

# Economic Valuation of Ecosystem Services in IW-Projects: Training Materials on the systematic integration of the economic valuation of ecosystem services into the TDA/SAP methodology

## Introduction to Bakul Country

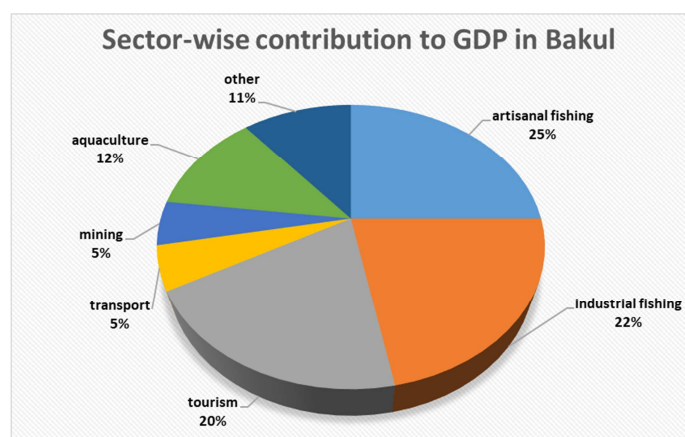
[Credits: The Bakul “virtual” Case Study was initially developed by GIZ and GRID-Arendal, as part of the “Integrating ecosystem services into marine and coastal development planning Training Workshop”. For more information, please visit [www.bluesolutions.info](http://www.bluesolutions.info) or contact [christian.neumann@grida.no](mailto:christian.neumann@grida.no)

This Case Study has been adapted for the purpose of this training by GRID-ARENDAL and InterSus/Eduard Interwies]

### Handout for the participants

Bakul, officially the Republic of Bakul (Bakulesi: Sathalanalat dschoik Bakul), is a tropical developing country, covering an area of 130,000 km<sup>2</sup> (a map is included at the end of this Handout). It is famous for its beautiful beaches and islands, the world-famous **Bakul Barrier Reef** and the **Coroné Delta** in northeastern Bakul, and the **Lake Majestic**, which draw tens of thousands of tourists to the country annually. The Mighty Mountains, a high-altitude belt (up to 2000 meters) running north to south along the west of the country, split Bakul into two main geographical regions: the western highlands and the eastern wetlands, including the coast.

Bakul is divided into **three provinces**: the coastal provinces **Indare** and **Exportul**, and the highland province **Belandu** with no coastal access. Its **major cities** are located near the coast: **Hanku** (the capital) and **Moneila city** (the economic centre of the country). Bakul has one major harbour, the Historic Harbour, and the Marvellous Marina. **Fishermen** were the first settlers along the coast of Bakul. They typically built their homes near the shoreline, where smooth landing of artisanal fishing boats was most convenient. Nowadays, fishing villages have extended further inland, but remain close to the shore. Coastal settlements include not only small fishing villages, but also a **growing number of hotels and other touristic infrastructure**.

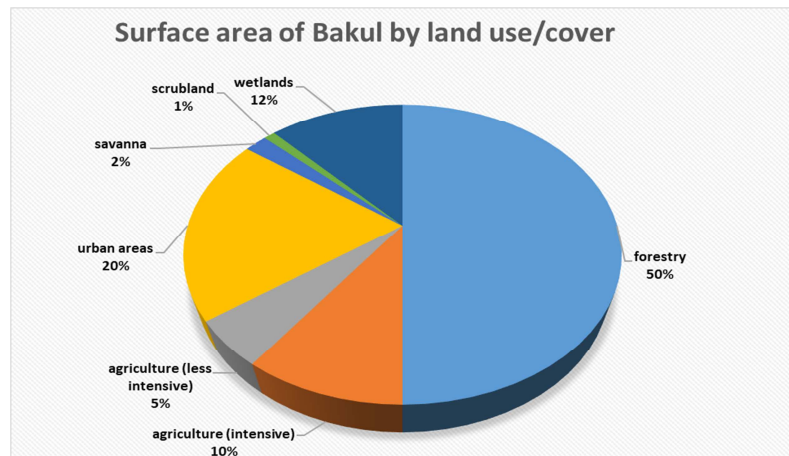


and **Moneila city** (the economic centre of the country). Bakul has one major harbour, the Historic Harbour, and the Marvellous Marina. **Fishermen** were the first settlers along the coast of Bakul. They typically built their homes near the shoreline, where smooth landing of artisanal fishing boats was most convenient. Nowadays, fishing villages have extended further inland, but remain close to the shore. Coastal settlements include not only small fishing villages, but also a **growing number of hotels and other touristic infrastructure**.

Bakul is a developing country with a **market-oriented economy**. Historically, the country's economic performance has been tied to **exports**, which provide hard currency to finance imports and external debt payments. Although these exports have provided substantial revenue, self-sustained growth and a

more egalitarian distribution of income have proven elusive. Presently, the main exports are **fish and shrimp, palm oil** and, to a lesser degree, **timber**.

