



Field Trip Report

Field Trip Group 3: Vulnerability and Saline Intrusion Adaption in Tra Cu District, Tra Vinh Province, Vietnam

I. Introduction

Vietnam is reported to be one of the most vulnerable countries to sea level increase. As a result, various areas in the country have endured natural disasters, including floods, drought, saltwater intrusion, and landslides. The Mekong River Delta, located in the southwest of Vietnam, is the largest area in the country to be negatively affected by this phenomenon due to its unique geographical and social characteristics. Among the 13 provinces of the delta, Tra Vinh is a coastal province with the highest poverty rate (GSO, 2011), and a large number of Khmer and Hoa people living beside the dominant Kinh ethnic group. These characteristics make the province a suitable place to study vulnerability and adaptation to climate change. Tra Cu district is one of the poorest coastal districts in the province and has been severely affected by salinity intrusion as well as water scarcity for years. Based on the levels of salinity intrusion, Tra Cu district is divided into different ecological zones with various economic activities, which can be seen in the following map (Figure 1):

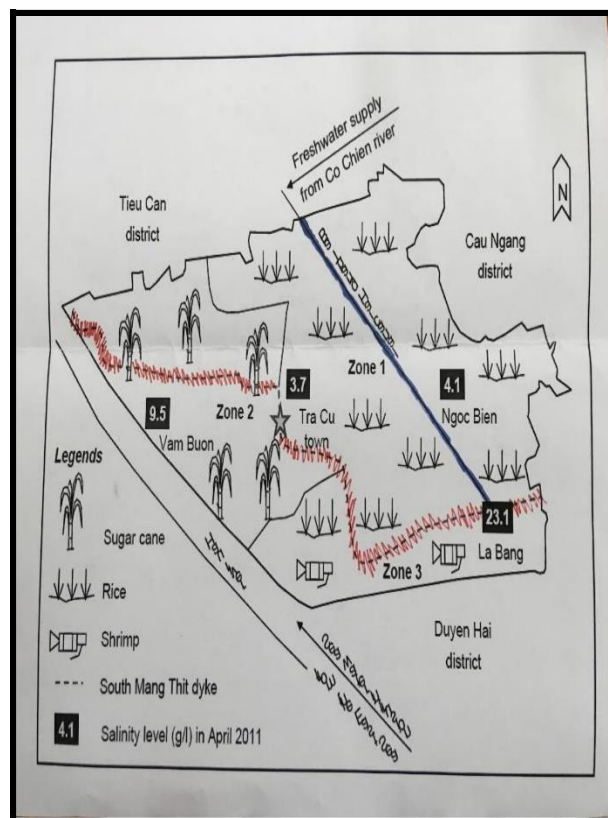


Figure 1



II. Framing

A. Before the Field

Based on the knowledge gained after a week of summer school, and before the field trip, our group had several discussions to decide on a main research topic. After the presentation of the field trip leader about general and specific characteristics of Tra Cu district, we agreed that the main topic of research would be salinity intrusion in the area. Given the available amount of time, the group would try to examine this issue from political, cultural, and social aspects. For the political and cultural aspects, we specifically wanted to look at the interrelation between different stakeholders participating in the salinity intrusion adaptation process. Additionally, since ethnic diversity is one feature of the area, we wanted to examine whether there were any differences in livelihoods and adaptation strategies between the Kinh and Khmer ethnic groups, as well as the impact of religion (if any) in relation to people's perception of climate change and adaptation. With these ideas in mind, our group decided against identifying a specific research question before going to the field, but instead drafted a list of methods we wanted to use to collect data. With input from the project staff, there emerged a variety of planned methods, including: interviews, document analysis, mapping, timelines, activity schedules, transect walks (photo interview), seasonal calendars, and observation.

B. Resources

After planning the research methodology, we considered what stakeholders may be involved with, or affected by, salinity intrusion in the Tra Cu district, so as to decide what actors could inform our study. The group ended up with a long list of prospective participants, including governmental officials, university researchers, nongovernmental organizations (NGOs), agricultural experts/officers, community members, and farmers. Since we were trying to apply the transdisciplinary approach, the information and knowledge gleaned from local farmers was considered of similar value and importance to that of experts and authorities. With regard to the socioeconomic situation in the area and the role of the South Mang Thit Sub Dyke in salinity intrusion prevention and relief, we wanted to gain information from different groups of farmers: those living inside and outside the dyke; old and young farmers; those with and without land ownership; male and female farmers; and last but not least, Kinh and Khmer farmers. Because Tra Cu district has an area specializing in sugar cane farming, we also wanted to investigate the opinions and perspectives of local sugar cane traders and middlemen. Finally, we wanted to meet with monks from a Khmer pagoda in order to explore whether religion played a role in the livelihoods and adaptation of local people.

