Policy Briefing

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Summary

Poor people are dependent on natural capital for income. Not enough is known about the state of natural capital, how it is being used and its value. Natural capital accounting could be a system for collating this information and presenting it in a way that could inform poverty reduction strategies and national development.

Background

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Natural capital accounting: providing information for poverty reduction

Poor countries and poor people are highly dependent on natural capital such as forests, water, farmland and minerals for their development. Consequently policymakers and planners need relevant information on the stocks and flows of natural capital, on who is using it, how it is being used and on the values realized. At present, this kind of information is often incomplete and/or unused by decision makers in developing countries. Natural capital accounting could be a system for pulling together good information and presenting it in ways that directly inform poverty reduction strategies. The World Bank's WAVES Partnership programme is working with many developing country governments to support establishing nationally tailored natural capital accounting systems that can contribute to national development and poverty reduction plans.

Natural capital accounting (NCA) provides systematic information about the assets that poor people and low income countries depend on for income, livelihoods, health, security and resilience.

> Natural capital is the stock of ecosystems (renewables, like forests, water, farmland, and biodiversity and non-renewables like minerals). It provides benefits to people in the form of flows of goods and services over time, such as food, timber, fibre, energy, clean water, clean air and protection from hazards — all of which contribute to development.

Principle asset for poor people

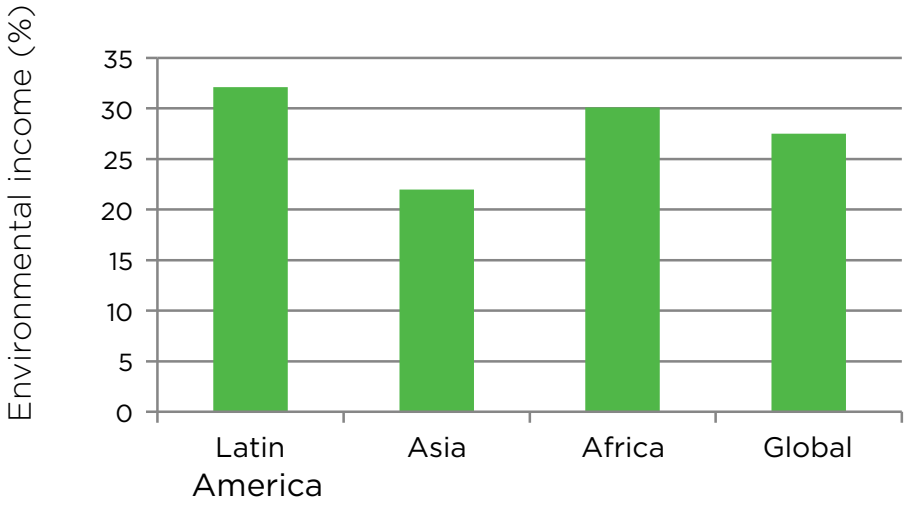
Natural capital is the principal asset available to most poor people, apart from their own labour. Nearly three quarters of the world's poorest citizens are directly dependent on natural capital: 50 per cent are smallholder farmers, 20 per cent are rural labourers, and 10 per cent depend on herding, fishing and forestry.[1] While wealthier segments of society can substitute between forms of capital (e.g. use fertilizers when soil nutrients are low, build defence barriers to protect against floods, or move to other places when it gets too dry), the livelihoods of most poor people depend completely on the condition of their natural capital and are highly vulnerable to natural disasters and shocks.

The importance of environmental income to the poor typically lies between 20 and 30 per cent of household income as illustrated by Figure 1.

The use of natural capital, and its transformation to other forms of capital (like financial or manufactured), is a principal development strategy for most poor countries. Thirty six per cent of national wealth in developing countries is natural capital, compared to just 2 per cent in OECD countries.[2] Thus it is not surprising that natural resource rents are a principal source of national income. But for poor people in particular, natural capital produces an estimated 47-89 per cent of the 'GDP of the poor' in developing countries.[3] Their capacity to develop other capital assets is closely linked to their natural capital, for example skills in farming, and equipment for processing natural resources. But because of missing or incomplete markets, credit and technology, poor people often depend on their surrounding environment for survival.[4]

Natural capital is the principal asset available to most poor people, apart from their own labour.

Figure 1. Relative importance of environmental income to household income
Source: Angelsen, A. et al. 2014. Environmental Income and Rural Livelihoods: A Global-Comparative Analysis, *World Development*.

