

ClimaViet project: Interaction with stakeholders and farmers in Don Xuan commune/Tra Cu district in Tra Vinh Province (22nd August 2014)

Scientists from the Cuu Long Delta Rice Research Institute (Dr.Hach, Dr.Chi), Bioforsk (Dr.Sekhar, Dr.Trond) and the University of Queensland (Dr. Andrew Borrell) visited Tra Cu district in Tra Vinh province and discussed with the Secretary of the Commune, Staff of Agricultural Station in the district, Agricultural staff of the Commune and farmers about climate change related impacts on the agriculture and rice production in the area.



The stakeholders were also asked to give their opinion on ClimaViet project activities in the area so far, the relevance of the project results to address the current problems faced by farmers in the district and the importance of scientist-stakeholder interactions. The project is conducting field trials of Alternate Wetting and Drying (AWD) performance in three sites within the Don Xuan Commune. Stakeholders are positive about the pilot demonstrations and information they obtained from scientists so far. One farmer hosting the field trial experiments said the trials have demonstrated that about 80 kg/ha of seed can be saved. He was most happy with the saved fuel costs, as irrigation is typically done by pumping in this area (80%). This is the first project of this kind in the district. Other overall benefits are the reduced cost in crop cultivation and higher yields, primarily due to less percentage of unfilled grains.

One of the farmers expressed that fertilizer savings is also possible with the AWD system of rice cultivation. Farmers normally apply nitrogen fertilizer four times during crop growth at

25 day intervals. However, they did not apply the 4th application with AWD, thereby saving 25% of fertilizer input. The results are yet to be seen, since the crop is yet to be harvested.

Also, water savings occurred in the wet but not dry season. The farmers stated that in the wet season, one irrigation was required for AWD compared with three irrigations for the flooded control. However, 12 irrigations were required in AWD and the flooded control in the dry season.



The main issues discussed with stakeholders:

Water management in the province: The irrigation infrastructure in the district was initially developed in 1985 and has been expanded since then. Water is supplied free by the government – stopped collecting fees for irrigation infrastructure about 10 years ago. In 2012, the Commune got funding to improve the irrigation system again. The government provides funds to maintain the irrigation systems, cleaning canals etc.

There is shortage of water during the dry season, mostly from February to April. The water has to be pumped from one field to another during water shortages. The soil is a sandy-loam texture, and it is not easy to shift to other cropping systems from rice, as there is no market for other crops like maize or vegetables.

Salinity and impacts on agriculture and rice production: Currently, sluice gates can be closed to prevent salt water intrusion. Once the salt concentration reaches 2 ppt the gates are closed. If salinity is high, the root system rots and plants cannot take up nitrogen fertilizer. Farmers suggested several options to address salinity, including the use of tolerant

rice varieties, changes in fertilizer use, and water control through sluice gates. There are also extension and training programs available in the district, but they do not address salinity issues specifically; they are mostly general training programs on agriculture. They prefer to grow rice in the dry season despite water shortages, as the weather is better for rice and there is a strong market. Vegetables could be grown, but the market is very limited. Some farmers also cultivate mushrooms and have cattle. Rice is sold directly to middlemen and farmers are not happy about this arrangement, as the middlemen decide the price. The farmers need to work together to negotiate a better price with the middlemen.

Training and extension: The commune officials so far have not been exposed to any climate change related workshops or training. Some district officials in Tra Cu have taken part in climate change awareness workshops. For the commune officials, these kinds of interactions with scientists are rare, and they find it useful. They expect changes in their agricultural practices as a result of projects such as ClimaViet.

The staff from the Agricultural Department also recommended that trials should be conducted in the dry season, as the main problems for this commune and the province are during the dry season. The staff suggested that they should be trained at the provincial level on various technologies to address salinity and drought.