III. Research Process Implementation

Given that we had to travel out of Ho Chi Minh City to the field, we spent some time on the bus. That amount of time was utilized to discuss and draw out a plan of implementing research methods, as well as a creating a schedule for feedback and reflection after every session. During our five days of field work, we spent the day collecting data from different stakeholders and



gathered at the end of each day to summarize what we had learned, provide comments and reflections, and to create a diary of collected data in order to prepare for the final group presentation. After five days, we managed to carry out a number of interviews, in particular three with governmental officers, one with a researcher, one with an NGO representative, and 10 with farmers. There was a diverse variety of interviewees in terms of gender, age, ethnicity, and land ownership. In addition to interviews, we carried out two mapping sessions (where we split into two small groups) and two transect walking sessions, with photos taken based on the decision of the participants.

IV. Reflections and Outcome

In the following section, our reflections on the methods applied during the field trip are presented. They cover all three stages of the process: (1) preconditions before applying the methods; (2) difficulties and challenges when undertaking research; and (3) lessons learned from our experiences during the field trip.

A. Preconditions

First, we reflect on the conditions we met before the actual application of the methods in the field. This was crucial because the preconditions influenced the procedural undertakings in the field. The main factor we needed to be aware of was the limited time we had during our stay in Tra Vinh province. Therefore, our way of proceeding was guided by the question: “how do we make the most of the time allotted?” Additionally, there were two important factors to be considered. First, the setting was already preselected, meaning that it was already decided where and with whom we were going to interact. Second, we had our own assumptions about the target issues, including expectations regarding what information we could obtain from specific respondents. These factors were the basis for us to make decisions on a suitable method and how to utilize it.

B. Challenges and Difficulties

During our activities in the field, we encountered some difficulties and challenges which sometimes were not foreseeable. In order to make the most of our short time, we tried to have as many meetings as possible, covering the different occupations of our participants (e.g., officials, scientists, farmers, etc.). However, our agenda did not always work out as scheduled, which resulted in some delays or changes to our appointments. The reason for these changes during our meetings was that we often needed more time than was planned. For example, in interviews, new questions arose from different information we discovered. Moreover, even while conducting interviews, we faced unpredictable situations or unexpected reactions from respondents, meaning that some methods did not turn out as planned especially when talking about very personal issues.

Other challenges resulted from cultural differences. In some situations, it was difficult to explain to a respondent the target idea of a question (in interviews), how a specific method worked (such as mapping), and the method’s purpose. We believe this was not only the result



of a language barrier, but also the different understandings of certain topics which might lead to misinterpretations of a question or method's essential core. There was also the issue of our positionality, especially regarding the respondents' assumptions about us. As a group of students and staff coming from urban areas as well as other countries, we were put into a higher hierarchical position than that of the locals themselves because they compared our living standards with their own conditions. We did not expect that situation and believed we could talk to the locals at the same level.

C. Adapting the Methods

The aforementioned challenges and difficulties provided us the opportunity to adapt our methodology to the context of a given situation. The first adaptation was to change the strategy of a method which unintentionally altered the "atmosphere." This helped us to get out of difficult situations. For example, the change from a strict interview with prepared questions to an open group interview/conversation allowed the group to be more active and dynamic. The second adaptation was to split into groups targeting different respondents at the same time. This gave us the advantage of saving time while still ensuring a diverse pool of participants. In addition to that, we found a smaller group might be less intimidating for the respondents and more comfortable to talk to.¹

D. Lessons Learned

All in all, the purpose of the field trip to Tra Vinh province was not only to study the general issues there, but also to explore methods and their application in the real field. During our stay, we faced problems we were aware of before, but on the other hand, there were also unexpected ones. The lack of time was a main issue that influenced the course of the practice and the outcome of the methods, especially because time is crucial for preparation, conducting research, and wrap-up. Thus, in order to make work in the field easier, in-depth preparation and increased awareness are important as a foundation. However, the biggest lesson we learned was to be flexible and to be able to adapt to unexpected situations in order not to get stuck. Thanks to good organization and a harmonized group, we were able to take these new experiences and make every step a successful lesson.

