnership, to ensure sustainable production and consumption in key economic sectors: tourism, inland fisheries, forestry management and agricultural production.

The Greater Mekong area is the largest inland fishery in the world with 60 million people dependent on fishing for a livelihood (Gallagher 2013).

Important dimensions of the initiative include:

- Conservation interventions on natural capital maintenance, enhancement, and restoration;
- Sustainable infrastructure for transport, energy, agricultural production, industrial development;
- Integrated land use planning;
- Energy and resource efficiency;
- Sustainable consumption and public procurement;
- Sustainable financing/incentivizing transition to green economies;
- Decent job creation in local 'conservation economies.'

Information on natural capital values needs to be made available to key decision-makers. Specific strategies involve (Gallagher 2013):

- Explicit rewards for companies positively impacting natural capital conservation directly or indirectly through engaging in cleaner and/or sustainable production, increasing resource efficiency, greening supply chains, developing and transferring environmental technologies, green job creation;
- Removal of perverse incentives for natural capital degradation;
- Increased prioritization of land use planning, monitoring and enforcement contributing to natural capital conservation in national budgets;
- Economic instruments incentivizing private sector investment in direct and indirect natural capital maintenance, enhancement and/or restoration Economic instruments for linking ecosystem service providers and beneficiaries, i.e. PES;
- Benefit-sharing mechanisms that redistribute some gains from economic development towards conservation interventions;
- Commercially viable conservation models that contribute to the maintenance of protected areas, supporting rural economic development and sustainable livelihoods.

Heart of Borneo

On the island of Borneo, export-oriented products like timber, oil palm, mining (coal) and NTFP contribute significantly to the Indonesian economy. High impact sectors like agriculture (20%) and mining (30%) have contributed to the RGDP of Kalimantan. However, this pattern has also impacted negatively on the environment (e.g., forest conversion, biodiversity loss). In these circumstances, Green Economy policies must focus on efforts to maintain sustainability in production and environmental balance especially in high impact sectors (Heart of Borneo Initiative 2013):

- Timber harvesting with reduced impact logging techniques;
- International and Indonesian standards for certification (timber, oil palm);
- Concession for forest restoration;
- Responsible mining;
- Integrated spatial planning;
- Good governance, transparency and accountability in natural resource management;
- Social and environmental assessment;
- Incentives and disincentives, and green taxes for companies;
- Participation of local people.



Marginal rainfed farming in India

In **South Asia**, **WWF Pakistan** has laid the groundwork for green accounting and decision-making for multiple competing uses of ecosystems. There, the 6-year Embassy of the Kingdom of the Netherlands funded “Indus for All Programme” a poverty-environment and sustainable livelihoods led approach to conservation planning that resulted in action plans for 4 priority sites in the Indus Ecoregion, listed 40 in the Global 200. Five comprehensive “total economic valuation” studies looked at consumptive, indirect and non-use values of coastal, rangeland, freshwater, forest, and agricultural ecosystems (Delhavi et al 2010). The net present values emerging from the studies use a 10% discount rate, assume a 40 year time horizon, and their point estimates are already supplying land use values for planners, even if Pakistan has yet to declare a “Green Economy” plan and register it with platforms such as the National Accounts Section of the United Nations Statistics Division or the Global Green Growth Institute. Moreover, Pakistan has developed national forest valuation guidelines that the Food and Agriculture Organization (FAO) of the United Nations and TEEB deemed fit for wider application within South Asia and elsewhere.

India and its approach to Green Economy

The 12th Five Year Plan of the Indian Government (2012 – 2017), ‘Faster, Sustainable and More Inclusive Growth,’ shows emphasis on sustainable growth where environmental concerns and social inclusion are featured as a priority. More specifically, it calls for:

- Increasing the share of new and renewable energy to 15% by 2020;
- Securing ecology of watersheds and catchments;
- Obtaining Cumulative Environmental Impact Assessments (CEIAs) for vulnerable regions
- Carrying capacity studies in selected river basins;
- Maintaining acceptable water quality and quantity by controlling pollution of water resources;
- Restoring wetlands and lakes and managing wastewater discharge from industrial and commercial establishments.

The plan recognizes that reducing poverty is a key element in India's inclusive growth strategy and that economic development will be sustainable only if it protects the environment. With the acceleration of economic growth, pressures and changes are expected to intensify, and India thus needs to pay greater attention to the management of water, forests and land. The plan also clearly states that it will be necessary to evolve mechanisms through which a suitable balance can be struck between the energy requirements of development and the need for environmental protection.

2.2 Can Green Economy deliver for rural wellbeing?

Green economy is regarded as the economic paradigm that can bring the right solutions, including green jobs, green finance, and renewable energy, to help slow down global warming, build resilience, and mitigate the effects of climate change and natural disasters. But these need to be based on strong equity, empowerment and social inclusion principles, and integrate rural level economies to help bridge the inequality gaps.

