



Natural Resources, Environment, and Sustainable Growth in Mozambique

Mozambique is a country of abundant natural resources, counting among its assets arable land in ten different agro-ecological zones (12% only being cultivated), hydropower potential from its many rivers, forests, fisheries, gas, and other subsoil assets (such as coal and heavy sands). The country's forestry potential is under-utilized, though its highly valuable species stocks are being depleted. The country's biodiversity, with its many endemic species, will certainly be a key asset for the Ministry of Tourism's eco-tourism ambitions.

The importance of natural resources in Mozambique can hardly be overstated. As emphasized by a recent World Bank Study (2005)¹, with 65% of the population living in rural areas, *“the country's economy will undoubtedly continue to rely to a very large extent on its natural resource base. Even with rapid rates of urbanization, the subsistence and well being of most Mozambicans will continue to depend on their access to land, water resources, forest products, fisheries, mines, and other natural resources.”*

Unfortunately, the country's tropical climate and low coastal areas, where numerous rivers (including the Zambeze) end, make the country particularly vulnerable to natural disasters such as floods, droughts, and cyclones. Global climate change will only exacerbate these problems.

Moreover, the development of commercial agriculture, though key to Mozambique's economic growth and poverty reduction, poses a challenge to the comprehensive and sustainable management of natural resources.

Importance of Natural Capital in Mozambique's Total Wealth

A nation's wealth is made of its productive capital, its intangible capital (encompassing human and institutional capital), and its natural capital (renewable and non-renewable). Mozambique has a relatively high endowment of natural capital, representing 49% of total wealth (see figure 1), relative to other Sub-Saharan Africa countries (24% on average). Natural resources should thus be integral to any growth strategy. In contrast, physical capital represents only a small share of the country's total wealth, while intangible capital has a large share. The breakdown of natural capital shows that mineral resources constitute the main part of Mozambican natural capital; its share could even increase if some oil reserves were to be confirmed. Croplands and forests also make up an important share of natural capital.

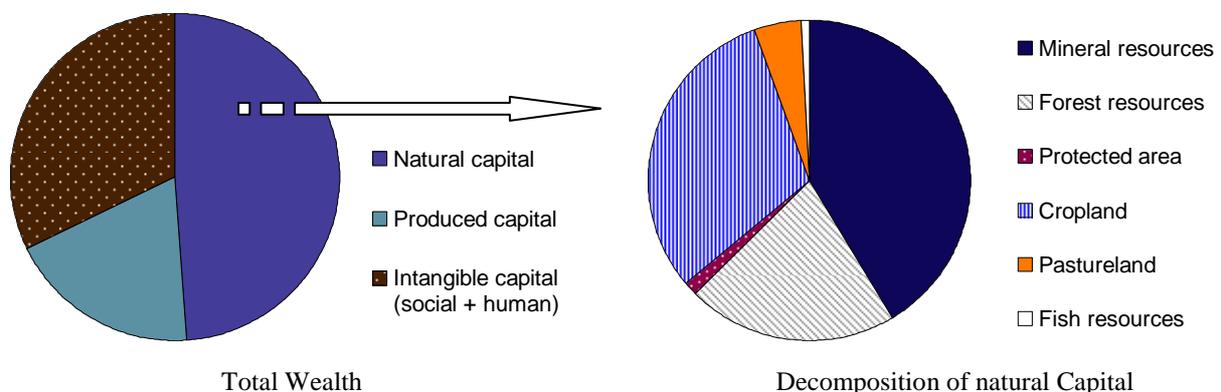


Figure 1: Decomposition of Mozambican wealth

¹ Natural Resources and Growth Sustainability, Economic and Sector Work, World Bank, 2005

Cost of Environmental Degradation

Estimated costs of environmental degradation, amounting to nearly USD 370 million annually, represent more than 6% of Mozambican GDP (see figure 2) and 20% of Overseas Development Assistance (ODA).