E. Findings

Based on our proposed methodological framework and knowledge related to climate change issues in the Mekong River Delta and Tra Cu district, we tried to explore what we expected to find in a real field trip scenario. In reality, our field work necessitated adapting different methods and our findings exceeded our expectations.

i. Salinity Intrusion

In terms of climate-related issues, salinity intrusion is caused by climate change in the dry season when there is a lack of fresh rainwater and saline intrudes from the sea. Moreover, we

¹ As we were limited in time, it was not possible to share the findings in detail with the other group members during the wrap-up sessions in the evening.



discovered that climate change alone is not the only reason for worsening saline intrusion in the area. The trade-off for development has strongly attributed to this issue at both the international and local levels. In the former, the bloom of hydrological power plants in the upstream (Laos, Cambodia) threatens water availability of downstream areas, especially in Tra Vinh province, which is dependent upon agricultural production. In the latter, mass production for food security has been adopted for more than three decades in the Mekong River Delta, leading to the arrival of a bundle of dykes and sluices which regulate water flows and prevent saline water intrusion. However, as a long-term policy, this approach has not been as efficient as expected, and has contributed to increased saline intrusion in agricultural areas.

ii. Stakeholder Relations

Stakeholder relations were one of the main aspects that we expected to deeply understand as a result of adopting a transdisciplinary research approach. We found that while scientists, NGOs, and authorities have the same knowledge of climate change (both theoretical and political), local farmers understand climate change as specific climate variabilities, such as rainfall, saline intrusion, sun light, etc. Moreover, the knowledge exchange from the academic world (we grouped scientists, NGOs, and authorities together) to farmers has seemingly been dominated by academia, and the reverse trend is rare (see Figure 2).

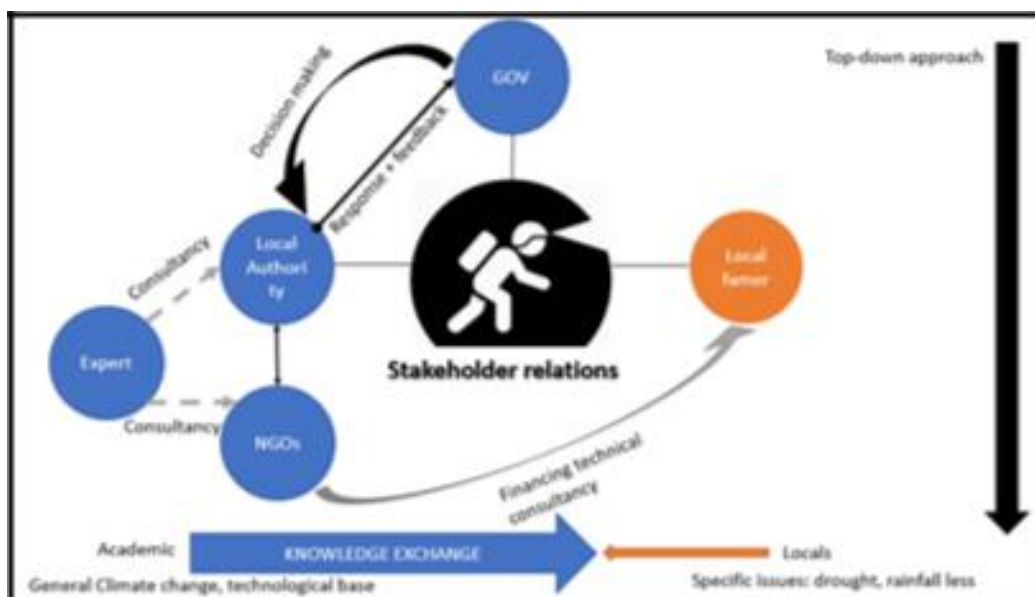


Figure 2

In terms of water management, stakeholder relationships were explored, and it was revealed that a top-down approach is adopted in water irrigation activities. We also learned about the role that each stakeholder held in this regard (see Figure 3, below). An interesting point is that there appears to be some flexibility in water management regulation, meaning that official control and planning at a local level provides for informal allowances, such as unplanned snakehead fish farming and increased groundwater consumption for a short time.

