

To advance the journey to self-reliance, we safeguard people and resources by systematically addressing environmental risk.

*The maize in this field was grown using only the nutrient-rich water from the fish ponds as fertilizer.*

PHOTO: SKYFOX LTD

### Challenges

- Potential conversion of forests to agricultural land
- Adverse impacts on water quality
- Need for multiple site-specific, detailed environmental impact assessments
- Assurance of the project's sustainability and economic viability

### Solutions

- Early engagement during the project design phase to identify alternatives to risk-prone project elements
- Development of a standard operating procedure for all sites
- Use of drone photography to aid site selection and design
- Training in environmental oversight
- Support and training in water management to avoid adverse water quality impacts

Water from fish tanks is re-used to irrigate agricultural fields in Adawso, Ghana.



PHOTO: MELISSA DAY

## ENVIRONMENTAL SAFEGUARDING SPOTLIGHT EXPANDING FISH AND AGRICULTURAL PRODUCTION IN WEST AFRICA

Securing Water for Food (SWFF), a program USAID funds with other donors, promotes solutions that enable the production of food with less water and increase the availability of water for food production, processing, and distribution.

SkyFox Ltd., a SWFF program awardee, proposed to deploy an innovative integrated aquaculture and crop production project in four countries in West Africa. The project had the potential to directly benefit over one million people, but the initial project design presented significant environmental challenges.

### Identifying Environmental Challenges

The initial design of the SkyFox project included cascading clusters of in-ground concrete fish ponds along a slope. The water from the last cluster of ponds would be used to irrigate nearby agricultural lands. SkyFox, the Implementing Partner (IP), planned to construct 3,400 fish ponds from 2017 to 2020, use them to irrigate over 2,040 hectares of land, and then lease this land to farmer groups in West Africa.

Constructing elevated geotextile tanks avoids the need for excavation.



PHOTO: SKYFOX LTD

Environmental compliance "added a great value to our project, as it has enabled us to grow our fish and crops in a safe manner for both the environment and the consumers of our product. It also enables us to differentiate our products from those in the market."

—Oliver Ujah, SkyFox Ltd.

It became evident, however, that several adverse environmental impacts needed consideration. In some locations, the IP planned to purchase land and convert it for crop production using the effluent water from the fish ponds for irrigation. In other locations, the selected sites for the ponds were forested. USAID was concerned about levels of water abstraction, monitoring of the quality of water from the ponds applied to agricultural areas, soil quality, contamination of the ponds by pesticides from upstream water users and nearby farms, and land use change related to the construction of the ponds. It was apparent the project would require several site-specific, detailed environmental impact assessments (EIAs) to comply with USAID regulations. This would increase the project's timeline and budget, making the project unviable.

To mitigate the project's potential adverse impacts and ensure its economic viability, the USAID Global Development Lab's Environmental Compliance team (the BEO team) paused further investment in EIAs and pivoted to providing targeted environmental advisory services to redesign the project.

## Working with the Project Proponent to Identify Solutions

The BEO team and SkyFox conducted joint field visits to evaluate potential project sites, meet with local leaders to identify areas of concern, and develop shared solutions. These included:

- **Developing a standard operating procedure (SOP)** to facilitate project implementation that would effectively ensure strong economic viability for the business and safety and security of the community and the environment.
- **Creating a customized site selection checklist** to help the IP evaluate and select suitable sites that have minimal adverse environmental impact and provide USAID staff with critical information on each site.
- **Revising the options for aquaculture sites and tank design** in tandem with SkyFox, ultimately favoring rehabilitation of abandoned aquaculture ponds adjacent to active agriculture or using aboveground geotextile or plastic tanks to avoid the need for excavation.
- **Planning for sustainable expansion** by proposing that SkyFox adopt a franchise model, where SkyFox would conduct an annual review of the franchisee for proper implementation of its SOP to protect the brand and ensure environmental accountability.

## Results

USAID's early engagement with SkyFox, and the training and technical guidance USAID offered the IP, strengthened SkyFox's capacity for environmental management, improved the project's design, and led to practical solutions that decreased the environmental risks project activities posed.

The success of the project is also demonstrable in economic terms. SkyFox saw its annual turnover rise to US \$1.6 million in 2019, an increase of nearly 350 percent from the previous two years. Its brand thus reinforced with sound environmental considerations, SkyFox was encouraged to seek funding from the Ghana Alternative Exchange to expand in West Africa and support further economic development in the region.

## FOR MORE INFORMATION

Visit the Securing Water for Food website: <https://securingwaterforfood.org/innovator-news/sound-environmental-design-equals-good-business>.

Visit <https://www.usaid.gov/environmental-procedures> for resources and templates to implement environmental safeguarding procedures.

Contact your environmental officers for guidance and additional resources:

<https://www.usaid.gov/environmental-procedures/environmental-compliance-officers>.