

# FOOD & BUSINESS APPLIED RESEARCH FUND

## Enabling Access to Sustainable Irrigation:

### Pay-per-harvest Irrigation Service for Barsha pumps in Indonesia (EASI-Pay)

#### Consortium Members

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#### Project description

**Objective:** to establish a financing mechanism that would help in creating access to environmentally friendly irrigation technology to small-holder farmers which will enhance income level and food and nutrition security of the people.

**Method:** implementation of 10 Barsha pumps at 10 different smallholder farmers, maximizing the involvement of women, and testing the “pay-per-harvest” financial mechanism.

**Anticipated impact:** sustainable growth in agricultural sector, sustainable food system during the dry season, and eradicating hunger and malnutrition.

#### Impact activities and preliminary results

Currently, five smallholder farming communities have committed to the pay-per-harvest financing mechanism, and have already harvested their crops by the end of the dry season in 2017. Two smallholder farming communities consisted only of women. The cultivation area ranged from 0,04 to 0,2 hectares with mix crops such as tomato, shallot, cabbage, spinach, and bitter gourd. The harvest was sold by the smallholder farmers and KRMW Foundation.

90 farmers benefit from the first implementation of 5 Barsha pumps. The beneficiaries not only got cash, but also fulfilled their family nutrition. Both impacts increase the farmer's income that leads to poverty alleviation.

Two smallholder farming communities were able to pay the Barsha pump about 25% and 17% of their harvest. The payment towards the pump of the other three smallholder farming communities are still in discussion.

#### Opportunities and challenges

##### Opportunities:

The current cultivation areas are small compared to the capacity of the Barsha pump. In the following season, each area is planned to be expanded up to 1 hectare.

We found shallot to be the most profitable crop. Thus, in the following season shallot will be the main crop to be cultivated.

Some head of villages from different areas in East Sumba showed interest in buying the Barsha pump using the budget of the central government program for village.

By promoting this pilot throughout the mass media, newspaper, radio, and television, the local government showed interest and listed the Barsha pump as an appropriate technology.

##### Challenges:

For most smallholder farmers in East Sumba, the cultivation of shallot is rare. Smallholder farmers need to be trained from the practice in the field until farm accounting.

The costs of seeds and fertilizers are relatively high for smallholder farmers. They need to provide these by themselves. Options to cover these costs are currently being explored.

Evaporation is high. Modern irrigation such as drip irrigation and sprinklers needs to be introduced. However, lack of finance and working capital faced by the smallholder farmers need to be solved.



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