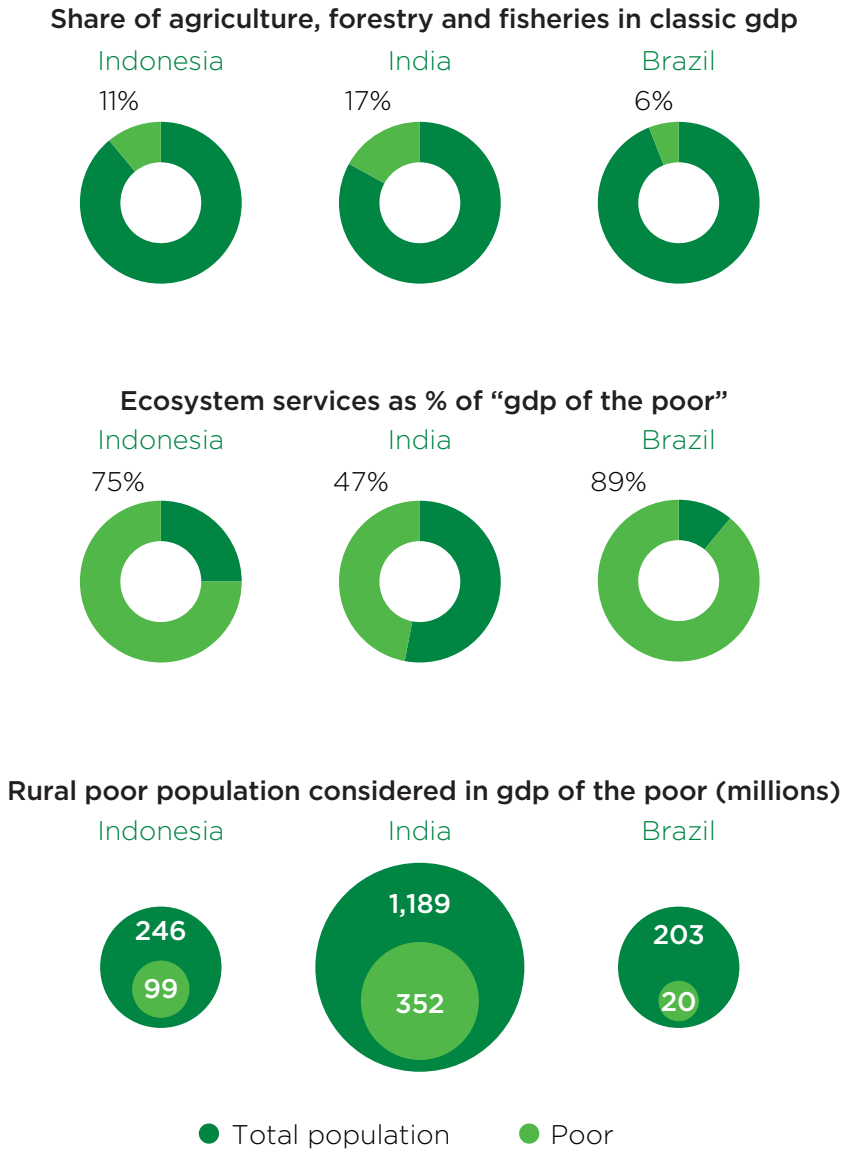


However, poor people's dependence on natural capital is rarely known beyond isolated studies. Much of this 'GDP of the poor' is based on a subsistence or informal economy in, for example, agriculture, animal husbandry, forestry and fisheries. This activity does not often enter the market and tends to be ignored in official economic statistics. For example, while production from a country's formal livestock sector will be reflected in the national accounts, the contribution of the informal pastoralist sector — critical for poor groups — will not.[5] When information on the GDP of the poor is analysed it is shown to be a very significant amount (Figure 2).

For many poor groups, deprivation of the non-cash benefits of natural capital can be a more significant measure of poverty than deprivations of cash income.

Too often natural capital is used in ways that do not benefit poor people.

Figure 2. GDP of the poor: estimates of ecosystem service dependence.
Source: TEEB (The Economics of Ecosystems and Biodiversity). 2010. Mainstreaming the Economics of Nature. A Synthesis of the Approach, Conclusions and Recommendations of TEEB.