Will the transition to a green economy be seized as an opportunity to transform social structures, institutions and power relations for more resilient, inclusive and equitable societies? Will it be limited to technological transfer, reduction of carbon emissions, and market-based solutions that support business as usual? Will it sideline the needed reform in tenure and natural resource governance towards more community-based small-holdings? In attempts to outline appropriate green economic models, countries still put economic growth at the center as the engine of development, and the role of the private sector enjoys a dominant position. Unless there is an adequate analysis of what aspects of growth might be the cause of much inequality and environmental degradation, the new model can prove incapable of resolving current injustices.

Green economy is still highly contested. There are different perspectives and agendas shaping the path to green economy (UNRISD 2012). How the key problems are defined and solutions designed to restructure the current economy depends largely on the economic views and beliefs. In a transitional phase, the prevalent approach seems on the greening of the system with focus on how to integrate the environmental dimension into the production and consumption aspects of the economy, and less on the compensatory and distributional mechanisms. The other concern is about the role of the states and global governance structures. The social dimensions are often marginalized in green economic analysis and policy.

Equity and pro-poor cannot be expected as a trickle-down effect of investment changes, transformation of incentive flow, and the creation of green jobs. The pro-poor dimension must be made explicit to avoid green economy becoming the greening of specific sectors, especially industry and finance. It is important to make sure that the economies at village and rural levels are integrated, and their parameters accommodated into a green economy framework to deliver on improved and secure livelihoods for the rural poor, forest and coastal communities.

2.3 Eradicating poverty for better conservation or conservation for poverty eradication?

While the failures of development to overcome poverty and inequality are clear, solutions have been more controversial and slower to come. Many rural areas that are important biodiversity hotspots and have high conservation value are also often forgotten or not reached by development in effective and inclusive ways. A large number of people in Asian countries like Indonesia, India, Nepal, Pakistan, Philippines, for example, still depend on natural resources for a living, and many of them are still poor, lack access to resources and basic services, or might be prone to overexploiting resources for lack of tenure security.



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Livestock grazing in Gobi desert, Mongolia

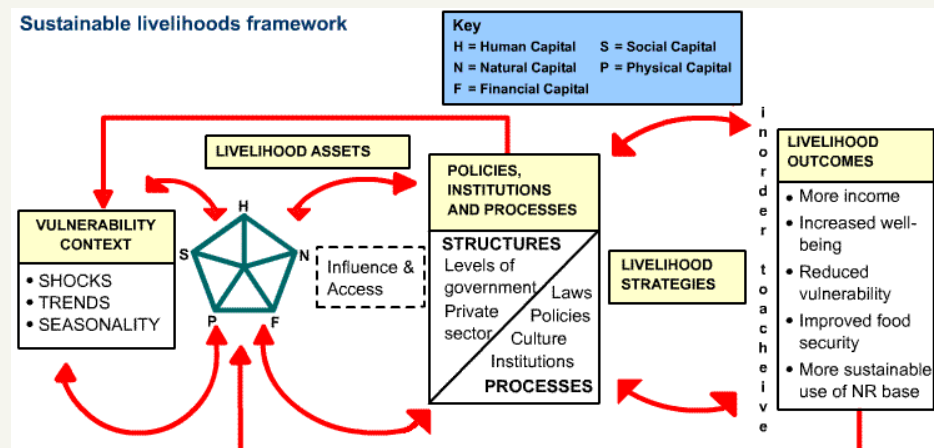
Development and conservation non-governmental organizations working on the ground recognize the importance of a focus on economy to help reduce the income gap and build resilience of the rural poor, protect biodiversity and encourage more sustainable natural resource management. In dealing with basic development needs, these organizations have developed many methodologies and tools to improve living conditions. While conservation organizations are learning to embrace and use the language of development and economics properly, and mainstream social and development dimensions into the very core of the conservation agenda, similarly, development organizations are increasingly adopting environmental principles and perspectives for effective delivery on development targets. The best example is the International Framework for CSO Development Effectiveness, adopted in June 2011. Principle (4), on environmental sustainability, strongly places the environment in the development agenda of CSOs. Environment is not only a basic support of our life, it is also the very natural asset upon which sustainable and equitable development can thrive.

THE SUSTAINABLE LIVELIHOOD APPROACH

Typically, projects and activities for poverty reduction in conservation organizations take the shape of Sustainable Livelihoods (SL) initiatives or follow, with a variety of implementation schemes, the SL framework. The Sustainable Livelihood Approach (SLA) analyzes assets that people have and vulnerabilities that bear on poor people's livelihood strategies and outcomes. It focuses on the organizational and institutional environment within which poor people implement their livelihood strategies (Chambers 1992; DFID 2002).

Central to this approach is "putting people at the center of development." Additional, defining aspects include:

- The target context is elimination of poverty and reduction of vulnerability;
- Holistic and multi-dimensional;
- Dynamic in the sense of understanding change and being responsive to change;
- Building on strengths or assets such as financial capital, physical capital, natural capital, social capital, human capital that can provide the basis for livelihood strategies;
- Emphasis on macro-micro links: how policies and institutions can influence and obstruct livelihood strategies.



