

# GENDERED DESIGN IN STEAM (GDS) - PROJECT TEAM POSTERS

GDS, Carleton University

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## GENDERED DESIGN IN STEAM

Uyo, Akwa  
Ibom State,  
Nigeria

### Team

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Associate professor, agricultural sciences and technologies, gender and development

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Co-Principal Investigator  
Construction technology and development

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Research Assistant, MSc student

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### Institution

University of Uyo

*"Mostly women will use the facility, the innovation that we are bringing, so they had to be considered."*

— Uduakobng Aniebiat Okon

ID47

# Improving traditional fish drying technology design for women fish vendors in Nigeria



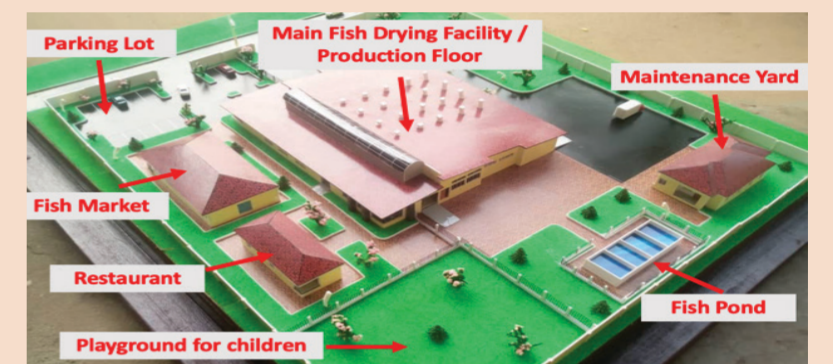
Fishing is the main occupation of the people of Akwa Ibom state of Nigeria. Women constitute more than 90% of the personnel involved in traditional fish preservation, handling, and marketing. The study was concerned with improved and gendered design of traditional fish Drying Technology, to address some lagging challenges in operations in the traditional fish drying cottage industry. Traditional fish drying methods are inadequate, inconveniencing, and dangerous to health. The team used questionnaires, interviews, and focus group discussions to identify the main hazards and challenges experienced by women fish processors and vendors. With this data, they designed improved fish drying technology prototypes in hopes of changing the industry to improve conditions for women.



Dr. Okon and Miss Edikan interviewing fish vendors in Udu Akpan Andem, Uyo.

## Outcomes

- Their findings present a case for the provision of improved fish drying technology in Akwa Ibom State and Nigeria at large.
- A fully functional fish dryer prototype was designed and produced, which took into consideration many of the suggested improvements discussed during the interviews and focus groups. The prototype eliminated many of the hazards from traditional fish drying methods, such as heat and smoke protection, improved sanitary conditions, etc.
- The team also designed a tabletop industrial model of an ideal fish drying facility, which includes many components to meet women fish vendor needs, including a major fish drying building, an on-site fish market, a playground for children, etc.
- The research users appreciated the gendered physical characteristic features built into the facility to improve traditional fish drying technology, and recommended this technology be adopted by the larger community.



Top to bottom: Tabletop prototype model of the modernized fish dryer; life-sized and fully functional fish dryer prototype, which is only one quarter of the intended modern fish dryer design; fish dried using the life-sized fish dryer prototype.

## Methods

- The team designed a questionnaire for women fish vendors in each senatorial district of the Akwa Ibom State. The questionnaire assessed the historical antecedent of gender involvement in traditional fish processing, current trends and gaps in traditional fish drying technology design, and the gendered characteristic features that are needed to improve fish drying technology.
- They conducted interviews with women fish processors and vendors in all the senatorial district of the Akwa Ibom State to assess the same concepts as the questionnaire.
- They also organized focused group discussions with women leaders of the Vendors Association in the state. These discussions assessed the technology gaps and needed gendered innovations to improve upland fish drying technology for women fish vendors in Akwa Ibom State.

- The team then designed and developed a modern fish dryer prototype, along with a table top industrial model of a fish drying facility based on the gendered needs identified from the questionnaire, interviews, and focused group discussions.
- Lastly, the team was able to demonstrate the functional life-size prototype to the Akwa Ibom State Ministry of Agriculture, the Department of Fisheries, faculty members from the University of Uyo, women fish vendors, and community leaders.



Focus group discussion in Eket senatorial district

## Lessons & Future Directions

- Their findings, when fully implemented, will provide economic and health solutions for women in the Akwa Ibom State and Nigeria as a whole, as expressed by the research users.
- Should the prototype designs be fully implemented at the local level of the senatorial districts in the state, public discourse would be enriched to help improve public policies on fish processing.
- The team hopes their research will positively influence policy practice on fish processing and the prototype be adopted in among women fish processors and vendors. Government representatives and policy makers that attended the prototype demonstration recommended the innovation be replicated when funds are available and adopted in the State.

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