

Name of the Project:

Piteå and An Giang - Sustainable Municipalities

1. Background

The contact between the An Giang province in the south of Vietnam and Piteå was established during 2010 at the Environment and Energy conference. A result of the initial discussions and contacts was an inception phase where representatives from different interest groups from Piteå, funded by the ICDL (enter record number 2010-0129), carried out a first visit to Vietnam in January and hosted a group from Vietnam in March 2011. The main results from the inception phase was that important areas for a partnership application was agreed on and the political bodies, both in An Giang and Piteå, decided that a partnership cooperation will be carried out, if funds are granted.

Strengths and weaknesses

So far, the achievements of the collaboration are that we have established a communication that has built personal relations and an awareness of cultural differences. During the inception phase we achieved a common understanding and could agree on problems areas and objectives. We could also realize that we have common problems but in different contexts. The weakness is that people involved are very engaged in many areas and have a lot on their agendas and can get new positions during the project period.

Local democracy related to the area for cooperation

Piteå

In the first phase to develop a climate and energy plan a citizens' dialogue took place through Peoples panel, which resulted in three prioritized areas where one focused on health and climate. In the work of describing the current situation and to identify measures, the business community, the country council, the church as well as different municipal departments and companies were involved. Different working groups have been inviting to various thematic meetings and the draft of the climate and energy plan has since been referred and also been presented on the municipal website.

In order to achieve objectives and targets there was a need for a broad collaboration between multiple players such as municipal groups, industry, organizations, associations, local authorities and the citizens. The work has been conducted with some methodological support from The Swedish Energy Agency's project Sustainable Municipality, where Piteå is one out of 31 municipalities who is further on to the third phase.

An Giang

In An Giang the government system is set up into two directions; bottom up and top down decision. However, in some aspects the citizens are not really to participate on project planning, financing and supervision the project. An Giang government wants to build a transparency and grass-root democracy authority, which could be learnt from Sweden and from Piteå.

In An Giang Peoples Committee is very influential in the development of the Society and has a great potential to take decisions that can facilitate a project like this.

Vietnam is known as the second largest exporting country of rice. Rice production has the most important role in the economy of the Mekong delta, which at the same time also is the part of Vietnam that is anticipated to suffer the most serious climate change. Rice straw and rice husk are a potential natural biomass source for energy production. Rice straw could be used for ethanol production, rice husk (RH) can be used as fuel for electricity and heat generation plants, and rice husk ash (RHA) could be used for production of fertilizer/constructing materials and as a base for producing silicon compounds. As of now, only a small part of rice husk production has been used as fuel in brick kilns, but most of it has been dumped illegally into the rivers or burnt openly, emitting huge amount of greenhouse gas (GHG).

To develop a strategy program for waste to energy, focusing on waste from rice could be transferred into other areas and give Vietnamese organization a tool for handling environmental problems.

Piteå

From an economical, social and ecological point of view forestry has for centuries been the base for development in Piteå. The industries consume a lot of energy for their production but during the last ten years the industries are using wood fuel instead of oil. This conversion has contributed to a decrease in fossil CO from 1998 until 2008 with 42 %.

Piteå is a center for development of renewable energy. Research in the energy sector in collaboration with LTU, Luleå University of Technology, has been carried out for a long time and the results have placed Piteå on the map for development in the area of renewable energy based of forest as feedstock.

There is also a strong expansion of energy technology development at Solander Science Park, an important platform for Piteå's business environment. At ETC, Energy Technology Center in Piteå, a gasification technology is developed where biomass is used as feedstock.

The biomass is mainly from forest residues but also agricultural residues can be used. The owner of the technology developed at ETC is MEVA Innovation. They have recently been funded by SEA, Swedish Energy Agency, where ETC will run tests in order to find technical solutions for turning rice husk to bio energy.

Challenges

An Giang as well as Piteå are facing great challenges. One is to use bio fuel effectively with a feed stock taken from our respective own geographic area. We also have to become more cost effective but without a negative impact on both environment and health.

