

FISH FOR SUSTAINABLE WELL-BEING OF THE PERLIS ASNAF COMMUNITY

J-KEP23-001-0001



Cawangan Perlis
Kampus Arau



OVERVIEW

PROJECT BACKGROUND

This project creates an opportunity for an **access to a cheaper and sustainable approach in obtaining nutrition especially protein** for the **Perlis Asnaf community**, the low-income group targeted for this project. Hence, a recirculatory aquaculture system (RAS) is introduced to the selected community where it comes with complete hands-on training, active guidance, and monthly supervision by the experienced members from IIUM, UiTM, and NQ Consult. The involvement of the team members along with community partner strives to empower the *Asnaf* participants to produce their own food by culturing *Patin* fish as one of the best sources of protein in a canvas tank, thus, improving their livelihood and well-being.

OBJECTIVES

- To impart skills to the target groups in **utilising halal and toyyib local ingredients fish pellet** with correct ratio for optimised production.
- To impart skills in managing **simple, cost-effective, and sustainable aquaculture system in toyyib environment** to promote an efficient production cycle.
- To build **community resilience against poverty and hunger** among the low-income groups (*Asnaf* in Perlis) by providing the **access to cheap protein and nutrition** through *Patin* fish culture.

PROJECT MEMBERS

PROJECT LEADER

ASSOC. PROF. DR. ZALEHA KASSIM (IIUM)

COMMUNITY PARTNER

KOPERASI PEMBANGUNAN KG. & LUAR BANDAR TITI TINGGI PERLIS BHD. (KOTITI)

KAMPUNG TERSUSUN TITI TINGGI, PADANG BESAR, PERLIS

TEAM MEMBERS

- PROF. TS. DR. MUHAMMAD LOKMAN MOHD. ISA (IIUM)
- TS. DR. JAMIL TAJAM (UiTM)
- MADAM ROHAYU ISMAIL (UiTM)
- MUHAMMAD SHAHEED SHAMMODIN (NQ CONSULT)

COMMUNITY LEADER

RESWAN RAMLI, CHIEF OF DUN TITI TINGGI, PERLIS

BASERI ISMAIL, CHAIRMAN OF KOTITI

ACTIVITIES

20 September 2023

All team members visited Kg. Tersusun Titi Tinggi and met the chief village and persons in charge of the KOTITI.

13 November 2023

300 *Patin* fries (young fish) and system equipment (tanks, canvas, water pump, and filter) were received (1st trip). The health and condition of fish at fry stage in the canvas tank were monitored. (All team members)

30 December 2023 – 15 January 2024

200 *Patin* fries and system equipment (tanks, canvas, water pump, and filter) were received (2nd trip). The health and condition of fish at fry stage in the canvas tank were monitored. (UiTM team members)

17 April 2024

Exit plan workshop with all participants, chief village, and chairman of KOTITI

7 October 2023

1st Training session "Bengkel Ternakan Ikan dalam Sangkar Kanvas". (All team members)

15 – 25 November 2023

Disease monitoring and handling. (UiTM team members)

22 January 2024 – 22 April 2024

Technical assistant for monitoring growth and field visit. (All team members)
Bimonthly visit to monitor growth. (UiTM team members)



Hands-on Training



Training Workshop



RAS Canvas System Installation



RAS Canvas System at Asnaf's House

LOCATION



ADDRESS

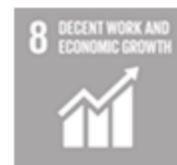
BATU 20, JALAN KAMPUNG TERSUSUN, 02100, PADANG BESAR, PERLIS, MALAYSIA.

ABOUT

Kampung Tersusun Titi Tinggi is located in Padang Besar, Perlis where it is 748.1 km away from IIUM Kuantan Campus and 28.0 km away from UiTM Arau Campus. Within this area is where the *Asnaf* participants reside, thus, the training takes place in the village. Every participant is supplied with the complete RAS canvas system where the system is distributed to each participant's house within the area.

