EDULINK

EDULINK II
ACP-EU Co-operation Programme
in Higher Education

Agriculture and Food Security
Aquaculture

PESCADO – Pioneering Education for Sustainability of Caribbean Aquaculture Development & Opportunities

Master students implementing research on fish feeding with BIOFLOC.

PROJECT IMPLEMENTATION PERIOD
October 2013 – April 2017

CONSORTIUM
- Universidad ISA (Instituto Superior de Agricultura), Dominican Republic
- University of Guyana, Guyana
- University of Stirling, United Kingdom

PROJECT CONTACT

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PROJECT WEBSITE
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SUMMARY OF RESULTS

A BSc. in Aquaculture and Aquaponics in Guyana and a MSc in Aquaculture and Aquaponics in the Dominican Republic have been developed and implemented, with the first cohort in September 2016. 384 fish farmers and technicians (46.1% female) were trained in both Guyana and the Dominican Republic in support of the academic programmes. The virtual Institute of Aquaculture & Aquaponics (INAQUAP) has been created and now supports several projects including the incorporation of three foundations.

BACKGROUND

The overall project objective was to support the development of a successful inland fishing and aquaculture industry in the Caribbean. The economic rationale is to create a modern viable and self-sustaining industry that can attract private investment, generate employment and attract bright students to the profession. This would be done by progressing from being a bulk product farming sector to one that creates value added products and meets the food dividend of the local population.

The creation of Bachelor and Master Degree programmes in aquaculture at Higher Education Institutions (HEIs) in the Caribbean and the establishment of a virtual institute of aquaculture and aquaponics in the Caribbean region will bring academia, private enterprise and the public sector closer. This will allow for collaboration on the development of the sector, introducing opportunities for entrepreneurial activity and businesses for fish farmers and producer groups to enter the fish supply chain.

Construction of a Fish Processing Plant at Universidad ISA, Dominican Republic, November 2013 to June 2014.

METHODOLOGY

Baseline and stakeholder survey
Participative methodology to determine academic and sectorial needs and opportunities in the Caribbean Aquaculture sector.

Capacity building
Development of the Bachelor's Degree (Guyana) and Master's Degree (ISA Dominican Republic) curriculum in Aquaculture with a focus on entrepreneurship skills.

Professional development
Training university staff in the programme subjects, integrating faculty and research extension training between students, faculty and fish farmers.

Virtual Institute
Establishing foundations for the Institute of Aquaculture and Aquaponics and centralisation of Caribbean research data.

Enrolment
Admissions of students and piloting delivery of BSc and MSc degrees.

Enterprise Incubator
Defining and piloting the establishment of a student committee and setting up of producer groups.

Model Business Plans
Creating supply chain links for commercial Aquaculture.

EDULINK PESCADO
Pioneering Education for Sustainability of Caribbean Aquaculture Development & Opportunities

UNIVERSIDAD ISA

UNIVERSITY of STIRLING

RESULTS

Outputs

Capacity building

- BSc. Aquaculture and Aquaponics (Guyana).
- MSc Aquaculture and Aquaponics (Dominican Republic).
- 39 lecturers and academic staff trained (55% female, 45% male).
- 384 Fish farmers, producers, technicians, students trained in Aquaculture (46% female, 54% male).

Networking

- Incorporation of three associations with more than 200 stakeholders:
  - Fundación Parque Palo Amarillo.
  - Asociación para el Desarrollo de la Acuiponía en República Dominicana (ADARD).
  - Movimiento Ecológico de los Ríos y Recursos Naturales (ECORENA).
- Virtual Institute of Aquaculture and Aquaponics.

Facilities

- Fish processing plant and aqua nursery facilities at ISA and the Centro de Investigación para el Mejoramiento de la Producción Animal (CIMPA) to support the Master degree programme.
- First certified export of a fish farm to USA in 2016.

Publications

- Corniel S. *et al.*, 2019. Diagnóstico Técnico, Social y Económico del Sector Productivo Acuícola de la Provincia Santiago, República Dominicana. Caribbean Journal of Aquaculture and Aquaponics (CAJAQUAP), Universidad ISA, Febrero 2019.

Outcomes

- Universities are able to respond to the demands of the aquaculture sector with new knowledge, skills and practices.
- Increase in students interested in aquaculture and research in aquaculture projects.
- Significant increase (120%) in the growth of the aquaculture sector, especially in the Dominican Republic.

Impacts

Usage

- HEIs are able to assist fish farmers and producer groups to be more successful by applying the new knowledge, skills and practices learnt.
- New public-private initiatives are contributing to the reform of aquaculture management systems.
- Trained lecturers and training materials are in demand by international institutions, especially to assist in Haiti.

Policy implications

- The academic programmes in Guyana and Dominican Republic will contribute to further research and along with the virtual Institute of Aquaculture and Aquaponics will professionalise the aquaculture sector and reinforce the capacity to plan the sustainable growth of the sector.

Sustainability

- The academic programmes are accredited by the national authorities.
- The programmes respond to real needs and are creating significant demand.
- The public authorities have been involved from the start and ensure funding for students with scholarships.
- The Caribbean Council of Higher Education in Agriculture will use the results to create new joint programmes with other Caribbean HEIs.

Fish farm in Guyana: Tilapia and Tambaqui nursery facilities.

TESTIMONIAL

Diogenes Castillo Berroa, Engineer in Animal Production, Dominican Institute of Agricultural and Forestry Research, Dominican Republic

"This project will result in more advanced research in aquaculture and will improve the information available to further develop production and research strategies. The Dominican Republic's aqua resources are plentiful but underutilised. Aquaculture accounts for 10% of local demand. PESCADO provides us with the opportunity to develop these resources effectively and sustainably."

Aquaponics system at the Faculty of Agriculture and Forestry of the Guyana University.

ACP-EU Co-Operation Programmes in the fields of Higher Education and Science, Technology and Research

http://www.acp-hestr.eu/

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