Besides the solid and measurable outputs, Vietnamese partners expect that they can gain experience from Swedish partners on: (i) how to manage the community in the manner of grass-roots democracy and transparency; (ii) how to stimulate the local communities to participate in activities of interest for the general society as environmental issues and the protection of public properties; (iii) how to save the fuel energy and replace them with bio energy.

In a strategy program, waste management plan and local regulations for sanitation, actions taken in the short term targeting the overall objectives will be clarified. The full board in Piteå adopted in 2010 a climate and energy plan, revised a waste management plan and is now working on measures under the Action plan. An Giang is in the beginning of a similar process. Here we all can benefit from exchange of knowledge and experiences, both in the development of strategies and in implementation of policy measures. A key success factor for both An Giang and Piteå is a widespread interaction between several actors as residents, community groups, business, organizations, associations and not least international contacts.

Influence

The administration in An Giang will, based on grass roots participation, develop strategies and practical instructions for handling and utilization of the waste from agriculture, but this project will focus on rice waste as it is identified as a major problem.

The network of actors in An Giang that will be involved in the process will be local authorities, private enterprises, researchers and farmers. The work of the network should be based on grass-roots democracy, transparency and community participation, which is an area of knowledge where Piteå has experiences.

In Piteå, democracy, transparency and community participation is one of four strategic areas and has during the last years developed new structured possibilities for people to participate in issues related to the development of the municipality where sustainability is one of these areas.

One outcome is a decision taken by the full board to prioritize energy as an area for growth and are today collaborating with private enterprises, interest organizations and the university towards an attractive and sustainable society. The work towards these objectives is reflected in all areas of activities in the local community, and the municipality has a leading role in this process.

2. Problem identification

An Giang is facing a major challenge in preventing and controlling pollutions and Green house gas (GHG) emission as well as they have shortage of energy. In An Giang there is neither a plan for agricultural waste management and energy development, nor for turning waste to energy. There is a need for a strategy program for turning waste into energy.

When a delegation from Vietnam visited Piteå, discussions regarding the continuation of the partnership took place. We looked at strengths and weaknesses in our municipalities and elaborated on what we can learn from each other in our efforts towards a sustainable community in energy and environmental issues. In order to explore differences and similarities we spent time on defining the content of the terminology we used, for example what we mean when we use the term sustainability.

Based on the analyze done in An Giang, where representatives from the target groups participated, through discussions and study visits in each other municipalities we came to the conclusion that our partnership should be in the area of climate change impacts, energy and environmental issues focusing on renewable energy based on waste from rice production.

In the process of formulating the project proposal representatives from both An Giang and Piteå have participated. The process has been prioritized which led to an extra meeting in Uppsala where we worked on the project proposal and later on used ICT tools for distance meetings.

In order to make a change and lay a foundation for changes there is a need for a well structured and process oriented work on a local level which includes the municipality as well as enterprises and different organizations, institutes and representatives of targeted groups. In order to identify what actions are needed for a sustainable community at the local level it's important to analyze the situation of today. This analyze should be the base for the prioritization of the actions.

In December 2010 a climate and energy plan was ratified in Piteå and today we are in the middle of the process to implement it. We are willing to share our knowledge and experiences from the process we are in the middle of with An Giang. Through the

cooperation with An Giang we expect to increase our awareness regarding global environmental issues and how they may affect us. The cooperation will also contribute to the outcome of our revised climate and energy plan that should be presented in 2014.

One expected outcome in An Giang is that we can assist in developing the awareness, knowledge and experience on how to manage the agricultural waste more efficiency and safety to environment by turning waste to energy. We also can share our experiences from have target groups involved in the process of developing a strategy program.

According to political strategies in Piteå, the Municipality of Piteå should develop international relations in order to share knowledge and experiences which both the local life and collaborating partners will benefit from.

3. Objectives

Overall objective

A secure, cost effective, sustainable energy system from rice waste to bio energy, which has a low impact on health, environment and climate change.

Objective for the project

Increased knowledge and understanding of global sustainability issues in the area of energy and climate from exchange of experiences between the Municipality of Piteå, Sweden and the Province of An Giang, Vietnam.