3.1. Building Natural Assets

Similar to the Sustainable Livelihood Approach (SLA), the Building Natural Assets (BNA) conceptual framework puts emphasis on strengths or assets, rather than needs, and how assets can be maintained or enhanced to improve the living conditions of the poor and secure sustainable use of resources. Natural assets are land, water, trees, animals, air, plants, and fish upon which human beings depend for their livelihoods. These natural assets are however not always seen or used as assets, or are not developed as a stock of wealth for local people to achieve long-term gains (Boyce and Pastor 2001). People who depend on these assets for a living might be excluded from control of these assets or deprived of the benefits deriving from the provision of environmental services.

3.2 What works and why in income generating activities

A rapid assessment of successful Sustainable Livelihoods interventions across WWF programs in the Asia Pacific region highlighted the following categories or type of interventions, some with longer history of implementation than others.

Benefit sharing mechanisms for communities:

- Trophy hunting (e.g., Pakistan);
- Ecotourism (e.g., Philippines, India, Indonesia, Malaysia);
- Carbon Credits (e.g., Indonesia);
- Fisheries (e.g., Greater Mekong, Indonesia, Philippines);
- Revolving funds, micro-credit, and financial access in rural areas (e.g., Nepal, Indonesia).

Certification (all):

- Small holders, producers, fisheries groups;
- ICS schemes, and community certification (certification system to evolve from the community rather than imposed from outside).

Effective community-based resource governance (all):

- Tenure security and rights;
- Empowerment, gender and social inclusion;
- Strengthening community institutions and organizations;
- Ensuring equitable benefit sharing of resources.

Food, water, energy-and-technology security:

- Optimizing use of renewable resources while minimizing use of non-renewable resources: Micro hydro, biogas, solar, ICS and energy efficient use devices (e.g., Pakistan, Nepal, India, Indonesia, Mongolia);
- Sustainable farming practices (e.g., India, Nepal, Pakistan, Greater Mekong);
- 'Water Smart' community (e.g., Nepal);
- Information technology and transfer (e.g., Malaysia, Indonesia).

Not only do these categories exemplify types of interventions and activities commonly undertaken under SLA with reference to the 5-asset diagram, but, they also integrate essential conditions that need to be in place to help ensure better distribution of returns, more equity and sustainability at the community level. Control over the resources and tenurial security are key factors. The success of livelihood interventions relies on the identification of appropriate safeguards for implementation, and their sustainability depends on taking into consideration the larger political economic context.

Benefits from protecting the natural capital

Some livelihood strategies have more direct impact on both the local economy and the protection (even enhancement) of the natural endowments. Good examples are efforts to rehabilitate the local coral reef damaged by unsustainable and illegal fishing methods such as bombing, and banning particular fishing gear. Most fish caught by local people is reef fish which is important for consumption but also for sale on the local market. Local fishermen can benefit from up to 25% rise in fish catch in the villages where enforcement is good and the coral reef is recovering. The good quality of coral reef can also become a major attraction for visitors, and an asset for the development of ecotourism industry.



Fisherwomen in India



© Vishalsh Uppal / WWF-India

Fuelwood collection from forests in India

Payment for Environmental Services (PES) schemes are part of a more direct approach that links natural assets and ecological functions like water, carbon-sink, biodiversity and landscape aesthetics to economic benefits or reward payments made to local stewards of those resources. PES schemes are contingent on the following basic elements: a well-defined and measurable environmental service, providers (e.g. local communities as managers and owners of the resources), and buyers (i.e. beneficiaries of the services and goods) who agree on a payment plan for delivery of a specific service (Wunder 2005). The potential pro-poor effect in the form of rewards and economic incentives that go directly to upland communities or people living in or around key areas for the provision of environmental services is high. However, the amount of payments and their effectiveness in making conservation profitable depend greatly on market mechanisms such as additionality and demand (the existence of buyers), and the competitiveness of economic incentives provided to local communities.

Collection and marketing of NTFP like wild honey can provide direct revenues for collectors and strengthen conservation behavior of local people who then have clear incentives to protect the trees where the bees make their hives and the surrounding forests. If the forest area is converted to other land uses, the bees will move to another area and honey production stops.

If there are prime natural attractions, reasonable easy access, and control of local people over the business operation, ecotourism can be a route out of poverty. This mechanism is less about restoring degraded ecosystems but about keeping them intact, with obvious and direct benefits for protecting important natural capital. Fair partnerships with tour operators can bring even further economic benefits for local people.