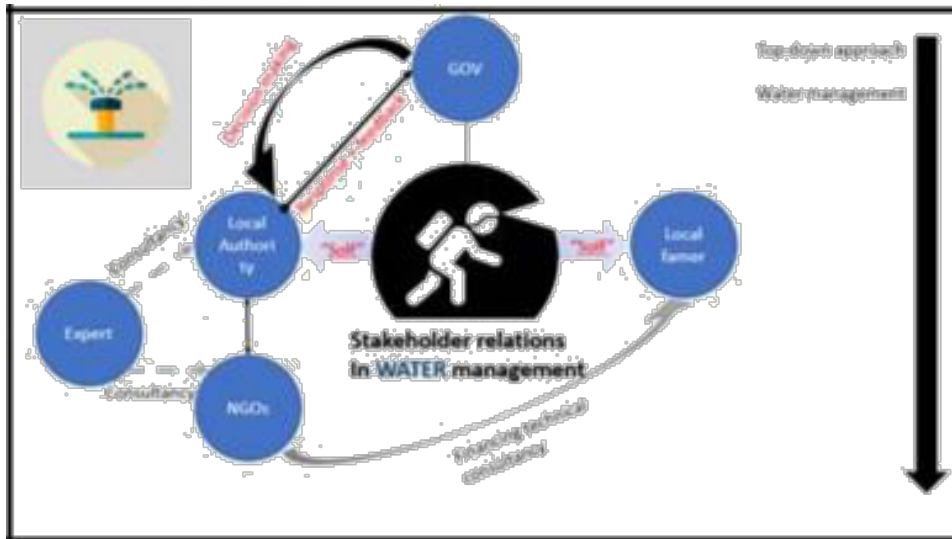


Figure 3

iii. Adaptive Models

Adaptive models were the next issue we tried to explore in the subject area. We discovered that there were many models which integrated climate change adaptation at the local level; however, the efficiency of these models requires further consideration. Additionally, the priority of saving water was emphasized by farmers and should be considered in the context of these models. With regard to climate change, we found the existence of “climate change winners” (i.e., those persons who knew how to use saline water for shrimp cultivation) and “climate change losers” (those farmers whose livelihood is based on freshwater fish or rice cultivation). There are two seasons of cultivation: six months for fresh water and six months for brackish water. These different seasons create conflicts between the livelihoods dependent on brackish versus fresh water. The trend toward brackish water is considered by local farmers to be more economically intensive and the environmental risks of this trend have been questioned by experts, NGOs, and authorities (see Figure 4).

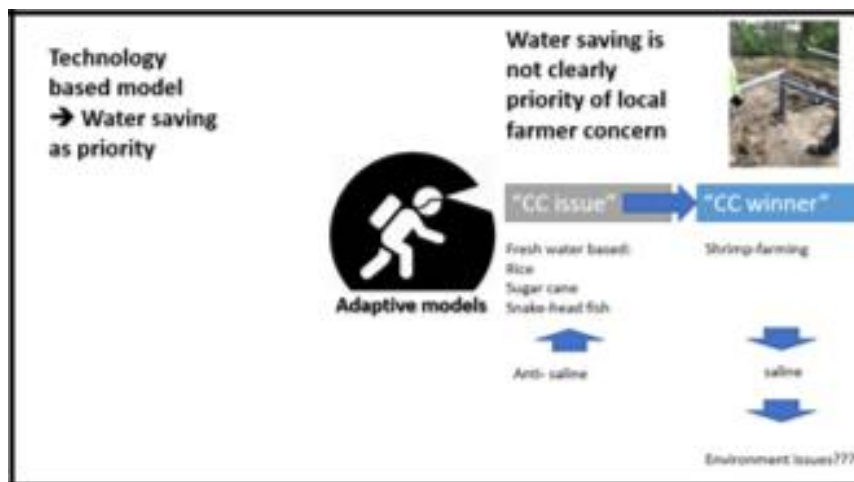


Figure 4



iv. Livelihoods and Social Issues

Finally, we explored two vicious cycles that worsen the negative impacts of saline intrusion on livelihoods and social issues; there is no doubt that climate change is a complicated issue. Agricultural mass production can be considered as a driving factor for chemical use in cultivation, with the purpose of increasing soil nutrients toward high crop productivity; however, as a result of such production, an ecosystem imbalance has emerged. This imbalance has led to soil damage and degradation, which in turn forces local farmers to use even more chemicals. Lower crop yields and productivity correlate to lower incomes and poverty and the migration of young workers away from agricultural areas. Indeed, all of the above-mentioned issues have threatened not only the farmers' living standards, but also the adaptive capabilities of the agricultural sector (see Figure 5).

