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## Repositioning forests in development

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*Forests are critical for a sustainable future and need to be “mainstreamed” into economic policy and decision-making.*

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For millennia, people have benefited and prospered from our planet’s abundant resources. Now, there are seven billion of us (United Nations Population Fund, 2011), but while our numbers are still increasing, resources are not. The concept of sustainable development responds to knowledge of the limits to resources. For example, the Brundtland Commission’s report *Our Common Future* (UNWCED, 1987), which helped popularize the concept of sustainable development, implied that the nature and magnitude of our economy should be managed within the regenerative and assimilative capacities of our biosphere (Daly, 2002).

The world economy has quadrupled in the last quarter-century, to the benefit of hundreds of millions of people. Yet there

is significant evidence that this development has not been sustainable. According to the Millennium Ecosystem Assessment (2005), over 60 percent of the world’s major ecosystem goods and services are degraded or being used unsustainably, and rapid urbanization has exacerbated problems of pollution, waste generation and congestion (UNCSD, 2010). Despite repeated warnings about the environmental, social and economic risks associated with human-induced climate change, the rate of greenhouse gas emissions continues to grow (*The Guardian*, 2011).

***Above: Youngsters fish in a creek in the Yoko Forest, Democratic Republic of the Congo. Hunting and fishing on forested land supplies more than one-fifth of protein requirements in around 60 developing countries***

While economic progress has been dramatic at a global scale, those benefits have not been shared equitably between or within countries (UNCSD, 2010). Thirteen percent of people in the developing world still lack access to adequate clean water (World Health Organization, 2011) and twenty-five percent have little or no access to modern energy services (International Energy Agency, 2009). In addition, rapid but non-inclusive economic growth has become a major driver of political and social unrest in many parts of the world (Sreedharan and Matta, 2010). As the human population continues to expand and per capita consumption rises, the already stressed biosphere will become increasingly strained; for example, the area of arable land per capita has declined since the 1960s as a result of overly intensive use as well as degradation and urbanization (IFPRI, 2011). With such an outlook, the need to re-examine and refocus our efforts to ensure a sustainable future is evident.

#### THE CONTRIBUTION OF FORESTS TO SUSTAINABLE DEVELOPMENT

In many countries, development is needed to increase employment and raise the standard of living (Dasgupta, 2011). To be sustainable, however, development activities must balance economic, social and ecological factors. Forests are a unique resource for accomplishing this balance because of their capacity to respond to multiple economic, social and ecological needs and challenges, and because of their renewability.

