

The Importance of Wild Fisheries For Local Food Security: GHANA

Fish is the primary source of animal protein and livelihood for most Ghanaians, particularly those residing along the coast. Yet, poor management, overexploitation, environmental degradation, and illegal fishing threaten the productivity and sustainability of the country's fisheries. Improved management practices are urgently needed to preserve the socio-economic importance of Ghanaian fisheries.

Food Security: Almost 23% of children in Ghana are stunted, 13% are underweight and about 6% are chronically wasted [1]. Although the prevalence of anemia among children 6-59 months has declined significantly, it remains at about 57% [1]. Ghana, specifically in the northern regions, still has significant food security and nutritional challenges [2]. A Comprehensive Food Security and Vulnerability analysis focused on Northern Ghana found that between 10 and 28% of the population surveyed, depending on the region, were food insecure [3]. Poverty was a primary driver of food insecurity, and female-headed households were more likely to be food insecure [3]. This analysis also found that households that sustained their livelihoods through fishing were more likely to have adequate food consumption [3]. Fish is the primary source of animal protein in the country. Average per capita annual fish and shellfish consumption is estimated to be 27.3 kg, accounting for 60% of animal protein consumption [4, 5]. Fish is utilized in a variety of ways to

provide essential nutrients. For example, fish commonly thought of as 'trash fish' because they command little or no price as whole fish in local markets still provide animal protein to Ghanaians in the form of manufactured products such as fish fingers, fish powder, and fish burgers [6]. These native "trash fish" therefore become important tradable commodities that generate revenue for fishers and contribute to Ghana's food security [6].

Economic Benefits: Over half of Ghana's industries are located within the coastal zone where marine fisheries are the primary source of economic activity [7]. The small-scale fisheries sector employs 80% of fishers in the country [4]. The majority of fishers are men, but women play an important role in the sector through fish preservation and marketing. As a whole, the fisheries sector employs about 2.4 million individuals or 10% of the population [4, 8]. The small-scale fisheries sector is estimated to contribute about

3% to national GDP and generate revenue of \$341 million annually [9].

COUNTRY PROFILE: GHANA Land Area Freshwater & Floodplains Marine Area/Exclusive Economic Zone

- Average per capita annual fish/shellfish consumption: 27.3 kg (60.2 lbs)
- Provision of animal protein by fish: 60%
- **Stunting: 22.7%**
- Underweight children: 13%

Livelihoods: More than 60% of Ghanaians live within 200 km of the coast and 42% within 100 km [10]. The coastal regions of the country are particularly dependent on fisheries for their livelihoods. Marine fisheries are the primary source of income for more than 200 coastal villages, including about 200,000 fishers with approximately 2 million dependents [11].

National Development Priority: The Government of Ghana ascribes high importance to the fisheries sector for its contributions to food security, nutrition, livelihoods, poverty reduction, and foreign revenue, and has identified fish as a key commodity in its Food and Agriculture Sector Development Policy [12]. In 2013, the government

established the Ministry of Fisheries and Aquaculture Development to "promote sustainable management of the Fisheries Sector through Scientific Innovations, Policy Guidelines for the enhancement of institutional capacity for efficient service delivery, and organic collaboration with stakeholders in the fisheries sector" [13]. Ghana's strategic development plan emphasizes the importance of small-scale fishing as a critical component of the fishing industry [14]. Improved management and governance of marine fisheries are also key objectives of USAID's work there [7].

Challenges: Throughout much of the developing world, and especially in Ghana and West Africa, local demand for fish has outstripped supply, and fish stocks are in serious decline due to a combination of factors led by poor management, environmental degradation, and overfishing [11]. Illegal fishing and poaching and poor management threaten the sustainability of fisheries, food security, and biodiversity in Ghana [4, 15], and overfishing can create incentives for harmful practices including child labor [16]. To assess and mitigate the negative consequences of illegal fishing, the Ghanaian government worked with the Food and Agricultural Organization of the United Nations to develop a National Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated fishing in the country [4]. While models differ on their predictions about the impacts of climate change on West Africa's coastal fisheries, one recent study found that climate change may increase their productivity but benefits for local fishing communities will only be realized if threats such as poor governance and overfishing by other nations are effectively addressed [17, 18]. Improved management of small-scale fisheries is urgently needed, built around effective adaptive co-management solutions where traditional authorities are respected and hold important leadership roles in fishing communities [14]. The global community of fisheries practitioners considers an ecosystem-based approach to fisheries management as the only viable way to move forward on the needed governance measures for sustainable use and conservation of marine and coastal ecosystems [19].

