

Natural Resources, Employment and Qualitative Growth

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The importance of natural resources for jobs and qualitative growth

Intact ecosystems are the basis of human prosperity. The free services provided by nature perform nurturing, cultural, supporting and regulatory functions. They set the framework for agriculture, which is so important and creates so many jobs in developing countries, e.g. by regulating the water balance, stabilising the microclimate and pollinating crops. They also generate non-monetary income for population groups in rural regions by providing construction materials, medicinal plants and drinking water free of charge.

Quantifying the importance of natural resources for jobs is a complex matter, and often can only be illustrated with reference to examples. Sound estimates exist for industries that are built directly on the use of natural resources, such as fisheries, forestry, and

The "value" of a coral reef

The TEEB report supported by the United Nations Environment Programme (UNEP) breaks down the economic contribution of ecosystems by taking the example of coral reefs. According to the report, these contribute up to USD 189,000/hectare/year to disaster risk management (e.g. by reducing storm surges), up to USD 1 million/hectare/year to nature tourism (e.g. diving tourism), up to USD 57,000/hectare/year to bioprospecting and the use of genetic material, and up to USD 3,800/hectare/year to value creation in the fisheries sector (this because coral reefs perform important functions in the food and life cycle of economically important fish species). FC is providing EUR 15million to support the protection of the world's second-largest coral reef along the coasts of Mexico, Belize, Guatemala and Honduras.

tourism. The total contribution of nature to qualitative growth and employment is far higher than that, however. Intact ecosystems play an important role in regulating global resource cycles and mitigating environmental risks, and thus help secure jobs in all sectors in the long term. These last two points are key to measuring the contribution of intact ecosystems to qualitative growth: sustainability, and the holistic perspective for society at large. A rapid exploitation of resources (e.g. overfishing, clearcutting etc.) can lead to high growth rates in certain sectors in the short term, yet have serious macroeconomic and lasting impacts. This is demonstrated by the lessons learned in forestry and fisheries in recent decades.

Sustainable fisheries

The FAO estimates that global fisheries are worth an annual total of USD 132.85 billion.¹ The World Bank believes that this figure might be as much as USD 50 billion higher if global fish stocks were to be fished sustainably. To put this in context: since industrial fishery began, commercially fished stocks have declined by 90% worldwide due to overfishing.²

Where sustainable natural resource management in the fisheries sector regulates and monitors rights of access, and establishes protected areas as regeneration zones, it can make a significant contribution not only to ecological growth, but also to economic growth and employment. Here we are not just talking about the quantity of growth and employment, but also about quality in particular: above all, sustainability in the fisheries sector means long-term prospects for business and jobs.

Sustainable forestry

Logging worldwide is estimated to be worth USD 100 billion.³ According to FAO estimates,



Source: KfW photo archive / Pietro Sutera

Mauritania: fish and jobs

The coastal region of Mauritania is among the world's richest in fish stocks. FC has been supporting the Mauritanian authorities for many years in fishing surveillance in the 200-mile economic exclusion zone. Since 2012 it has been supplementing these activities with measures to protect shallow water areas, which are particularly important for reproduction and the development of juveniles. This includes the Banc d'Arguin National Park, which covers an area of 12.000 sq km and is a UNESCO natural world heritage site. This will safeguard the 60,000 jobs in the Mauritanian fisheries sector in the long term, as well as the country's high revenues from fishing quota agreements, for instance with the EU. German consumers will also benefit indirectly from the stabilisation of the global fish supply. FC is providing EUR 12million to support the project.

just under 10 million people around the world are employed directly in forestry or forest management, even though many of them work in the informal sector. Especially in developing countries, illegal logging still accounts for a very high share of the total. The improved regulation of forest management can generate key impetus for growth and employment here, too.

One particularly striking example is Brazil. In the Amazon region, which covers an area of over 5 million km², over 50% of the land is owned by the state, and a further 27% has no

¹ Food and Agriculture Organization of the United Nations: The State of the World Fisheries and Aquaculture 2012. Rome

² TEEB – The Economics of Ecosystems and Biodiversity for National and International Policy Makers – Summary: Responding to the Value of Nature, 2009