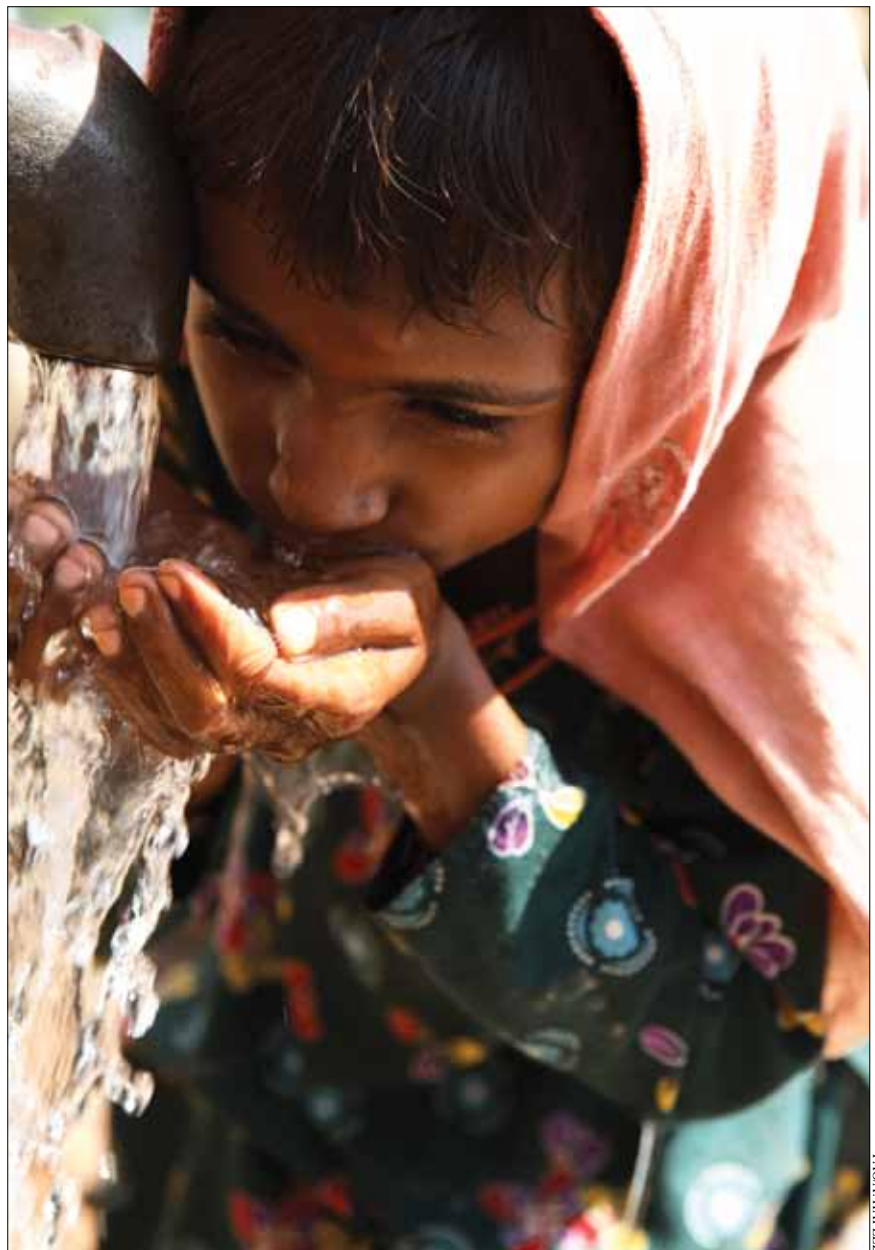
#### Forests provide food and energy

Close to 350 million of the world's poorest people, including 60 million indigenous people, depend almost entirely on forests for their subsistence and survival (FAO, 2012a). They include the most disadvantaged and vulnerable – and often the politically weakest – people in society. For

them, forests are an important source of food and medicine; for example, hunting and fishing on forested land supplies more than one-fifth of protein requirements in around 60 developing countries (Mery *et al.*, 2005). Moreover, forests provide many of the raw materials used by local entrepreneurs. In Cameroon, for example, small forest enterprises based on honey, the bark of *Prunus africana*, bush mango (*Irvingia* species) and gum Arabic (based

on *Acacia senegal*) have enabled many local people to earn cash income that may subsequently be used to purchase food, fuel and other critical goods (FAO, 2012b).

In addition to improving food security, forests play an important role in slowing and reversing land degradation due, in large part, to their ability to replenish and increase the retention of soil nutrients. As a result, sustainable forest management and forest restoration have come to



**A child drinks from a communal pump, Sukkur, Pakistan. Thirteen percent of people in the developing world still lack access to adequate clean water**

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**Small forest enterprises based on the fruit of the bush mango (*Irvingia species*) generate employment and income for many local people in Cameroon**

be recognized as critical approaches for addressing major food security challenges such as desertification and soil degradation. Agroforestry and silvopastoral land management both capitalize on the protective functions of trees and forests to increase food production over time (Calle, Murgueitio and Chará, 2012).

Forests also play a key role in producing fuel: for more than two billion people, wood energy is critical for cooking, heating and food preservation (i.e. smoked food products) (FAO, 2010a). Moreover, charcoal and fuelwood are often primary sources of cash for poor people living in and around forests (FAO, 2006). Significant research is under way on the use of forest biomass as a sustainable, clean high-tech energy source (FAO, 2008).