Natural capital accounting: informing the poverty reduction-natural assets relationship

The relationship between poverty and natural capital is not simple and can be negative as well as positive. However, policy and plans are often not informed by this relationship and what influences a positive or negative trend. Poor people's lives are more intimately tied up with the condition of natural capital than other groups:

- Typically, natural capital provides at least a **safety net** for poor people — smallholder farms, forests and fisheries providing a range of nutrition, energy and health needs[6,7]
- Sometimes natural capital can offer a **route out of poverty** — realising income from its rental, from local enterprises or employment in natural resource management. For example, a 10 per cent increase in farm yields from sustainable agriculture reduces poverty by 7 per cent in Africa and 5 per cent in Asia[8]
- Occasionally, however, natural capital acts as a **poverty trap** — where people's lives become bound to underproductive or degraded land and water bodies, especially if they live in areas remote from markets, education and health, with few opportunities to invest in land improvement.[4]

The relationship changes over time, closely linked to market dynamics, changes in resource scarcity, and governance regimes. For example, with changes in legislation and international demand and supply, poor countries and groups can be left with stranded assets, such as in the case of coal-or oil-rich countries when climate legislation and carbon markets tighten up. But given current population and poverty trends, the rural poor will continue to lose out unless a major shift takes place.[9] Relying on natural capital as a pathway out of poverty is not enough. Policies need to be place-specific and use a variety of instruments like direct investment to reduce dependence or over-exploitation of environmental resources through non-farm jobs and improving access to affordable capital, technology and markets.

Too often natural capital is used in ways that do not benefit poor people. Economic growth policies have favoured local elites or foreign companies dominating access to natural capital, to manage it in ways that suit their interests. Conservation policies often exclude poor people from using natural resources like forests and water bodies — for example when national parks are created or extraction licences are given — and from economic incentives like subsidies for reforestation if linked to clear tenure or require co-investment.

In such cases, others benefit (including society as a whole from preservation of resources) but it is the poor people who have suffered the costs. The distribution of these social, environmental or financial costs and benefits are neither transparent nor included in decisions — to the detriment of both natural resource management and poverty reduction policies.

The challenges of natural resource management and poverty reduction are highly significant, but each has been treated as a separate endeavour. Isolated institutions, disciplines and information systems make it hard to deal with the real-life interdependence of these challenges. Equity-blind

approaches to natural capital management are not enough and a much more systematic solution is needed. For example ecological outcomes are at risk if fairness and legitimacy (of access and distribution of benefits and costs) issues are not considered.[10]

More integrated information is a first step to opening up natural resource routes out of poverty, and to closing down poverty traps. Ideally, we should know:

- Natural capital stocks and flows: what are the changing stocks of each type of natural capital such as forests or soils, and the flows of goods and services from these stocks?
- Waste and 'brown' agenda: what are the flows of ecosystem 'bads' (waste water, pollutants, CO_2 emissions)? What sectors are involved and what opportunities may this create for others?
- Users and use: what sectors, localities or groups of people are using natural capital and for what purpose? What are poor groups using, and what is their dependence on it?
- Added value: what benefits are poor groups receiving from natural resource use — e.g. in terms of income per m^3 of water or wood, as well as health, security or livelihood resilience?
- Productivity and efficiency: which natural capital is being overused, efficiently used, or underused?
- Costs: what are the true costs of using natural capital? What is the cost of losing or degrading it (e.g. in terms of replacement cost or loss of resilience)
- Opportunities for job creation — and possible alliances between the public and private sector to create shared value for companies and societies.
- Policy and investment: how is the introduction of regulations and market instruments, and new investments, changing the above? Where are the effective levers for poverty reduction?

Developing countries don't usually have all this information. To answer the above questions requires research in specific localities, as well as interdisciplinary methodologies and institutional coordination. But efforts to provide this have variously been short-term projects only, heavily value-based, poorly provided with data, and/or not tractable with mainstream disciplines and institutions. Again, a more systematic solution is needed.

Natural capital accounting offers a systematic overview of different forms of natural capital relevant to poverty reduction.