Income from forestry and agro-forestry

The report by the World Bank on Forest & Poverty (2007) recognizes that there are no simplistic connections between forest and poverty given the complexities of the forest mosaic and social conditions. “Forest cover is an unreliable indicator of poverty rates, and poverty is a poor proxy for deforestation.” According to the same report, there are, however, important tendencies in the forest and poverty linkage that can guide policy:

- As people depend on forest resources for a living, rights and access affect their income stream;
- In forest frontiers areas, tenure rights tend to be weak and depress land values;
- There tend to be bureaucratic and legal obstacles to using forest assets.

Notwithstanding the existing challenges, there is considerable evidence that community-forestry timber enterprises can reduce poverty and conserve biodiversity. It is not only timber from the forest that can benefit poor communities but also fuel-wood, fodder and wild foods which are an integral part of the livelihood strategies of the poor. The role of forest income in rural livelihoods and poverty alleviation is also evidenced by research in China where 75% of the people surveyed in Tianlin County perceived an improvement in their living conditions (income from marketing of forest products). But inequality issues remain with better off households profiting more (Hogarth et al 2012). Tenure security represents a key factor in securing benefits flow to the right beneficiaries.

According to a review of conservation mechanisms and their effectiveness in providing benefits for the poor (Leisher et al 2010), the commercialization of one or more NTFPs in the community can represent one of the few income-generating opportunities for women and the poorer people. The authors also point out that a common problem in NTFP economy is that if there is significant money to be made, then the powerful and better-off people take control. The risks for the mechanism seat with the market: distance, chain and middlemen, prices, fluctuation and unpredictable income stream.

Promoting local initiatives of agro-biodiversity conservation generally helps poor farmers diversify the types of crops they raise, improve nutrition, secure more stable food production, and have resilience in the face of climate change (droughts, floods, pests, etc). There is a strong gender component to agro-biodiversity conservation because it is often women who keep local cultivars and native species. Agro-biodiversity can be an important enrichment technique for the natural capital.

3.3 SL models: are approaches effective to overcome inequality and poverty?

While conservation and development organizations might be engaged in a lot of promising efforts to boost economies at field level, the results are mixed. Often, the interventions or activities that work at small-scale have limited impact, or lack the leverage to bring change and transform the economy. In general, they are successful in providing modest poverty reduction benefits and a safety net to keep people from falling deeper into poverty.

Key issues touch upon the following aspects: equity; sustainability; governance; incentives and scale.

- Households with higher assets and higher levels of social capital are more likely to reap benefits in a community which leads to widening income disparities;
- Elite capture in a community which maintains existing levels of inequalities;
- Weak institutions at community level;
- Limited level of amplification and magnification of several livelihood activities (small impact);
- The difficulty of identifying right incentives. The premise that increased incomes for local communities will necessarily lead to reduced negative impacts on biodiversity



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River transportation in Cambodia

and the natural resources remains to be proved. There is still a weak relationship between enterprises, market success and conservation success. One of the reasons is that economic rewards or compensation alone are not sufficient and need to exist in the context of regulations and policies that condition and regulate the access and use of natural resources. Moreover, field data suggest that conservation or sustainable behavior with regard to natural resources depend also on the uniqueness and future value of the resource (i.e., its role in sustaining livelihoods cannot be easily substituted; social value associated) rather than the level of income;

- **Tradeoffs in livelihood activities.** Sustainable livelihoods are premised on a number of tradeoffs between the economic returns of ecologically sound activities and other social benefits that accrue from the sustainable management of natural resources (e.g., tenure security); between forgone short-term higher economic returns and long-term preservation of the resource bases of livelihoods; between pursuing maximum economic profit and maintaining optimal resource value of forest resources. The relevance of tradeoffs also applies in more direct approaches where fiscal incentives are positively correlated with conservation measures (compensation; payment for environmental services). Agreements should be based on clear understanding of tradeoffs among stakeholders;
- **Early returns.** Expectations towards the economic value generated by livelihood strategies often exceed the economic potential of the small enterprises, especially in their initial stages. Expectations are often pitted against the high opportunity costs borne by both poor communities and local government in resource-rich forest and marine/coastal areas while abandoning extractive or environmentally destructive activities. This realization does not mean that sustainable livelihood approach is misplaced, but rather it warns us of the need to ensure early returns for poor communities where development needs (and entitlements to) are highest. In this regard, planning requires a two-pronged approach by which short-term benefits and long-term preservation of resource bases are both taken into account in order to maintain and enhance living conditions of the poor.

