



Adaptation for  
Smallholder  
Agriculture  
Programme

**ASAP**



Investing in rural people

## ASAP Innovations, Policy and Scaling

### THE GAMBIA

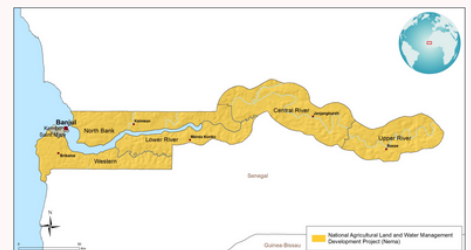
- NEMA's interventions made substantial strides in improving food security, asset acquisition, income generation, nutrition, and overall livelihoods, particularly for women and youth, contributing significantly to poverty reduction and gender empowerment.
- The project played a vital role in forming and strengthening the National Women's Producers Apex Cooperative.

#### The challenge

The Gambia, one of the world's poorest nations, faces a grim reality, with approximately 57 percent of its population living in poverty and an additional 21 percent teetering on the edge of the poverty line. The root causes of this dire situation are multifaceted and deeply entrenched. Rural poverty is prevalent, and its connection to low productivity in the rain-fed agricultural sector exacerbates it.

Agriculture is the cornerstone of livelihoods for the rural population and most of those residing below the poverty line. It employs around 70 percent of the population and contributes to 24 percent of the GDP. Climate change compounds the nation's vulnerability, making The Gambia one of the most susceptible countries to its adverse effects. Severe droughts in 2011 and 2014 slashed production by 50 percent. Rising sea levels and dwindling rainfall have resulted in saltwater intrusion, reaching as far as 150-200 kilometers inland, crippling productivity further.

Gender disparity also adds to the nation's poverty landscape. In 2003, 54 percent of female-headed households were below the poverty line, compared to 35 percent of their male-headed counterparts. Poverty is intrinsically tied to the high illiteracy rates among women, their limited economic opportunities, and their inadequate access to crucial resources such as credit, land ownership, skills, and support services, as underscored in the national gender and women policy for 2010-2020.



#### National Agricultural Land and Water Management Development Project (NEMA)

2012 - 2020

#### Project Financing

Total project cost: US\$ 76.59 million

IFAD financing: US\$ 39.41 million

ASAP grant: US\$ 5.0 million

#### Outreach

- The NEMA project covered 6 of the 7 regions of The Gambia, namely, West Coast, Lower River, North Bank, Central River (N), Central River (S) and Upper River Regions
- 413,712 household members and 45,968 households, against an initial target of 264,861 and 29,429, respectively.

#### Target group

- Smallholder farmers, predominantly women, engaged in vegetable and rice production, rice in the lowlands and vegetables being produced mainly by women.
- Rural youth under thirty years-old through inclusion in market-oriented production and (mainly) value-addition initiatives in response to increasing demand for technical services

#### Programme objective

The overall goal of the project is to reduce the poverty of rural women and young people. The development objective is to increase their incomes through improved productivity based on sustainable land and water management practices.

## The innovation: A myriad of ground-breaking initiatives to enhance climate resilience

The NEMA project innovations included a myriad of ground-breaking initiatives, such as tidal irrigation schemes for the production of rice, village gardens for the production of fruits and vegetables, access roads to facilitate farm-to-market access, soil and water conservation to protect against water erosion, construction of markets for women to sell their garden produce and ecosystem restoration initiatives, such as agroforestry and mangrove planting.

### Box 1. Tidal irrigation scheme

The tidal irrigation scheme consists of the creation of water inlets with one or more steel gates, which will allow the introduction of the volume of water necessary for the irrigation needs of the rice fields. Thus, the rice plots will be irrigated by controlled submersion during high tide or rising floods. From this water inlet, a main channel is built, which supplies secondary channels. Then, secondary canals serve tertiary canals, which irrigate the plots with sections of PVC pipe. The tidal irrigation scheme is completed by an anti-flood dike whose role is to protect the plots against flooding and also a drainage system to evacuate excess rainwater or for harvesting or other cropping operations. Movement inside fields between plots and along canals is ensured by creating a network of internal access roads. Tidal irrigation scheme also requires the construction of punctual concrete crossing structures at the intersections of roads and irrigation or drainage canals.

The **Farm-to-Market Access Roads Initiative** focused on building new roads and restoring existing ones, creating vital connections between villages and markets. This enhanced infrastructure includes bridges and culverts to ensure year-round accessibility. While initially aiming for 50 km of roads, the project completed 75.68 km, improving access to productive farmland and markets.

Another standout ground-breaking initiative is the Farmer Field Schools for Climate Adaptation, established to educate farmers in integrated production techniques and climate-resilient pest and disease management. Customized curriculums were developed for rice and horticulture. Through this approach, 640 farmers were trained, leading to substantial increases in yields and incomes, ranging from 56 percent to 85.7 percent on average. Fifty schools were established, contributing to greater climate adaptation, resilience, and agricultural productivity, especially among women and youth farmers.