³ Food and Agriculture Organization of the United Nations Global Forest Resources Assessment 2010. Main Report. Rome 2010

clear legal status. Until 2006, the law did not allow these areas to be used for forest management. Consequently, many companies operated illegally. Since 2006, it has been possible to award forest concessions to private actors for parts of these gigantic state-owned forest lands. This is lifting companies out of illegality, and laying the foundations for sustainable growth prospects in the forestry sector. Legalising these companies and their activities has created jobs that, compared to the informal sector, offer more regular working conditions that are legally protected and enforceable. Today, forestry in Amazonia – which is worth no less than USD 2.5 billion – is generating over 200,000 jobs in the economically disadvantaged Amazon region. As a general rule of thumb in Amazonia, 150 hectares of sustainably managed natural forest generate an average of one job.⁴ With support of EUR 15 million delivered through Financial Cooperation (FC), it is envisaged that up to 2 million hectares will be made available through new concessions, and be sustainably managed. Applying the aforementioned rule of

Southern Africa: nature tourism

In Southern Africa, together with the governments of five countries KfW is developing one of the world's largest continuous nature reserves, the Kavango Zambezi Transfrontier Conservation Area (KAZA), which covers an area of 29 million hectares. The countries in the region are relying on international tourism to boost economic development. The rule of thumb in Southern Africa is that for every 8 additional tourists, one job is created. FC is supporting KAZA to the tune of EUR 20 million.

Furthermore as part of its commitment to CSR, since 2008 KfW has been using its own funds to finance the training of five female students a year at the Southern African Wildlife College. By doing so it is not only promoting the work of future gamekeepers, but also creating new professional opportunities for women.

thumb, this would be equivalent to over 13,000 new, legal jobs.

Nature tourism

Nature tourism is one of the fastest growing branches of the tourism industry worldwide. The World Tourism Organisation estimates that nature tourism around the world is experiencing annual growth of 20%, which is approximately six times the growth in the remainder of the tourism sector.⁵ Nature tourism is directly dependent on intact natural monuments such as coral reefs, scenic landscapes and flagship species (e.g. gorillas, whales, tigers etc.), which are often found in national parks or other types of protected area. These monuments facilitate protection of the entire biological diversity of a region, by providing an emotional basis and images that enable people to identify with the area.

On behalf of the German government, KfW is currently financing 280 nature reserves in 35 countries around the world, which cover a total area of over 711,000 km² – which is almost twice the size of Germany. A large proportion of this area comprises tropical forests (just under 70%), as well as steppes and savannas (around 18%). Due to their species abundance and physical features, the latter are especially suited to the development of nature tourism. Wherever possible and expedient, potential for sustainable tourism is harnessed in FC projects (e.g. in Southern Africa, see box).

Conclusion

Intelligent natural resource management harnesses the locally available potential for development, while safeguarding the rights of the local population. At the same time, in the vast majority of cases nature conservation is not a viable business proposition in itself, and despite the rising number of tourists in some regions will remain dependent on public budgets, development funding and donations in the long term. On balance, an investment in nature conservation may nevertheless make particular macroeconomic sense if the area

generates significant positive external effects as a result of ecosystem services delivered free of charge.⁶

Nature conservation and forestry often compete directly with other forms of land use that also create jobs and can induce development, e.g. agriculture, mining or power generation. Establishing and expanding protected areas may therefore also entail negative effects on employment and growth if these alternative forms of land use are included in the calculation. This risk exists particularly in cases where the use of resources is completely prohibited, and/or the opportunity costs associated with protecting the area are particularly high. However, the negative effects on employment can be counteracted, and alternative income can be generated, for instance through development measures in the immediate vicinity of the protected areas that are compatible with nature conservation.

In many cases, the role of FC is to support governments in developing and implementing comprehensive land-use planning. These plans must combine various policy goals such as food security, foreign exchange earnings and nature conservation in such a way that the partner country can pursue a green development path. A strong, capable state, the provision of physical infrastructure, and the protection of relevant public natural goods from which the economy and society as a whole benefit, create legal and investment certainty. This is necessary, so that companies which do business with natural resources in countries can also create sustainable jobs.

Further information

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<https://www.kfw-entwicklungsbank.de/International-financing/KfW-Entwicklungsbank/Sectors/Naturressourcen-und-Tropenwald/>

⁴ Imazon, Fatos Florestais da Amazônia 2010, 2010

⁵ TEEB – The Economics of Ecosystems and Biodiversity for National and International Policy Makers – Summary: Responding to the Value of Nature, 2009

⁶ ten Brink, P., Mazza L., Badura T., Kettunen N. and Withana S.: Nature and its Role in the Transition to a Green Economy. 2012