GETTING IT RIGHT: GREEN ECONOMIES FOR EQUITY AND WELLBEING

There is no ‘one’ model of green economy. What is needed are contextualized yet comprehensive concepts and related strategies and courses of action, in fact, models of green economies, to secure well-being (*vivre bien*, as emphasized by some Latin American countries like Bolivia) for ecological sustainability, social and economic equity. The Rio+20 UN Conference recognizes the need for GE to be adopted: “We affirm that there are different approaches, visions, models and tools available to each country, in accordance with its national circumstances and priorities, to achieve sustainable development” (The Future We Want, 2012)



Community mapping of local resources in India

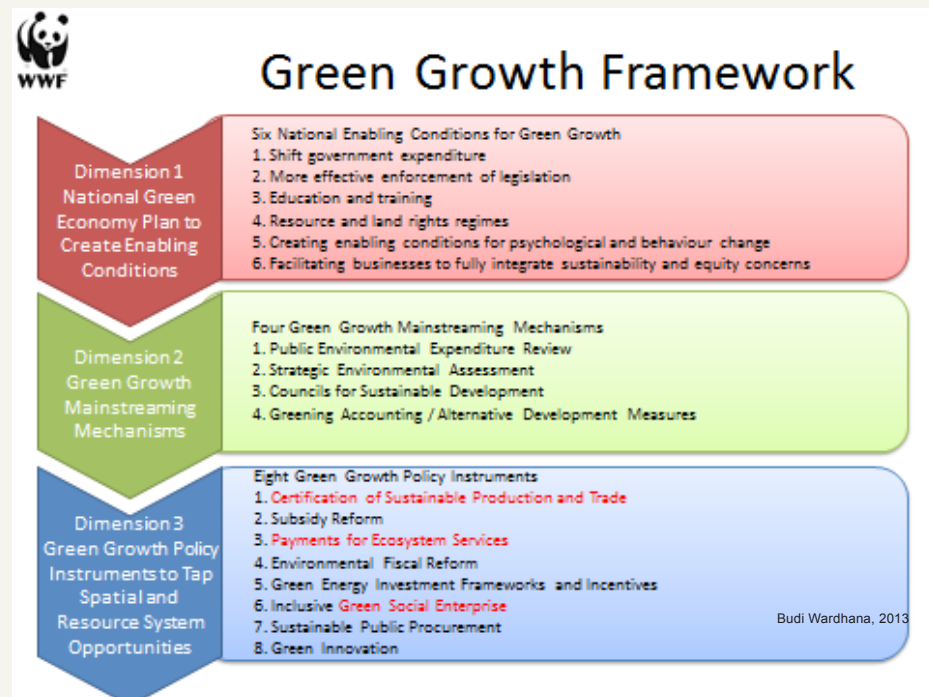
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Framework conditions for rural economic development need to be set along a pro-green/pro-poor pathway, including incentive measures. Clear links also need to be established with conservation benefits by focusing on activities that increase rural income and maintain the natural capital.

The scope of the SL work has often lacked the magnification and amplification needed to leverage enough attention and affect the bigger development agenda, especially in rural areas. Green economy paths need to also look more carefully at social dimensions and identify the right conditions and mechanisms to help poverty and inequality eradication. Building green economies will require different approaches to suit local

conditions, but also coherent and strategic government policies, innovation at the level of private sector and communities to help transform high-impact systems such as energy, food, and transportation towards sustainability. It will require new business models, but also social innovations and social policies to help mitigate and overcome structural inequalities that underpin poverty and vulnerability. Efforts to restructure the economy need to move in ways that are both green and fair. It is very important to ensure and strengthen the strategies of participation of diverse social and economic actors and all members of the civil society in defining green economic agendas.

The SL framework remains an extremely valid approach for devising village- and community-level interventions, for developing modules to assess needs with clear links with the relevant features of the rural conditions. The micro-economic or field-level elements of the SL framework can and should be accommodated within the GE macro-economic framework. Communities that are well educated and have reliable sources of income and equal rights will be much stronger social and economic actors. Rural communities are also likely to be more resilient if they have a broader range of livelihood systems. Traditionally, they have diversified from subsistence agriculture by cultivating household vegetable gardens, rearing a few livestock or running small shops. But they can also adopt more modern farming practices as well as rural industries or, in some areas, eco-tourism. For this to happen, they will need better markets and economic opportunities, improved public services, access, health and technological/communication infrastructure like internet.



4.1. Important principles for equity and prosperity in Green Economies

- Localize and embed economies in a larger landscape of relationships;
- Recognize that those closest to resources have the rights and capacity to govern those resources;
- Respect the ecological boundaries and the diversity of nature, ecologies, and cultures;
- Nurture economic democracy;
- Respect economies, livelihoods, and polities, including those of indigenous peoples and local communities, in so far as they are in consonance with the principles of sustainability and equity;

- Recognize the multiplicity of social institutions (norms, regulations, rights) and relations (class, gender, ethnic);
- Reinforce ethics towards nature of which we are part (e.g., Bolivian mother earth concept);
- Respect diversity of knowledge, values, and synergistic relations of various ways of thinking;
- Define the role of the state/government actors to facilitate the process and setting up of the needed policies, conditions, and crucial functions of welfare and justice;
- Promote socio-economic and ecological equity and justice;
- Promote distributional equity and responsibility and accountability of all social and economic actors.