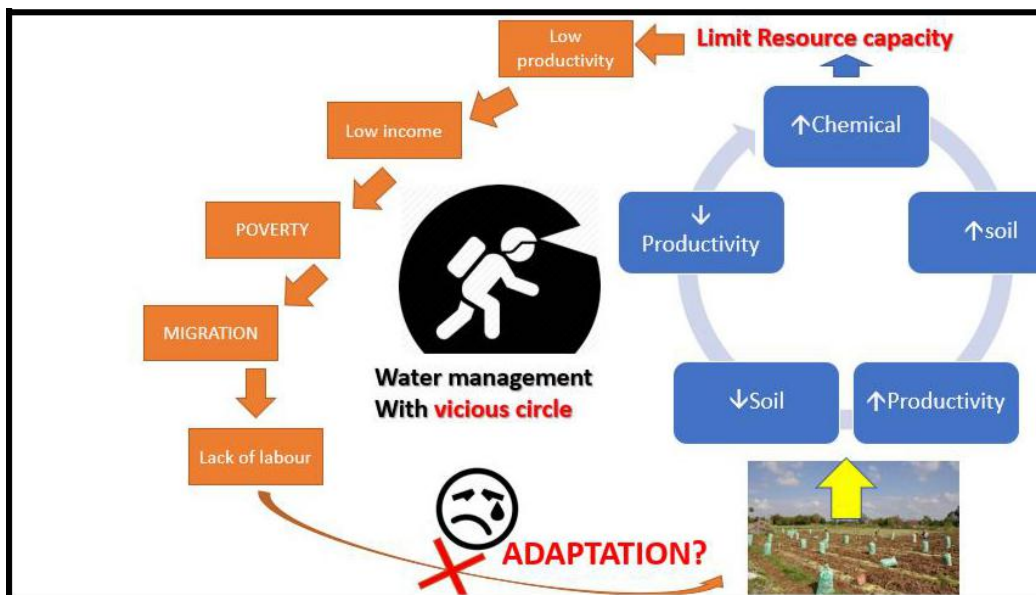


Figure 5

V. CONCLUSION

As discussed in the sections above, the largest challenge to our field work was a lack of time to undertake a full research project, including the time needed to substantively review our findings and coalesce our results. Despite these issues, our group was hardworking and dedicated, with a flexible and harmonious dynamic; thus, we believe we maximized our time to the greatest extent of our abilities. Our field trip leader went above and beyond our expectations and proved himself to be a capable and adaptable organiser. This allowed us to keep the pace when unexpected situations arose – a crucial component to the success of our field trip.

Having discussed the various elements of our work in the field, we conclude this report with a reflection of what we would need to implement a transdisciplinary research project in the future. We have listed these elements, with explanations, below.



Language

The issue of language was omnipresent throughout our work. Thanks to our translators, we had the chance to process a great deal of information and data, including feelings that were expressed by the people interviewed. Yet, translation can often be an interpretation, as opposed to a verbatim exchange of information. When undertaking research in a different language, you may never be able to overcome this issue. Different languages have different words and expressions for feelings or situations, and these expressions always carry their own intrinsic assumptions. For example, during a mapping exercise, we asked a question and the farmers started to laugh and made small comments and expressions to each other. It was not possible for us to feel the atmosphere and our translator was unable to explain what exactly what was going on in the moment. What was the reason behind the laughter? Was the question awkward, funny, or uncomfortable? Often these situations were so quick that when reflecting upon the scenario in the evening, it was impossible to know what had actually transpired.

Time

We would need more time. As we previously stated, time was an issue in many parts of our fieldtrip. For instance, while separating into groups for smaller interviews had advantages, there were also disadvantages, as we needed even more time for a mutual wrap-up to inform the other group members about our interactions.

Better Access and Relationships

In order to conduct an appropriate amount of research, a more intimate connection to the stakeholder actors would be necessary. This is again connected to the time issue. The longer you stay in the field, the more trust can be built up. In our field trip, we were only able to meet certain farmers that were selected by the local authorities. We found that out of all the farmers that we met, none of them expressed a concern about the future; however, we did not have the opportunity to talk to landless farmers, which may have presented a different perspective.

Flexibility

We need the flexibility to adapt different methods to the moment, adjusting to a specific situation, and a willingness to abandon a previously laid plan, if necessary. This means a realization that a method may not be working or may require rapid and spontaneous adjustments.

Additional Stakeholders

Our research revealed a need to expand the parameters of our engagement to include additional stakeholders, such as scientists and experts from fields other than agriculture. This is especially important when examining the topic of climate change, a subject that requires expertise in various technical, physical, and chemical processes. Additional experts that may have been helpful to our research include the following: hydrologists, engineers, economists, political scientists, and social scientists.

Knowledge Sharing

We realised that when working together in a group, most members took detailed notes; however, we did not have the time to compare these notes in detail or combine them. For professional research undertakings, it is crucial to have a system for both knowledge storage and sharing. This will ensure that all researchers are informed by the findings/problems that other group members discover.



Funding

As a conclusory comment to our report, we note that funding is an integral aspect of a transdisciplinary research undertaking. The time needed to engage in transdisciplinary research necessitates an ample source of funding, perhaps even one that is flexible in its deadlines for results. If transdisciplinary research is to be fully embraced, it may take months to even establish a viable research question; hence, an adequate amount of funding is required in order to ensure that a research project can be completed in its entirety.