According to the 2010 National Forest Assessment report, mangrove forests alone declined from 67,000 hectares to 35,700 hectares due to fuel wood extraction and other domestic uses. But with the intervention of NEMA, wetland ecosystems are increasingly being used for rice cultivation and for dry season vegetable gardening as well as grazing for livestock. The promotion of **mangrove restoration**, concentrated in the West Coast Region, Lower River Region and North Bank Region of The Gambia, addressed the dual challenge of climate change impacts and sustainable resource management. Mangroves are critical for protection against storms, flooding, and rising sea levels. This initiative empowers communities to grow and plant mangrove trees, rehabilitating degraded areas and creating buffer zones. A total of 1,400 hectares of mangroves have been successfully rehabilitated in three regions, contributing substantially to carbon sequestration and climate resilience. The restoration activity was concentrated in the West Coast Region, Lower River Region and North Bank Region of The Gambia.

This innovative project underscores the potential for integrated approaches in agriculture, climate adaptation, and environmental conservation to bring about positive change in The Gambia. They not only boost agricultural productivity but also enhance the resilience of communities and ecosystems, aligning with sustainable development goals. According to the 2010 National Forest Assessment report, mangrove forests alone declined from 67,000 ha to 35,700 ha, due to fuel wood extraction and other domestic uses. But with the intervention of NEMA, wetland ecosystems are increasingly being used for rice cultivation and for dry season vegetable gardening as well as grazing for livestock.

## Lessons Learned

- Creating inter-village and farm to-market road linkages contributes directly to high productivity, low production costs, high competitiveness and good performance along the rice and horticulture value chains. Investing in creating linkages across border communities promotes trade and value chain development across national borders.
- In Gambia, mangrove restoration strengthened the resilience of coastal communities. A community-based approach helped regenerate local mangrove species and established tree nurseries. This exercise highlights importance of approaches that combine conservation measures with initiatives that ensure that local communities can access and benefit from protected area resources for their livelihoods. Ownership and sustainability of the initiative are essential for meaningful climate change adaptation and resilience and long-term food security and livelihood.



## Results and impacts

NEMA's interventions made substantial strides in improving food security, asset acquisition, income generation, nutrition, and overall livelihoods, particularly for women and youth, contributing significantly to poverty reduction and gender empowerment.

The Farm-to-Market Access Roads initiative has not only connected remote villages to markets but has also exceeded its initial goals, greatly improving access to fertile farmlands. These roads benefited especially rural women by reducing travel time to their fields. Meanwhile, Farmer Field Schools for Climate Adaptation have equipped hundreds of farmers with essential skills and knowledge, increasing yields and incomes.

The project investments in the lowland and upland vegetable garden schemes also contributed to improving the livelihood of the target beneficiaries and generating incomes. There was an increasing trend in production and productivity in the developed scheme, with 81% reporting an increase in production. The end-line study also revealed significant progress in household food security, reducing seasonal hunger.

The program directly fits into the Intended Nationally Determined Contribution (INDC) submitted by the Gambia under the Paris Agreement and in fulfillment of national and international obligations towards Land Degradation, Biodiversity Conservation and Sustainable Development Goals. The initiatives in woodlots, agroforestry, and mangroves promoted sustainable natural resource management, including land and water management practices. The mangrove restoration initiative has the highest potential for carbon sequestration per hectare among the ASAP projects, with sequestration of 8.4 tons of CO<sub>2</sub> per hectare per year over 20 years.

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The project achieved significant gender transformation, with women comprising over 70% of beneficiaries. Women were the majority in rice and horticulture production, and they were actively targeted for leadership roles. Notably, the project won recognition by IFAD for the **Best Gender Awards (2019)** due to its gender-focused activities.

Finally, the project played a vital role in forming and strengthening the **National Women's Producers Apex Cooperative**. It contributed to developing key policies, including a **National Rice Strategy**, **National Extension Policy** and the **National Climate Policy**.

## NEMA Footprint



The project reached **45,968 households**



Reduced the duration of the hunger season from 2.8 to 1.2 months (Impact Survey Report, 2019)



Enhanced the climate resilience of more than **35,200 rural households**, more than **27,000** of them **women**  
**8,409 households** had their climate resilience increased by at least 15% due to ASAP activities



**1,955 ha of land brought under climate-resilient practices** against a target of 1,530 ha



In lowland rain-fed swamps, rice yields increased from 0.7 tons/ha to 2.5 t/ha while in the tidal rice schemes, yields increased from 1.5 t/ha to 3.5 tons/ha



Positive impact on women's ownership of productive assets, with ownership of small ruminants and poultry increasing from baseline values from 79% for poultry, 35% for sheep, and 57% for goats to 86%, 47%, and 62%, respectively



**37,234 rural people** experienced changes in their economic status (by 10% or more) including income, consumption, wealth, food diversity and nutrition






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