### **Forests contribute to job creation and improved livelihoods**

Forests have come to be recognized as engines of rural economic development. In southern China, for example, forest-related activities contribute as much as 40 percent of farm income (The World Bank, 2006). Globally, the formal forest sector accounts for nearly 1 percent of gross world product (the sum of the gross domestic products of all countries) and generates at least ten million formal-sector jobs (FAO, 2010a). If employment in informal, small and local forest enterprises is considered, it is likely that more than 100 million people are employed in forest-related jobs (Macqueen, 2008).

Over time and with financial and technical support and capacity development, the increased use and marketing of wood and non-wood products will create new enterprises, more employment opportunities and increasingly secure livelihoods. Tools such as certification and ecolabelling could add to the marketability of forest products (Muthoo, 2012). A positive



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feedback loop could thus be created as greater local income increases consumption, which in turn would stimulate production and create further employment. Forest restoration also holds the promise of substantial job and income creation (Calle, Murgueitio and Chará, 2012; Brancalion *et al.*, 2012).

### **Forests provide critical ecosystem services**

Forests perform a wide range of ecosystem services. They help to regulate hydrological cycles and reduce the threat and impact of floods and drought (Daily *et al.*, 1997), and they are home to more than 80 percent of the world's terrestrial biodiversity (WWF, 2012). Forests also play a major role in the global carbon cycle, including by storing about 289 gigatonnes of carbon in their biomass (FAO, 2010a). Further investments in sustainable forest management and forest restoration could increase the storage of carbon in forests (Skutsch and McCall, 2012). Additionally, the better integration of forestry and farming is rapidly coming to be understood as a significant component of ensuring sustainable agriculture and food security. For example,

transitioning from traditional agriculture to agroforestry has the potential to sequester up to 25 additional tonnes of carbon per hectare (ha) per year (Matta, 2009; see also Brancalion *et al.*, 2012). Forests can also help put wastewater to productive use (Del Lungo, 2012).

### **Forests supply an array of products**

Forest ecosystems provide a variety of wood and non-wood products that are intrinsically natural and recyclable and are often reusable and biodegradable. There is great potential for the increased use of such products, for example in "green" buildings and other infrastructure, as recyclable car and computer parts and in foods, medicines and cosmetics. The increased and innovative use of forest products could lead to dramatic changes in the way we lead our lives. Increased prosperity and the growing demand for more sustainable consumption and lifestyles is likely to create increased demand for sustainably produced products. Given that forest-based products can so simply and readily respond to such demand, the importance of forests to both producers and consumers is likely to be increasingly demonstrated.