FUNDER: Majlis Agama Islam & Adat Istiadat Melayu Perlis (MAIPs)

COLLABORATORS: IIUM Kuantan Campus
UiTM Kampus Arau, Perlis
NQ Consult



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DISSEMINATION OF ACTIVITIES & FINDINGS

COLLABORATION

Dr. Jamil Tajam and Madam Rohayu Ramli are the lecturers from the Sustainable Marine Technology Program, Faculty of Applied Sciences from UiTM Cawangan Perlis, Kampus Arau. Along with the technical expertise by NQ Consult to deliver the training and supervision, this **collaboration leads to the ideal target group that resides nearby**. The distance between UiTM Arau and Kampung Tersusun Titi Tinggi helps to not only connect and promote the project to the *Asnaf* community but also to supervise the project promptly.

COMMUNITY OUTREACH

Team members of this project **reached out to the village chief and the chairman** of Koperasi Pembangunan Kg. & Luar Bandar Titi Tinggi Perlis Bhd. (KOTITI) to identify the *Asnaf* community. This becomes a reliable medium for the team members to collect further information on the potential target group and to study their profile before executing plans to spark their interest.

PROJECT PREVIEW

A talk for a brief explanation on the background of the project was delivered for the community of Kampung Tersusun Titi Tinggi to invite those who were interested to receive the system and participate actively. As a result, ten *Asnaf* participants were selected to join the project.

MEDIA & COMMUNICATION



OUTCOME & IMPACT

CHALLENGES AND SOLUTIONS

1 Challenge

Participants possessed little knowledge on the canvas system and little faith in the success of the project.

Solution

Participants received mentoring and technical assistants from the project team as well as guidance and support from chief village DUN Titi Tinggi. A community project leader was also appointed among the participants.

2 Challenge

Small and fragile stage of fish seeds, the condition of water quality, and fish feeding.

Solution

Weekly visit by the team from UiTM Arau.

3 Challenge

The presence of ammonium compound in canvas.

Solution

Team members taught the participants to measure ammonium compounds by using simple ammonium kit for daily monitoring. They were also taught to condition the water by using aquatic plants.

4 Challenge

Timing due to the availability of participants.

Solution

A flexible feeding schedule to nurse fish was prepared for the participants.

5 Challenge

Participants lacked the understanding in income generation from the aquaculture activity.

Solution

A hands-on guide on the calculation of the profit and other financial management was given to participants

KNOWLEDGE TRANSFERRED

- ✓ Knowledge on basic aquaculture system.
- ✓ Skill to establish canvas tank with RAS system.
- ✓ Skill to manage water requirement for fish fry in canvas tank.
- ✓ Skill to manage disease and bacterial infection in fish fry.
- ✓ Skill to maintain water environment in the canvas system.
- ✓ Skill to feed the fish according to correct ratio and schedule.
- ✓ Knowledge and awareness on the economic potential from the fish rearing in canvas tank.

IMPACTS

On the community (participants):

- *Asnaf* participants gained leadership skills to organise work within the community through means of communication such as social media platform to interact and exchange information.
- Participants able to innovate the system to ensure optimised efficiency for fish rearing.
- Participants able to handle fish disease outbreak cases by diagnostic and early treatment against bacterial and fungal infection.
- Participants can identify market and revenue for *Patin* fish by product development: **RTE food, Patin pais, Patin pekasam, Patin lemak tempoyak**. (All initiatives supported by KOTITI)

On the general community:

- The local community has the opportunity to get new fresh supply of fish and improve their food security.
- The supply of local fish pellet boosting the local business.
- The community improves their social well-being and mental health through a shared socio-economic activity.

On IIUM:

- IIUM establishes a splendid networking with the community, KOTITI, and Office of Penghulu DUN Titi Tinggi Perlis.
- IIUM establishes a formal networking with the researchers of Marine Science, Faculty of Applied Sciences, UiTM Arau, Perlis.
- This project instil interest and improve the skills of young lecturers and postgraduate students to actively participate in community engagement project.

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