

# MINDANAO ECOLOGICAL FOOTPRINT INITIATIVE



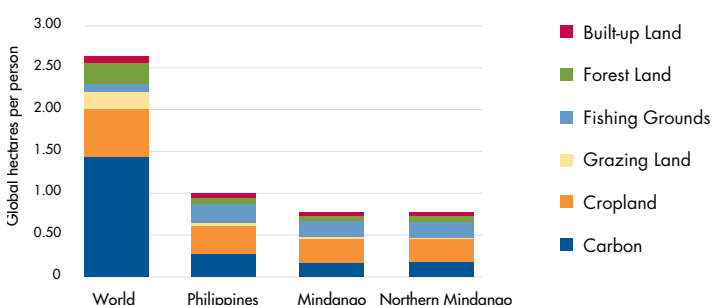
In 2012, the Agence Française de Développement (AFD) funded a national Ecological Footprint report of the Philippines co-authored by Global Footprint Network and the Philippines' Climate Change Commission (CCC). The study revealed a stark reality: Since 1961, the Ecological Footprint of the Philippines had tripled, with its population demanding nearly twice as many ecological resources and services than were available within its borders. In addition, the Philippines is increasingly vulnerable to the effects of climate change, including devastating typhoons, as a result of its South Pacific location. The 2012 Philippines Ecological Footprint study launched a public discourse on the ecological state of the country, with President Benigno Aquino III declaring: "Indeed, the time is right for ecological accounting."

Once again, AFD is working with Global Footprint Network, the CCC and now the Office of the Presidential Advisor for Environmental Protection to continue this vital work, focusing on the "food basket" of the Philippines: Mindanao. This region supplies more than 40% of the country's food, despite being home to some of the nation's most vulnerable people. A key focus of the project is Northern Mindanao, where six of Mindanao's major rainforest watersheds are found.

While the total Ecological Footprint of the Philippines has tripled since 1961, its per-capita Footprint has increased only slightly, reflecting the nation's rapid population growth. The Philippines has an Ecological Footprint of 1.01 global hectares (gha) per person, while Mindanao has an Ecological Footprint of 0.78 gha per person.



## ECOLOGICAL FOOTPRINT



**The Ecological Footprint** measures a population's demand on nature. **Biocapacity** represents a region's biologically productive land and sea area available to meet this demand. Both are measured in **global hectares (gh)**—globally comparable, standardized hectares with world average productivity.

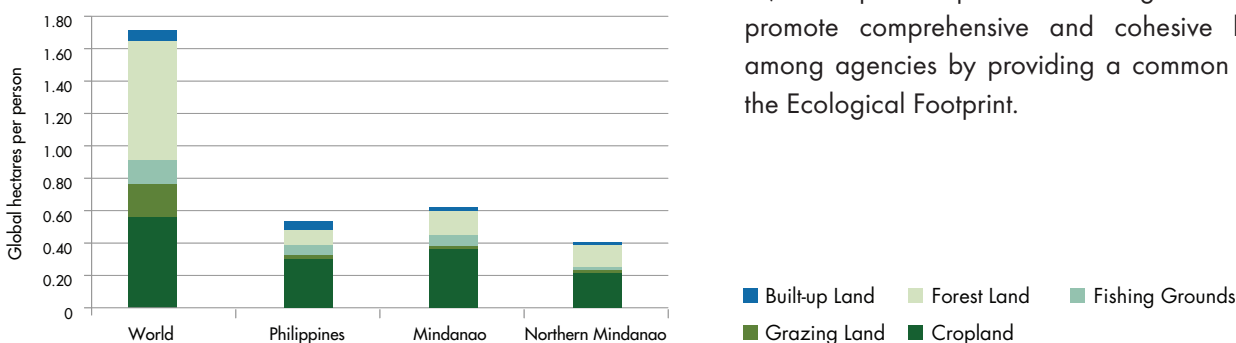
## ECOLOGICAL FOOTPRINT

The Ecological Footprints of the Philippines and Mindanao are below the world average biocapacity per person of 1.7 gha, indicating that parts of the population lack access to basic needs, such as food, clothing and shelter.

Mindanao's forest Footprint—or demand for forest products—is significantly lower than that of the national forest Footprint. This may indicate that the root cause of deforestation and other challenges may stem from external dependencies on Mindanao's forest products. In addition, unsustainable farming practices, such as "slash-and-burn" agriculture, which upland populations rely on for subsistence, are leading to forest destruction.

The largest components of the Philippines' total Ecological Footprint are cropland and carbon (forest area required to absorb carbon emissions), while the largest components of the total Footprint of Mindanao are cropland and fishing grounds. Growing demand on Mindanao as the country's food basket, as well as growing external demand met through exports, will continue to pose risks to both cropland and fishing grounds if the resources are not monitored and managed wisely. Already, fishing activity exceeds sustainable catch levels, leading to depleting fishing grounds and drastically reduced fish populations and catch.

## BIOCAPACITY BY LAND TYPE



## BIOCAPACITY

The amount of domestic biocapacity available to meet the demands of the average Philippine resident is shrinking. As more and more countries find themselves in a similar position, competition to secure resources will pose a greater risk to lower-income countries like the Philippines, as dwindling resources will lead to volatile food and fuel prices. This also will increase dependency on regions such as Mindanao that are still rich in ecological resources.

Cropland makes up the biggest share of Mindanao's biocapacity, at 57.41%, followed by forest, at 25%. Mindanao island's forest biocapacity constitutes nearly 40% of the Philippines' total forest biocapacity, but it faces increasing risks. The severe depletion of the forest cover in Mindanao contributed to a water crisis, weakening agricultural outputs, impoverishing local communities and jeopardizing existing businesses. More dramatically, deforestation is one of the primary factors explaining the high magnitude in casualties and damages caused by recent natural disasters, particularly typhoons.

The Mindanao Footprint study, to be completed in 2016, will include more in-depth analyses of Mindanao's forest Footprint and biocapacity and the human activities that pose ecological, social and economic risks to the area and its population. The study will help decision-makers develop ecologically feasible economic benchmarks for future development and inform local and national policies and investments. In doing so, we hope to improve the management of ecosystems and promote comprehensive and cohesive land-use planning among agencies by providing a common language through the Ecological Footprint.

**Global Footprint Network** is an international think tank working to drive informed, sustainable policy decisions in a world of limited resources. Together with its partners, Global Footprint Network provides a menu of tools to empower decision-makers at all levels of government to help the human economy thrive within Earth's ecological limits.