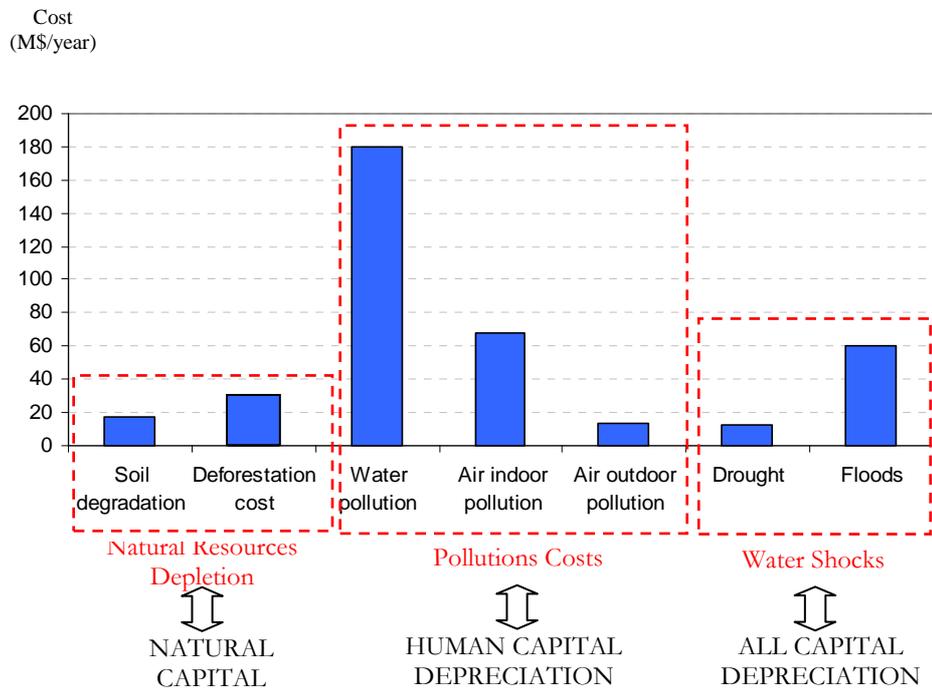


Figure 2: Costs of environmental degradation

High Impact of Pollution and Water Shocks

Figure 2 shows that efforts to build up human capital through high levels of investment in education are hindered by inadequate water supply, hygiene and sanitation, and indoor air pollution. Results from other countries show that investing in water or indoor air pollution reduction can be highly beneficial.

As expected due to its geography, Mozambique is highly vulnerable to climate variability. Indeed, “water shocks” (especially floods) are costly to Mozambican growth. It is critical to find the most effective way to reduce the impact of these shocks.

Relatively Low Depletion of Renewable Natural Resources

Pressure on renewable natural resources in Mozambique remains quite low, although some resources can be overexploited locally. The main challenge here lies in unlocking the country’s considerable potential and fostering productivity gains. Finally, the question of rent optimization and sharing is salient in the fishery and mining sectors.

The Sustainability of Growth is at Risk

Current national accounts, with indicators such as gross national savings, neglect the negative economic effects of natural resource degradation. Wealth accumulation in Mozambique is thus overestimated (see figure 3). Accordingly, accounting methods that integrate changes in productive assets, natural resources, environmental quality, and human capital provide a more accurate indicator of growth sustainability. This approach shows that the current development path of Mozambique is unsustainable: the

negative adjusted net savings (2005) reveals wealth destruction rather than accumulation – therefore jeopardizing future growth and well-being.

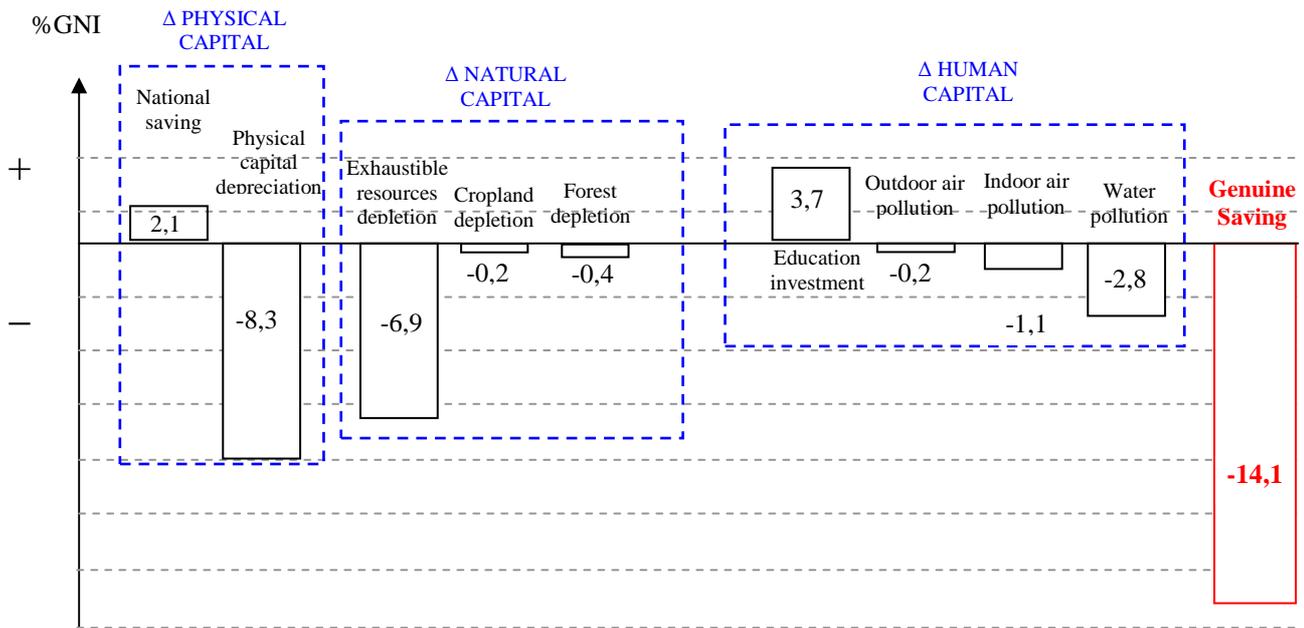


Figure 3: Adjusted net savings