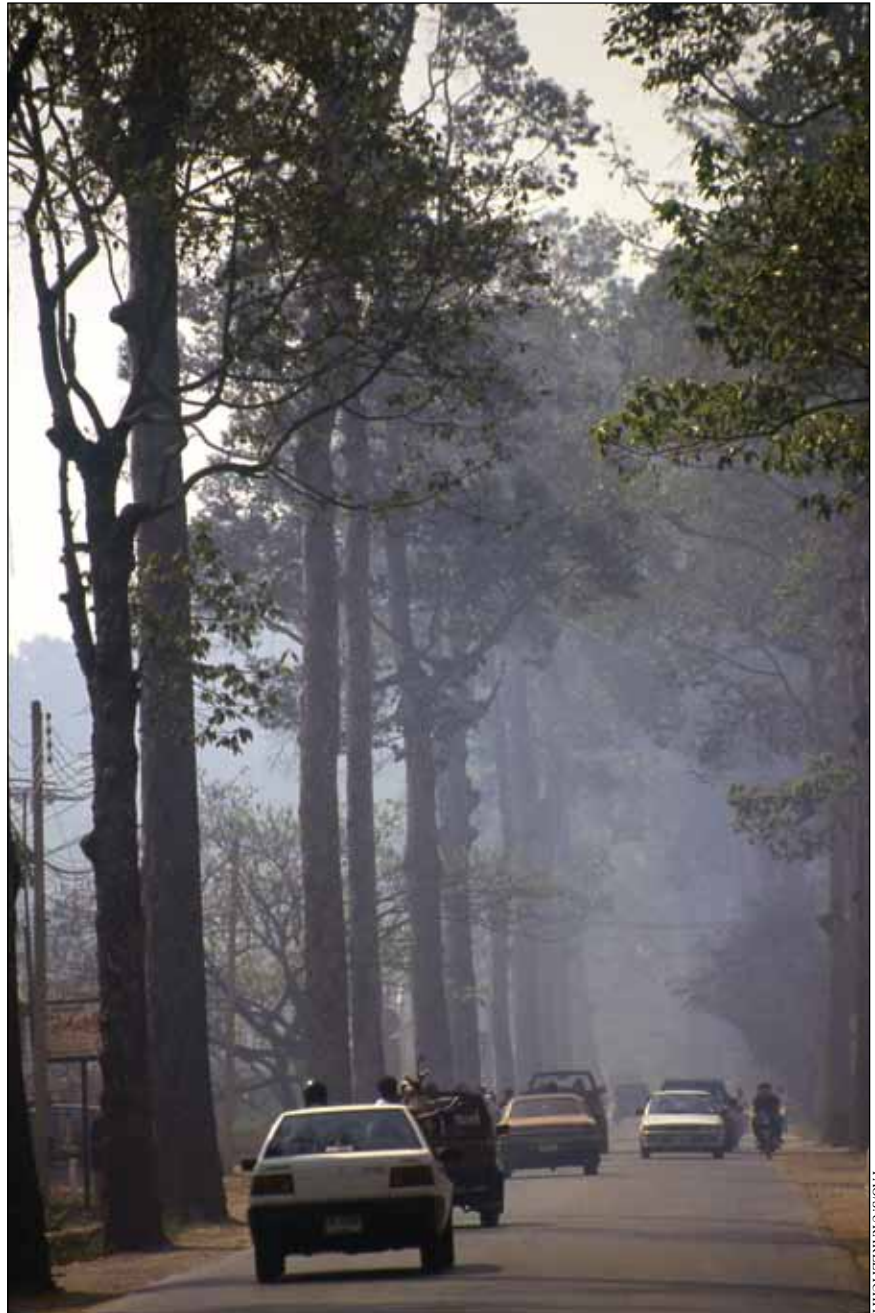
*Urban forestry plays an important role in making cities livable*

### **Forests foster healthier and more livable cities**

Forests are important for our cultural, aesthetic and recreational fulfillment. With more leisure time and discretionary income, interest among urban-dwellers in the recreational use of forests has increased dramatically; for example, as much as one-half of world tourism is nature-based (FAO, 2012a). Urban residents can be affected by forest loss if it leads to an increased incidence of flood or drought or a decline in urban water quality. Trees can further help urban dwellers by mitigating the “heat-island” effect – the phenomenon whereby urban areas are hotter than surrounding rural areas. Urban forestry serves an important role in regulating temperature within cities (FAO, 2002), and has also assisted in water management and the creation and expansion of urban and peri-urban green spaces and recreation areas. It has even been linked to a reduction in crime in inner-city areas (Kuo and Sullivan, 2001).

### **Forests mitigate and lessen the impacts of disasters**

Forests can provide a means of mitigating and coping with shocks resulting from catastrophic events. For example, there is considerable evidence that coastal forests can reduce the impacts of cyclones and other disastrous events and thereby lessen damage to property and reduce the loss of life (Braatz *et al.*, 2006). Such crises can lead to the creation of forestry programmes that benefit local populations in the long run. Mexico’s programme of payments for hydrological services, which provides financial incentives to landowners to maintain forest cover in critical watersheds, was established primarily in response to severe drought conditions and water scarcity (Munoz *et al.*, 2008). In China, devastating floods along the Yangtze River spurred the government to initiate the Sloping Land Conversion



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Programme, which set out to convert 14.7 million ha of croplands to forest (Bennet and Xu, 2005).