What natural capital accounting offers

Natural capital accounting offers a systematic overview of different forms of natural capital relevant to poverty reduction:

- The data presented is unbiased, structured, and comparable. It employs an accounting framework that is agreed by the United Nations (the System of Environmental and Economic Accounts, SEEA), and follows a logic that is tested and acceptable to statisticians, accountants, economists and natural scientists. This eases its adoption across sectors, and enables it to complement other high-level national information, particularly the system of national accounts, but also poverty reduction and census information.
- It provides a first step towards an information base on natural capital, which can be used for poverty reduction planning, to inform e.g. national development plans, job creation and social protection programmes, as well as natural resource management plans that are critical for poverty reduction e.g. water supply and collaborative forest management.
- It is produced through, and supportive of, collaborative practice across several departments and potentially also with representatives of poor people.
- It is repeated on a regular basis, which enables the correlation of natural capital data and trends with poverty data and trends.
- It can focus research on the many knowledge gaps concerning the relationship of natural capital and poverty. While NCA does not obviate the need for detailed policy analysis in relation to particular natural resources, locations or user groups, it offers a systematic information base to support such analysis and the policy decisions that follow.
- At the moment the information collected is at the national level. Future steps should move towards disaggregation of data and a more distributional focus.

Making progress in-country: the WAVES programme informing poverty reduction

Developing countries face many pressures and resource constraints, and systemic solutions are often viewed as impracticable or expensive. However, NCA can be built up in stages: countries can begin with accounts for just one resource that is critical for poor people — such as water in drought-prone countries, or for economic growth — such as minerals and forests.

Although it is early days in most countries, NCA has already begun to inform poverty reduction strategies.

Botswana water accounts. These revealed a dilemma: the agriculture sector is the highest water user (43 per cent), but it is a low contributor to GDP and formal employment. In contrast, the service sector, notably tourism, produces significant added value from each m^3 of water. However, if poverty is to be reduced, the income-generating potential of services needs to be balanced against agriculture's support to much informal employment, which provides a critical social safety net to people in remote areas. Information from Botswana's water accounts is aimed directly at supporting implementation of the National Water Master Plan and associated water sector reforms[11].

Guatemala agricultural accounts and food security. Guatemala has become the first WAVES country to address national policy around food security by undertaking agricultural accounts together with water, forest and energy accounts. Food security remains a major challenge in Guatemala. With half of pre-school chronically malnourished, Guatemala has the higher chronic malnutrition in the Latin American and Caribbean region and one of the highest in the world. Over half of the malnourished children in the region live in Guatemala. Malnutrition not only increases child mortality, but lowers education performance and adult productivity.[12] The WAVES programme will apply the System of Environmental Accounts to agriculture to inform this debate. Provisional engagement with key stakeholders from public and private sector is taking this work forward.

Philippines accounts inform land use options. The Philippines has chosen to undertake accounts in two regions — Southern Palawan and Laguna Lake — both of which involve poor and non-poor groups competing over natural assets. In Southern Palawan, an island of rich natural assets there are active struggles ongoing over whether to preserve the biodiversity for ecotourism and sustainable use or to allow mining of the rich deposits that have been discovered. In Laguna Lake by the capital Manila, there is competition between large- and small-scale fishers and the many other users of the lake.

As NCA progresses, it needs to address several challenges if it is to realise its potential to support poverty reduction. The World Bank is making progress in developing and applying NCA with developing countries, through the WAVES Partnership. The task is not straightforward, however. There are challenges in ensuring NCA can be precisely tailored to the needs of poor countries and poor groups. The partnership welcomes debate and collaboration in tackling these challenges:

- As far as possible, NCA should incorporate data relevant to natural resource-using SMEs and informal economic activities, and not only the major formal sectors (e.g. decentralised water abstraction, artisanal mining production, etc). Community reporting, use of mobile devices, and so on can provide channels for poor groups to input data to NCA, and to validate data.
- NCA should be transparent and accessible to poor groups – at least in terms of its overall findings. Social networking is one way of achieving this.
- NCA should pay attention to the data challenges of the particular natural capital types on which poor groups depend — which are often non-marketed — such as watershed quality and biodiversity.
- NCA should avoid inadvertent bias towards national issues and account for differences across geographies, social groups and employment types. Local accounts might be one way forward.
- Although these are tough challenges, as NCA is an internationally agreed, credible, information system that works for all sectors, disciplines and resources, it is more likely to attract data, to be used, and to be influential. NCA encourages a whole-of-government approach to data assembly and analysis. This improves the likelihood of its being used in cross-institutional, central and/or high-level decisions — and of systemic solutions being found.

Notes

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