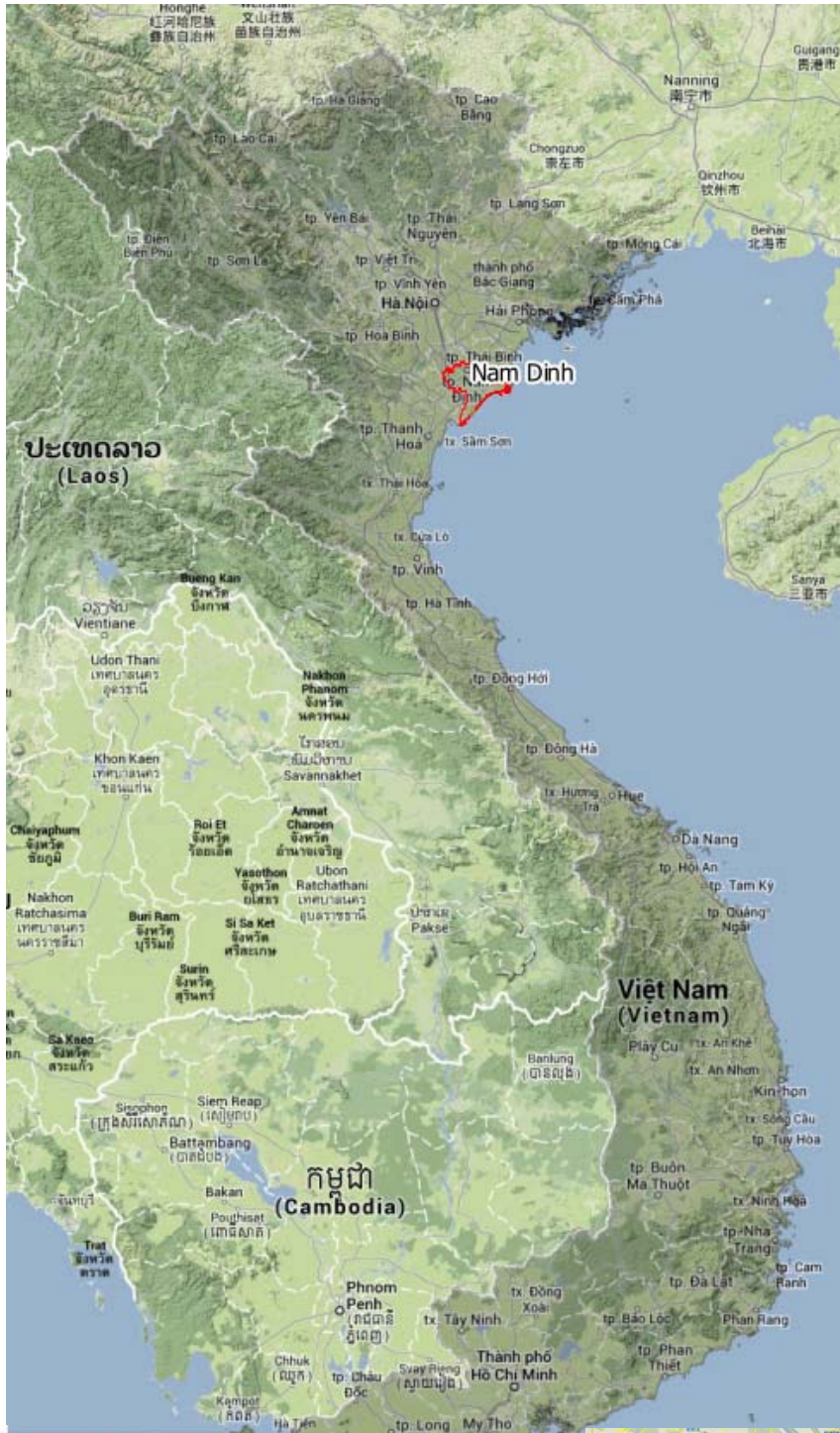
The stakeholders were also interested to know the follow up actions from the scientists, and were interested to know what will happen after the field demonstrations are completed.

One of the main concerns was the marketing issue, and the stakeholders wanted to know how farmers could get a better price for rice. They have farmer associations, but they are not currently addressing the price issue. One of the suggestions given was that farmers should organize themselves into 'Self-Help Groups' and deal with middlemen with a stronger voice.

Scientists and stakeholders later visited the three experimental sites and observed the performance of trials comparing Alternate Wetting and Drying (AWD) with the conventional flooding system of paddy cultivation. Five rice varieties are being tested within each irrigation treatment. The rice varieties vary in maturity by up to 10 days. The crop will be harvested within 10 days from now, and results will be available by September. Biomass samples will be harvested in the field and transported immediately to CLDRRI for drying (70°C for 72 hours).

Field experiments





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