### **FORESTS AND A SUSTAINABLE FUTURE**

While there are compelling reasons to conserve forests and encourage the integration of forests into sustainable development

strategies, the risks forests face from degradation, fragmentation, conversion to other uses and unsustainable exploitation are high. For example, about 130 million ha of forest, including 40 million ha of primary forest, were lost in the period 2000–2010 (FAO, 2010a).

The 20th anniversary of the landmark 1992 United Nations Conference

on Environment and Development, also known as the Earth Summit, was marked in 2012 by the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil (and known as Rio+20). There, world leaders and other representatives of civil society identified seven areas in need of priority attention: jobs, energy, cities, food, water, oceans and disasters (UNCSD, 2012).

Forests play a critical role in each of these areas, but this role is often underappreciated. Up to now, forests have rarely been foremost in the minds of policy-makers, and many of their contributions to society are unknown outside the forest sector (FAO, 2010b). The final outcome document of Rio+20, *The Future We Want*, devotes just four paragraphs (in a 283-paragraph document) to forests (United Nations General Assembly, 2012).

Nevertheless, *The Future We Want* does stress the importance of integrating sustainable forest management objectives and practices into the mainstream of economic policy and decision-making. Doing so will involve creating an understanding of the benefits of mainstreaming, getting commitment from decision-makers for identified actions, and ensuring that those actions are carried out on the ground. It will require strong global and national leadership and concerted action on several fronts. Profound adjustments in policies and practices must be made unflinchingly. The articles in this issue of *Unasylva* (some of which are cited here) provide a glimpse of some of the avenues being explored to strengthen the forest sector and its role in sustainable development.

Incentives designed to encourage investment in forest-related activities and stimulate the creation of new markets will be needed, in tandem with the development of appropriate regulatory frameworks. Paying for forest ecosystem services, for example, could significantly change the market dynamics of forest enterprises and increase their financial viability. This, in turn, could lead to greater investment in forestry and ultimately to additional income

and livelihood opportunities for local communities. To ensure a level playing field for forest products (Martin, 2008), policies are needed to ensure that the prices of unsustainable, or “non-green”, products reflect their full environmental costs (e.g. in terms of pollution, energy use, global greenhouse gas emissions and waste disposal).

Underlying issues such as land tenure and governance must be addressed, and policies should be put in place to encourage local forest-based enterprises, cooperatives and forest governance. REDD+ mechanisms must include specific safeguards to ensure that the flow of benefits is sustainable, inclusive (particularly of women; see Setyowati, 2012) and participatory.

In some countries, regulatory and voluntary compliance policies have created disincentives for landowners to carry out sustainable forest management. The environmental and sustainability credentials of wood products – that they are renewable, recyclable, biodegradable and require less energy to produce – need greater visibility. Policy-makers and development practitioners should take a hard look at existing policies and regulatory frameworks to ensure that they foster an enabling environment that promotes forest industry, including small and medium forest enterprises, and broadens the range of forest values and benefits by developing new and innovative products and services.

Strong global leadership and concerted communication, knowledge-sharing and networking are also needed to instil broad understanding about the socio-economic benefits of investing in forests. Organizations leading such efforts may have to move beyond conducting occasional symposiums and side-events and employ modern-day digital technologies and web-based outreach methods, which have unprecedented potential for scaling up success stories. Considering the global benefits provided by forests, interventions that increase appreciation of the value of forest goods and services and the benefits of using forest products must be made at both the country and global levels.

Rio+20 has provided us with the opportunity to rethink sustainable development. Perhaps now is the time for a real and meaningful paradigm shift to embrace forests in our thinking and actions on achieving genuinely sustainable development. We can still have the forests we want. ♦



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