



# Wetlands: Providing more than a billion livelihoods

More than a billion people depend on wetlands for a living! Just stop and think about that number – and about what a wetland actually is. The Ramsar Convention defines a wetland as any land area that is saturated or flooded with water, either permanently or seasonally, along with all beaches and shallow coastal areas.

This definition covers all inland wetlands such as marshes, ponds, lakes, fens, rivers, floodplains, and swamps... as well as the whole range of coastal wetlands which include saltwater marshes, estuaries, mangroves, lagoons and coral reefs. Then we should add in all man-made wetlands such as fishponds, rice paddies, and salt pans.

Wetlands host a diverse range of jobs, including a few we might not normally think of:

## Rice farming

- Rice, grown in wetland paddies, is the staple diet of 3.5 billion people and accounts for 20% of all calories consumed by humans.

- Almost a billion households in Asia, Africa and the Americas depend on rice growing and processing for their main livelihoods.
- Some 80% of the world's rice is produced by small-scale farmers and is consumed locally.

## Fishing

- The average human consumes 19 kg of fish every year. Most commercial fish breed and raise their young in coastal marshes and estuaries. In addition, more than 40% of fish production is now through aquaculture.
- More than 660 million people depend on fishing and aquaculture for a living.

## Tourism and leisure

- International tourists spent US\$ 1.3 trillion worldwide in 2013, and an estimated half of them seek relaxation in wetland areas, especially coastal zones.
- The travel and tourism sectors support 266 million jobs, and account for 8.9% of the world's employment.

## Transport

- Rivers and inland waterways play a vital role in transporting goods and people in many parts of the world. In the Amazon basin, rivers carry 12 million passengers and 50 million tons of freight each year, sustaining 41 shipping companies.

## Water provision

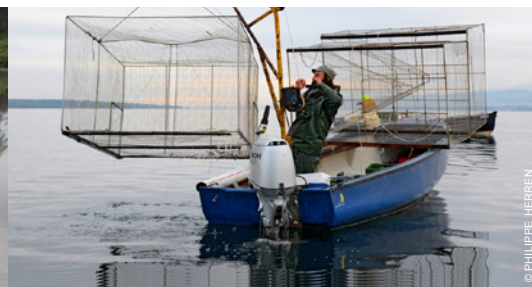
- Vast networks deliver fresh water and remove and treat wastewater, while employing large workforces. For example, Bangkok's Metropolitan Waterworks Authority employs over 5,300 staff.
- The bottled water industry delivered over 70 billion gallons of water in 2013. Danone sells major brands such as Evian, Volvic, Bonafont and Mizone, and employs more than 37,000 people in its water businesses worldwide.

## Traditional wetland product-based livelihoods

- Medicinal plants, dyes, fruits, reeds and grasses are just a few of the wetland products that provide jobs, especially in developing countries.
- Reeds and papyrus collected from the Barotse floodplain wetland in Zambia are estimated to be worth US\$ 373,000 per year to local communities.







# Wetlands and sustainable livelihoods: From vicious circle to virtuous cycle

Wetlands are essential for humans to live and prosper. They provide freshwater and ensure our food supply. They help sustain the wide variety of life on our planet, protect our coastlines, provide natural sponges against river flooding, and store carbon dioxide to regulate climate change.

## From vicious circle...

Alarmingly, 64% of the world's wetlands have disappeared since 1900, and freshwater species populations declined by 76% between 1970 and 2010. The wetlands that do still remain are often so degraded that the people who directly rely on them for fish, plants, and wildlife – often the very poor – are driven into even deeper poverty.

## To virtuous cycle...

Enabling people to make a decent living while at the same time ensuring that wetlands can still provide their essential benefits, do not have to be conflicting goals! In fact, the new United Nations Sustainable Development Goals underline that reducing poverty actually demands that we also protect and restore ecosystems such as wetlands.

## Creating the right conditions

There are multiple models outlining how to promote sustainable livelihoods in wetlands, and they share several key points:

1. Understand peoples' needs, especially how vulnerable they are to shocks and natural disasters, and how the seasons affect their incomes.
2. Provide them with many different sorts of 'capital' including:
  - products harvested from wetlands such as reeds, rice, fish, etc.
  - training and knowledge in using wetlands wisely
  - a voice in planning how local wetlands should be used
  - basic equipment and tools
  - credit, cash or micro-loans
3. Identify who can actually provide these resources – often governments, NGOs or community organizations – and help them make the changes happen.

## Case study: Senegal

### Mangrove restoration to ensure sustainable livelihoods

Senegal still has some 185,000 hectares of mangrove estuaries in the Casamance and Sine Saloum regions, but 45,000 hectares have been lost since the 1970s. Healthy mangroves serve as effective salt water filtration systems, provide protection against storms, and act as nursery grounds for fish.

The world's largest mangrove reforestation project is under way here thanks to Danone and the Livelihoods Carbon Fund, who are working with the Senegalese NGO Océanium. This project:

- has replanted 79 million mangrove trees on more than 10,000 hectares
- promotes the restoration of rice paddies
- will produce up to 18,000 extra tons of fish annually, along with shrimps, oysters, and molluscs
- plants trees that will store 500,000 tons of CO<sub>2</sub> over 20 years
- has mobilized the efforts of 350 local villages and 200,000 people





# Sustainable livelihoods: Wetlands can deliver

What does the term livelihood mean?

Quite simply it is the set of capabilities, activities and resources that are required for someone to make a living.

What makes a livelihood sustainable?

Ideally it should be able to:

- cope with and recover from man-made and natural crises
- maintain its viability over time, without undermining the natural resource base

## Three dimensions of sustainability

Sustainability itself is a term that unites three key aspects in a single ideal:

- economic development: ensuring that people have the ways and means to build their own income and wealth
- social development: enhancing cooperation, respect and trust between social groupings, and promoting gender equality
- environmental protection: conserving and restoring the earth's ecosystems to benefit both human life and the natural environment

## Case study: Brazil

### Tamar Project on sea turtles

Tamar is an organization that protects five endangered species of sea turtles in Brazil. It started in 1980 by hiring local fishermen to patrol the sea turtle nesting beaches in their regular fishing areas during the nesting season. This halted the take of turtles and eggs and provided local residents with alternative livelihoods.

Today Tamar protects roughly 1,100 km of coastline with a network of 23 bases located in important areas for sea turtle feeding, nesting, and development. More than 1,300 people, (85% of them local coastal residents) are involved directly with the programme. This includes 400 fishermen who work in field activities, and people from 25 fishing villages who staff visitor centres, work in shops or as guides, run conservation education activities, and make Tamar clothing for sale. With support from key sponsor Petrobras, Tamar has become a model for conservation programs worldwide.

*Wetlands are very well placed to offer sustainable livelihoods that take these economic, social and environmental aspects into the mix.*