The Bakul Reef is internationally known for having diverse and rich fishing grounds. People's livelihoods along the coast mainly rely on artisanal **fisheries**. The fisheries sector largely depends on goatfishes, which stay in shallow coastal waters with sandy sediments during summer and leave for deeper waters in autumn. Industrial fishing, mainly in the form of offshore trawling and pelagic seine fisheries, is rapidly taking over traditional artisanal fishing grounds, as well as increasing its activities in offshore water. The status of fish stocks in the region has been recently assessed, and in 2015 alone, Bakul produced 97,425 tons of marine fish products, which was below the MSY level. According to FAOSTAT Statistical Yearbook (2014), the global average price per ton of marine fisheries products is 1,339 US\$/ton.



In recent years, the **tourism** sector has been growing rapidly. It is based on the country's beautiful beaches and coral reefs, archaeological monuments, ecotourism in the rainforest and adventure tourism in the Mighty Mountains. Beach resorts are plentiful along the coast with a couple of new luxury resorts having recently been built on the southern coast. The Bakul Barrier Reef with its large potential for diving is an increasingly important tourism site. Another tourist hotspot can be found just north of Hanku city, the Nelam wetlands, and near Moneila city, the Eastern Wetlands, which are part of the Ramsar List of Wetlands of International Importance and a mecca for birdwatchers. The total number of international and domestic visitors in the country yearly is today five times larger than ten years ago, and the Ministry of Tourism aims to triple the current numbers within the next ten years. More specifically, according to the latest report of the Bakul Tourism Board for the year 2015, the overnight tourism industry experienced breaking numbers with 385,583 tourists, with the majority in Indare 44%, 36% in Exportul and 20% in Belandu.

Key features of Bakul	
<b>Area and Location</b>	130,000 km <sup>2</sup> 390 km of coastline 35,350 km <sup>2</sup> of Exclusive Economic Zone (EEZ) Bordering Bekule Country in the north and Mariba Country in the south
<b>Population</b>	14 Million, with 55% living in urban and 45% in rural areas Population density: 108 /km <sup>2</sup> Population growth: 1.9% per year, mainly in urban areas

<b>Provinces and Capital cities</b>	<ul style="list-style-type: none"> <li>• Indare (6 Million), Hanku (3 Million), home to the Marvellous Marina used by big yachts</li> <li>• Exportul (3 Million), Moneila (2 Million), home to the Historic Harbour used for economic activities</li> <li>• Belandu (5 Million), Kalu (0,5 Million)</li> </ul>
<b>Economic indicators</b>	<p><b>Human Development Index (HDI)</b> 0.723, increased by 0.11% over the past 10 years</p> <p><b>National GDP (nominal) (International Monetary Fund 2015)</b> Total: US\$72.73 billion per capita: US\$5,195, increasing by 6,7% per year</p> <p><b>National GDP (PPP)</b> Total US\$141.52 billion Per capita US\$10,109</p> <p><b>Currency:</b> Bakulesi dollar (1 BD= 0.50 US\$)</p>
<b>Climate and oceanography</b>	<ul style="list-style-type: none"> <li>• <b>Tropical</b> climate in the coastal area and more <b>temperate</b> climate in the mountains</li> <li>• In the coastal area, the year is split into two periods: the <b>dry season</b> (December to April) and the <b>rainy season</b> (May to November)</li> <li>• Tropical cyclones regularly affect Bakul's coast from July through to October</li> <li>• Recently, increased incidents of <b>flooding</b> during the rainy season, affecting the Coroné delta in particular, and prolonged <b>dry periods</b>.</li> <li>• A <b>north-south current</b> dominates the coastal oceanography</li> <li>• <b>Tidal range is small</b> with changes of only about 35 cm. Yet, tidal currents are important for dispersion of sediments and larvae in reef passages and near river mouths</li> <li>• The marine resources of Bakul are inextricably <b>linked to a much larger area</b> via water exchange: For instance, the watershed of Bakul's neighbouring Bekule and Mariba are influencing Bakul's coast.</li> </ul>
<b>Ecosystems (area)</b>	
<b>Freshwater</b>	<ul style="list-style-type: none"> <li>• <b>Milaku river</b> (26 km<sup>2</sup>)</li> <li>• <b>Coroné river and delta</b> (114 km<sup>2</sup>)</li> <li>• <b>Eastern Wetlands</b> (363 km<sup>2</sup>)</li> <li>• <b>Mighty Lake</b> (28 km<sup>2</sup>)</li> </ul>
<b>Marine and coastal</b>	<ul style="list-style-type: none"> <li>• <b>Bakul reef</b> stretches along almost half of the coast of Bakul (410 km<sup>2</sup>)</li> <li>• <b>Mangrove forests</b> (385 km<sup>2</sup>) covering the intertidal area of <b>Nelam wetlands</b> (503 km<sup>2</sup>).</li> <li>• The shallow waters of Bakul's coast host vast <b>seagrass beds</b> (245 km<sup>2</sup>), home to one of the world's largest population of manatees, three species of sea turtles and other remarkable marine life.</li> <li>• A dozen of small scattered <b>sandy beaches and islands</b> (90 km<sup>2</sup>), including Turtle Island and Manatee Island: Both islands offer an ideal base for diving tourists who wish to explore the reef. Turtle Island is a nesting area for endangered leatherback marine turtles.</li> </ul>
<b>1 km<sup>2</sup> = 100 ha</b>	