(cf. International Framework for CSO Development Effectiveness 2011; Ashish Kothari 2013a; WWF Indonesia 2006)

4.2. Important safeguards for applying equity and prosperity in Green Economies

- Ensure that local values, traditional knowledge and practices inform policy development. The importance of diverse forms of knowledge that have sustained humans for hundreds of years, and are widely acknowledged as crucial elements of sustainability and equity in the future.
- Distributional equity. One of the most important challenges in setting up positive incentives for conservation is to make sure that they accrue to the right beneficiaries. Economic incentives, for example, need to be framed by rules that ensure that the benefits created also flow to poor people and communities that bear the highest costs for conservation (Eghenter and Mubariq A. 2007). The application of economic tools needs to rely on policies and institutions that influence distribution and increase benefit retention among the most resource dependent people (cf. Ribot 2005). This is also the case with social incentives whereby the beneficiaries are not in the position to fully enjoy the right to take part in management or control access to resources. Redistribution of wealth and resources so that countries/regions with inadequate facilities and access are able to gain them without further threatening the ecological boundaries of the earth.
- It is crucial to identify which social groups stand to lose from industrial restructuring and more accurate pricing of carbon, market-centered approaches and strict environmental regulations that may negatively impact livelihoods and identity of farmers and IPs etc.
- Maintain the conditions that enable local stakeholders to derive benefits from natural resources (access and control, capital, knowledge, access to market).
- Implement free and prior informed consent (FPIC) with regard to the use of the lands and resources over which communities have customary rights.
- Decision-making, participation, and accountability. GE is contested by a wide range of social actors and needs local buy-in in the form of the backing by broad-based coalitions of social actors. Modes of decision-making would also need to include the voices of citizens and communities at the ground level, in rural or urban settlements, and allow for face-to-face deliberations especially when decisions concern the lives of these communities. A model of deeply or radically decentralized polity would enable greater achievement of accountability and transparency than is possible in today's representative democracy structures (Ashish Kothari.2013a and 2013b).
- Encourage small-scale sector in forestry, fishery, and agriculture.

4.3. Community indicators for equity and prosperity in Green Economies

The multiple dimensions of poverty have already been recognized: insecure assets, vulnerability and minimal safety net, powerlessness, inadequate or unstable employment, lack of access to natural resources, weak bargaining position (cf. World Bank Report 2007). Poverty is a situation in which an individual or a household has difficulty fulfilling its basic needs, lacks opportunities provided by an enabling environment to sustainably improve its wellbeing or is vulnerable to losing its current standard of living.

Economic growth is the increase in the amount of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. In a new economic paradigm that values the natural capital and aspires to secure prosperity for all, the standard measure of ‘development’ like GDP needs to be replaced (beyond GDP) towards a basket of genuine progress or well-being indicators, which include not only quantifiable but also qualitative aspects (cf. Agrawal and Redford 2006).

Core wellbeing covers basic material and non-material needs, including nutrition and health, knowledge and material wealth. Enabling environments (context) are the living environments that affect core wellbeing issues. Many perspectives accept that prosperity has material dimensions. It is difficult to talk about things going well if one lacks the basic material resources required to sustain yourself, such as food, water, materials for clothing and shelter. Security in achieving these aims is also important.

Prosperity has vital social and psychological dimensions. To do well is also in part about the ability to participate freely in the life of the society, to enjoy the respect of others, to contribute useful work, and to have a sense of belonging and trust in the community (Prosperity without Growth 2009; Life Beyond Growth 2012)

New indicators are being developed. It is important to control the flow of people, technology, goods, and money for fairness. GE indicators must be linked to HDI and wellbeing. China, for example, is also developing a GE Indicators system to move beyond what has so far been a GDP-centered indicator system (WWF China 2013).

Important steps to be taken in developing the measurement for well-being and environmental sustainability include:

- Engage with Indigenous Peoples and local communities and together identify relevant and meaningful indicators with them (see example of Cambodian fisherfolk and criteria of good livelihoods);
- Monitor the behavior of the private sector and change their mindset to accept the concept of ecological boundaries. Their green practices must be realized locally and not just internationally;
- Identify measures of “happiness” rather than simply monetary income, for example:
 - more learning opportunities for life skills
 - appropriate and adequate health services
 - minimize the social divide within communities
 - secure assets (monetary and non-monetary).

Good Livelihood:

- Have more livelihood options
- Have literacy, knowledge, experiences and skills to deal with their livelihoods
- Have enough work force to generate income
- Have inheritance or occupation from his/her parents
- Have financial support from their relative or other sources
- Have more property
- Have few children
- Have good financial management skills and save income
- Have good relationships in their community or society
- Healthy family (less sick)
- No gambling or less drinking
- Less fish gear stolen
- No debt

Cambodian Fisherfolk

PRELIMINARY POLICY RECOMMENDATIONS

The ‘Green Economy’ (GE) framework is a macro-economic framework. As such it tends to assume rather than explicitly outline the conditions and mechanisms, i.e., the nuts and bolts, to secure fair distribution and more equitable economic options at ground level for the millions of rural, coastal, and forest-based people whose livelihoods depend on natural resources and their services. But for this to happen, conditions need to be developed and linkages built to make sure that the economies at village and rural levels are integrated, and their parameters accommodated into a ‘green economy’ framework to secure improved livelihoods for rural poor, forest and coastal communities. Equity and pro-poor cannot be expected as a trickle-down effect of investment changes and transformation of incentive flow. The pro-poor dimension of green economies must be made explicit.

