

Climate Change Costs in Namibia

James MacGregor quantifies the costs of climate change on Namibia's natural resource dependent economy and people. The author is a researcher with the Environmental Economics Programme at the International Institute for Environment and Development in London

Poor nations will suffer most from climate change, in part because of heavy reliance on climate-sensitive sectors such as agriculture and fishing. Up to 30 per cent of Namibia's Gross Domestic Product (GDP), for example, depends on the environment. Ironically, poor nations have contributed least to climate change. Namibia was estimated to be a net carbon dioxide sink in 1994 due to uptake by trees.

Namibia's advanced Natural Resource Accounts (NRA) help to evaluate the [contribution of the environment to national wealth](#) by developing "satellite" accounts for natural assets such as fish and forests. NRA data can be fed into conventional national economic accounts - a clear advantage for policy makers in natural resource dependent economies.

Feeding NRA data into a model reveals that under a best-case scenario agricultural impacts would be partly offset by improved water distribution, there would be no impact on fisheries and Namibia's GDP would fall by roughly one per cent. Under a worst-case scenario, reduced agricultural and fishing outputs means the GDP could fall by almost six per cent over 20 years. These estimates, however, only consider agriculture and fisheries. They ignore impacts on the health, infrastructure and energy sectors that will also be significant.

Combining NRA data with Namibia's [Social Accounting Matrix](#) shows that climate change impacts will hit the poor hardest. Even under the best-case scenario, subsistence farming will be sharply reduced. In the worst-case scenario for agriculture, labour-intensive livestock farming is hit hard. While high-value irrigated crop production could thrive, it creates few jobs. Thus, even under the best case scenario, a quarter of Namibians would need to find new livelihoods. Displaced rural populations could move to cities causing incomes for unskilled labour to fall by 12 to 24 per cent. Income distribution in Namibia is already one of the most uneven in the world and this inequality is likely to increase.

Nations such as Namibia cannot afford to ignore the contribution of the environment to national wealth in the face of climatic shifts. Along with "climate-proofed" policies and activities, Namibia needs a strategy to deal with displaced farmers and farm workers. Industrialized nations, who are most responsible for climate change, must help Namibia and other vulnerable countries cope with the impacts and plan for a climate-constrained future.

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