Sources:

- 1. Ghana Statistical Service, Ghana multiple indicator cluster survey with an enhanced malaria module and biomarker, 2011, Final Report. Available from: http://www.childinfo.org/files/Ghana_2011_MICS_Final_Report.pdf. 2011, Ghana Statistical Service: Accra, Ghana.
- 2. USAID, Ghana: Nutrition Profile, Available from: http://www.usaid.gov/sites/default/files/documents/1864/USAID-Ghana_NCP.pdf. 2014.
- 3. World Food Programme, Ministry of Food and Agriculture, and Ghana Statistical Service, Ghana Comprehensive Food Security and Vulnerability Analysis. Available from: http://documents.wfp.org/stellent/groups/public/documents/ena/wfp257009.pdf, 2012.
- 4. Republic of Ghana, National plan of action to prevent, deter, and eliminate illegal, unreported, and unregulated fishing. Available from: ftp://ftp.fao.org/fi/DOCUMENT/IPOAS/national/Ghana/NPOA_IUU.pdf. 2014.
- 5. National Marine Fisheries Service. Per Capita Consumption. Available from: http://www.st.nmfs.noaa.gov/st1/fus/fus11/08_percapita2011.pdf. 2011.
- 6. Nunoo, F., et al., When trash fish is treasure: the case of Ghana in West Africa. Fisheries Research, 2009. 96(2): p. 167-172.
- 7. USAID, USAID/Ghana Country Development Cooperation Strategy 2013-2017. 2012, Available from: https://www.usaid.gov/sites/default/files/documents/1860/Ghana_CDCS_fy2013-17.pdf. 2012.
- 8. West Africa Trade Hub and USAID, West African Fisheries Profiles: Ghana, 2008. Available from: http://www.imcsnet.org/imcs/docs/ghana_fishery_profile_apr08.pdf. 2008.
- 9. Belhabib, D., U. Sumaila, and D. Pauly, Feeding the poor: Contribution of West African fisheries to employment and food security. Ocean & Coastal Management, 2015. 111: p. 72-81.
- 10. Perry, R.I. and U.R. Sumaila, Marine ecosystem variability and human community responses: the example of Ghana, West Africa. Marine Policy, 2007. 31(2): p. 125-134.
- 11. Nunoo, F., et al., Marine fisheries catches in Ghana: historic reconstruction for 1950 to 2010 and current economic impacts. Reviews in Fisheries Science & Aquaculture, 2014. 22(4): p. 274-283.
- 12. Republic of Ghana, Food and Agriculture Sector Development Policy. Available from: http://mofa.gov.gh/site/?page_id=598. 2007.
- 13. Republic of Ghana, Ministry of Fisheries and Aquaculture Development: MOFAD at a glance. Available from: http://www.mofad.gov.gh/?q=mofad-at-a-glance. 2014.
- 14. Coastal Resources Center and GSO/URI, A National Framework for Fisheries Co-Management in Ghana. Hen Mpoano. Policy Brief No. 4. Available from: http://www.crc.uri.edu/download/GH2009COM006ib4_508.pdf, 2013: Narragansett, RI.
- 15. Falaye, A.E., Illegal Unreported Unregulated (IUU) Fishing in West Africa (Nigeria & Ghana). Marine Resources Assessment Group Ltd, London, 2008.
- 16. Afenyadu, D. Child labour in fisheries and aquaculture—a Ghanaian perspective. In Background paper prepared for the Workshop on Child Labour in Fisheries and Aquaculture in cooperation with the ILO. 2010.
- 17. Baranbe, M., et al., Impacts of climate change on marine ecosystem production in societies dependent on fisheries. Nature Climate Change, 2014. 4: p. 211-216.
- 18. Lam, V.W.Y., et al., Climate change impacts on fisheries in West Africa: implications for economic, food and nutritional security. African Journal of Marine Science, 2012. 34(1): p. 103-117.
- 19. USAID, Sustainable Fisheries and Responsible Aguaculture: a guide for USAID staff. Available from: https://www.usaid.gov/sites/default/files/documents/1865/FishAquaGuide14Jun13Final.pdf. 2013.