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Rattan weaving in Greater Mekong region

To change the economy and accelerate rural well-being, we need to identify agents of change and pathways for change, and build partnerships for GE. Resistance movements, peoples, trade unions, political parties, social movements can all take part. But it is really cross-sectoral, there are good people and agents of change in private sector and government as well. NGOs can facilitate these platforms (Ashish Kothari, 2013b).

Building local constituencies and forging partnerships need become the trademark of sustainable development and conservation initiatives. Local communities, the right-holders and stakeholders whose livelihoods are still largely dependent on natural resources, need to become promoters and partners in development and conservation plans that affect their land and large landscapes, and not just participants or invited parties on someone else’s initiative (Walker et al 2007; Eghenter and Langub 2008). Stakeholders, government agencies, local communities, NGOs and others, need to engage in a prolonged, iterative process of learning and developing trust to be able to build effective partnerships. Long-term interaction and engagement, and the recognition of differences, are important aspects of building a shared vision and effective collaboration for sustainable development and conservation. Stakeholders need to share existing information and plans as part of a process of engagement and building trust. Oftentimes, local communities are invited to make decisions on the basis of very poor information, or are consulted on partial aspects of the plans devoid of a clear vision. At the same time, local communities would also need to make their vision and aspirations effectively and widely known to other stakeholders.

Policies need to be in place to guarantee political and economic space for GEs with a social focus. They need to incorporate uncertainties and complexities in policy analysis.

Relevant policy directions would focus on:

1. Policies that promote investment in the development of vibrant rural areas, focusing on agricultural and non-agricultural livelihoods, access to high-quality infrastructure. This has the potential to reverse the rural-urban migration flow;
2. Policies that build up the natural assets of the poor to increase their resilience and food security;
3. Policies that promote social inclusiveness and participation at all levels of governance and management of natural capital (community-based, collaboration, shared governance, etc);
4. Design policies and financial flows to encourage a 'green stimulus' to offer jobs and economic recovery in the short term, energy security and technological innovation in the medium term, and a sustainable future for our children in the long term;
5. Policies to highlight 'eco-regionalism' for development and land use planning, and support landscape/seascape-based institutions to be answerable to these basic, local and ecological units. Policies would need to look at and be grounded in priority landscapes and ecoregions rather than sectors as defined in economic growth plans;
6. Increase attention to programmes that can deliver co-benefits:
 - Job creation and training
 - Education, retraining and skills
 - Provision of ecological low-cost housing
 - Infrastructure investment
 - Incentives for green consumption, via green taxation

ILO's definition of green jobs

Jobs are green when they help reduce negative environmental impact ultimately leading to environmentally, economically and socially sustainable enterprises and economies. More precisely green jobs are decent jobs that:

- ▶ Reduce consumption of energy and raw materials
- ▶ Limit greenhouse gas emissions
- ▶ Minimize waste and pollution
- ▶ Protect and restore ecosystems

7. Policies to protect and enable vulnerable groups to respond to environmental or climate-related risks
8. Policies to reduce well-being deficits (for food water energy), and improve productive assets for rural families
9. Pro-poor budgets with compensation for 'losers'
10. Improve current poverty alleviation programs (rice for the poor, direct cash assistance –fuel subsidies) where 'mis-targeting' is the main problem—and instead reach the right beneficiaries. Learn from successful conditional cash transfer programmes like Family Rewards, the first such programme in the United States. Based on and learning from similar programmes in other countries (e.g., Brazil, Mexico, etc), it aims to reduce poverty by providing households with incentives for preventive healthcare, education and job training.
11. Policies to recognize and adopt traditional practices of management that avoid overexploitation and benefit from high social capital to ensure collective accountability in natural resource management. As in many examples of common-pool resources, natural resource users have often organized themselves to protect their resources, without central government or NGOs interventions (Gibson et al. 2000). Communities who have rights to access and manage natural resources are more likely to manage those resources in sustainable ways and be held accountable. Recognition of basic rights will help transform unequal power relationships that have so far kept communities from becoming partners in sustainable management.



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Coffee growing in Papua

The three dimensions that are at the core of sustainability (environmental, social, and economic) need to be paired with strong partnerships between the three main actors, i.e. civil society, government and private sector to implement policies and practices for green and fair economies at rural level in Asia. A strong role of civil society and citizens' participation are key in shaping sustainable development and integrating environmental concerns to ensure wellbeing for all.

