AMRITA VISHWA VIDYAPEETHAM

SDG report 2020

Goal 14: Life below water

Summary of Improvements

India has more than 7500 km of coastline, and receives an important part of its resources from the ocean. In Kerala, ocean and water bodies have a special place, not only in history, but still today in the daily life of people. Many communities rely exclusively on fishing for their livelihoods, and on water canals and lakes for transportation and local businesses.

Understanding, conserving coastal and marine areas as well as enforcing sustainable practices and mitigating the adverse effects are some of the key challenges for that goal.

- Project 1 - Aimed at recognizing new knowledge on emerging issues in food security. The Fish4Food project aligns with this objective by realizing new knowledge, products,

practices and policies at various levels of the low-price fish chain (from local to international) that improve food and nutritional security of the urban poor.

- Project 2 – Aimed at providing a platform to integrate the last 15 years of research in science and technology to improve the rehabilitation and resilience of coastal communities, and revive scientific social responsibility to reduce the risk and vulnerability factors
- Project 3 - Focused on exploring ways to mitigate the effects of salt water intrusion in the unique inland fresh water bodies of Kerala, which are home to a unique wildlife as well as fragile communities.

Projects Highlights

Fish for food security in city regions of India and Ghana (Fish4Food)

Year: 2020

Amrita Vishwa Vidyapeetham has been collaborating in an international project titled as Fish for food security in city regions (Fish4food), since 2016, involving two countries Ghana and India. The objective of this research is to investigate the flow of fish to the urban low-income communities through the marketplaces. This project is funded by the Netherlands organisation for scientific research (NWO) for the period 2016 to 2021, having a budget of 750 thousand euros. This project is headed by Dr. Maarten Bavinck, University of Amsterdam. Amrita Vishwa Vidyapeethamis the nodal partner in conducting research in India. Dr. Amalendu Jyotishi (then working in Amrita Vishwa Vidyapeetham) spearheaded the project and lead the research and data collection work in India from Amrita Vishwa Vidyapeetham. Dr. Priya Gupta of Amrita Vishwa Vidyapeetham is a collaborator in this project since 2019, researching on fish consumption behaviour among low-income households in Chennai and Bangalore.

Synopsis of the Project

Aim

The project “Fish for food security in city regions of India and Ghana: an interregional innovation project (Fish4Food)” studies the food systems that service low-income consumers in selected city regions of South Asia (India) and West Africa (Ghana), with the aim of improving their quality and scope.

The Sustainable Development Goals that this project focuses include Goal 2- Zero hunger, Goal 5-Gender equality and Goal 14- life below water.

Objectives

To recognize new knowledge on emerging issues in food security. The Fish4Food project aligns with this objective by realizing new knowledge, products, practices and policies at various levels of the low-price fish chain (from local to international) that improve food and nutritional security of the urban poor.

Method

The project has two aims namely, first to understand the present state of fisheries-related food security in selected city regions, the second one is to find innovation to improve food security through fisheries. The project makes use of a mixed-methods approach.

Finding

At mid review of the project, an improvement from research perspective to innovation in low-price fish chains in West Africa (Ghana) and South Asia (India) was seen. A basic understanding of the functioning of low-price fish chains as they travel from shore to coastal and inland urban consumers is achieved. A complementary survey among low-income households, in order to identify their seafood-related food security and their views on impediments with regard to the availability, accessibility, and quality of seafood is also conducted.

International Symposium on Tsunami Risk Reduction & Community Resilience

On December 26th, 2004, several coastal areas along the Indian Ocean were affected by 30-meter-high Tsunami waves from a 9.1-9.3 magnitude earthquake off the coast of Sumatra, Indonesia. More than 200,000 people were killed and nearly 2 million people were displaced across 14 countries in this disaster. Fifteen years after this devastating event, how far have we advanced in early warning, mitigation and adaptation to Tsunamis? Through the medium of this symposium, we will provide a platform to policymakers, NGOs, technological innovators, and scientists to share their knowledge and answer questions that will help develop resilient communities across the world.

The Ministry of Earth Sciences (Government of India), the Indian National Center for Ocean Information Services (ESSO-INCOIS), Esri India, and Amrita's prestigious UNESCO Chair on Experiential Learning for Sustainable Innovation and Development, UNESCO Chair on Gender Equality and Women Empowerment, School of Sustainable Development, and the Center for Wireless Networks & Applications are jointly hosting an international symposium to critically reflect on the imprints of the December 26, 2004 Indian Ocean Tsunami, its subsequent impact on our society, and advances in science and technology that have helped to build sustainable and resilient communities.

SYMPOSIUM OBJECTIVES

The symposium seeks to provide a platform to integrate the last 15 years of research in science and technology to improve the rehabilitation and resilience of coastal communities, and revive scientific social responsibility to reduce the risk and vulnerability factors. We seek to achieve this by:

- Understanding the impact of Tsunamis on coastal community
- Reflecting on lessons learned from the 2004 Indian Ocean Tsunami
- Marking the advances in science and technology in monitoring and modeling of the Tsunami and its impacts
- Coming up with a strategic framework to further advance our disaster preparedness, adaptation, and mitigation efforts to build sustainable and resilient communities

Partners

Ministry of Earth Sciences Government of India	ESSO INCOIS	AMRITA VISHWA VIDYAPEETHAM	esri India THE SCIENCE OF WHERE

SDG Covered

		

Addressing salt water intrusion and depleting water quality in coastal ecosystem through experimental desalination unit

Year:2019

Coastal and marine ecosystems are adversely impacted by marine pollution of all kinds, whether it is caused by human activities, or induced by climate change. One of the impacts that was observed in Kerala is the increasing intrusion of salt water from the ocean in the backwaters and freshwater lakes that are unique to the State's ecosystem. The local fishing communities rely equally on freshwater bodies and the ocean for fishing. Depletion of water quality is impacting the stock of fishes, thus threatening the livelihood of these communities as well as the whole ecosystem.

In order to address and minimize the impacts, a scientific cooperation was initiated to develop affordable and sustainable desalination systems that would cater to the needs and environmental characteristics of coastal communities and their environment. This experimental system filtrates impurities using a hydration/dehydration process that imitates the natural water cycle, with a low energy consumption that makes it very affordable. It is an important step in increasing the resilience capacity of this unique ecosystem and the communities it hosts.