REFERENCES

- Arun Agrawal and Kent Redford (2006). Poverty Development and Biodiversity Conversation: Shooting in the Dark? Working Paper no 26. Wildlife Conservation Society.
- Ashish Kothari (2013a). Missed Opportunities? Comments on two global Reports for the post-2015 goals process. Kalpraviksh and ICCA Consortium.
- Ashish Kothari (2013b). Development and Ecological Sustainability in India: Possibilities for the Post-2015 framework. Paper commissioned by Oxfam.
- Asia Pacific Human Development, UNDP (2012). One Planet to Share. Sustaining human progress in a changing climate.
- Asia Pacific Human Development, UNDP (2010). Power, Voice and Rights.
- Boyce, J. and M. Pastor (2001). Building Natural Assets: New Strategies for Poverty Reduction and Environmental Protection. Amherst (MA): Political Economy Research Institute.
- Budi Wardhana (2013). Economic situation, priorities, and the greening of the economy in Indonesia. Presentation for the workshop, "From sustainable livelihoods to green economies, best practices for working on poverty alleviation and equitable conservation at scale," experience sharing workshop of WWF practitioners and experts from Asia offices. Jakarta, Indonesia.
- Chambers and Conway (1992). IDS Discussion Paper 296: Sustainable Rural Livelihoods. Practical Concepts for the 21st Century. Brighton: Institute for Development Studies.
- Dehlavi A., Groom B., Khan B.N. and Shahab A. (2010). "Non-use Values of Ecosystems Dependent on the Indus River, Pakistan: a Spatially Explicit, Multi-ecosystem Choice Experiment," In Choice Experiments in Developing Countries: Implementation, Challenges and Policy Implications. Bemmatt J. And E. Birol (eds). Edward Elgar, Washington D.C., USA.
- DFID (2002). People, Poverty, and Livelihoods: Links for Sustainable Poverty Reduction in Indonesia.
- Eghenter, Cristina and Mubariq Ahmad (2007). Poverty alleviation and conservation: The role of incentives and good governance. Paper prepared for the Panel, "REDD and Poverty," 13th UN UNFCCC COP, December.
- Eghenter, Cristina and Jay Ilangub (2008). Past Meets Future: A Trans-Border Forum for a Sustainable Future in the Highlands of Borneo. Borneo Research Bulletin, Vol 39: 286-294.
- Gallagher, L. (2013). WWF-Greater Mekong Green Economy Strategy, 2013-2015.
- Gibson, C., McKean, M., and E. Ostrom, eds. (2000). People and Forests. Communities, Institutions, and Governance. MIT Press.
- Heart of Borneo Initiative (2013). Strategy for developing the Heart of Borneo (HoB) through a Green Economy. HoB National Working Group, Indonesia.
- Hogarth et al. (2012). The role of forest-related income in household economies and rural livelihoods in the border-region of Southern China. World Development.

Human Development Report-HDR (2013). The Rise of the South. Human Progress in a Diverse World. UNDP.

International Framework for CSO Development Effectiveness (2011).

Leisher, C et al. (2010). Does Conserving Biodiversity work to reduce poverty. A state of knowledge review. August 2010.

Life Beyond Growth (2012). Alternatives and Complements to GDP-Measured Growth as a Framing Concept for Social Progress. ISHES, Tokyo.

MDGs Report (2013).

Oxfam (2013). A Safe and Just Space for Humanity.

Roe, D. and J. Elliott (2006). Pro-poor conservation: the elusive win-win for conservation and poverty reduction, Policy Matters 14 (March).

Sahlins M. (1972). Stone Age economics. Aldine-Atherton.

Sustainable Development Commission (Tim Jackson, Economics Commissioner) (2009). Prosperity without growth. The transition to a sustainable economy.

The Future We Want. (2012). Outcome document adopted at the Rio+20 UN Conference on Sustainable Development. Rio De Janeiro, Brazil.

UNEP (2008). The Economics of Ecosystems and Biodiversity.

UNRISD United Nations Research Institute for Social Development (2012). From Green Economy to Green Society. Bringing the Social to Rio+20.

United Nations ESCAP (2011). Statistical Yearbook for Asia and the Pacific.

Wollenberg, E., Adwinata Nawir, Asung Uluk, and Herry Pramono (2001). Income is not enough: The Effect of Economic Incentives on Forest Product Conservation. CIFOR

World Bank Report (2007). Forest & Poverty.

Wunder, S. (2005). Payments for environmental services: Some nuts and bolts. CIFOR.

WWF (2012). Living Planet Report.

WWF Indonesia (2006). Prinsip-prinsip Penerapan Community Empowerment dalam Agenda Konservasi. Jakarta (March)

WWF UK (2012). Building Green Economies. Creating prosperity for people and planet.



WHY SD4C?

Conservation is also about facilitating social change and WWF's work is largely about influencing and changing people's behaviour, policies and social institutions towards a more sustainable use of natural resources.

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