A developed strategy program for waste to energy

Peoples' Committee bodies at district level in the Province of An Giang are involved in a process aimed at encouraging the citizens to work according to a developed a strategy program that focuses on waste to energy, especially on rice waste.

Short term objectives:

- The target groups are aware and participate in developing a rice waste- to-energy program.
- A cluster network is established and involved in the process.
- A need assessment is carried out regarding, emissions from rice husk, the need for electricity and the potentials of what bioenergy rice husk can contribute to cover the needs.

4. Activities, Time Table and Budget

The project will have a time span of three years. The project will start with a project management meeting to look at the detailed planning of the project, and discuss how to

ensure that each activity is designed in a way that favors the needs of both men and women, and other interest groups such as farmer, enterprises, officers, decision makers, researchers and citizens.

There are four main group activities including: (i) Survey and assessment of existing conditions; (ii) Building capacity; (iii) Organize the workshops; and (iv) Prepare the proposal for implementation phase.

For the continuation in the project there is a need for regular contacts and follow ups. Our target is to have distance meetings every month and two country visits yearly.

All main activities are proposed in the following grant chart and Table 1.

Table 1. Main activities, time tables, expected outputs and budget

Time 2012	Activity	Responsibility for activity	Expected outcome	Budget, skr
January	Start of process, web meeting	Piteå		---
Every Month Except July	Follow up meeting	Piteå	Developed communication	10 000 Investment in equipment
February	Steering Committee meeting + project leader	An Giang	Clarification of role, mandate, expectations and detailed planning for the year	Management and coordination budget
March/April Activity 1	To An Giang Persons involved in the project. GIS, web-site and start of climate and energy plan (CEP)	Agreed preparations done in An Giang	Actions plan for GIS and CEP Overall project strategy related to the objectives 2012-15 Planning of group meetings in the different areas	170 000
April	Webb site Social media	Piteå An Giang	Editor in each country Development of Structure Sharing information/ Communication	10 000

			At Social network regarding environmental issues	
March - August	Analysis of the potential of the rice husk	ETC	Data for GIS system Report of rice-husk testing and validation test from ETC	40 000 - expert
March - August	Survey and asses existing conditions of rice prod. And rice husk emission	An Giang	Data for GIS system	30 000
Sept-dec	Involve target groups	An Giang	Cluster network is established	An Giang Budget
Aug- dec	Review and identify gaps of policies, legislation and institution arrangement on environment and energy	An Giang	Base for regulations and institution arrangement	An Giang Budget
October	Vietnam to Piteå People involved in the project	Piteå	GIS and CEP Continuation Detailed action plan for 2013 Be trained on grass-root democracy and cluster network	180 000
October/november	Steering Committee meeting	Piteå	Evaluation of the year, issues for the next year	Management and coordination budget
During visits	Interpreter	Piteå/An Giang		20 000
Visa				10 000
Vaccines etc				20 000
				500 000

Time 2013	Activity	Responsibility for activity	Expected outcome	Budget
Every Month Except July	Follow up meeting	Piteå An Giang	Development program	-----
During the year	Vietnam to Piteå People involved in the project	Piteå	Development of the project, participating in activities and reflection/evaluation Of the past year	200 000
During the year	Exchange in an area related to the plan	An Giang	Participating in relevant activities	200 000
Jan- June	Prepare "rice waste to energy program"	An Giang	Material to process in the different target groups	Expenses material 10 000
March - September		An Giang Piteå		Expenses material seminars 25 000
March - December	Training for targeted groups in An Giang	An Giang	Training course on rice waste to energy	An Giang budget
November/december	Steering Committee Meeting		Detailed action plan for 2014	Management and coordination budget
visa				10 000
vaccinations				20 000
Interpreter	Piteå/ An Giang			20 000
Not budgeted expenses				15 000
				500 000
Time 2014	Activity	Responsibility for activity	Expected outcome	Budget
Every Month Except July	Follow up meeting	Piteå An Giang	Development	-----
February to July	Produced material	Piteå/An Giang	CEP, GIS Materials, printing	20 000

February – April	Exchange due to the activities An Giang			210 000
May - September	Wrap-Up meeting and eventually prepare a new proposal	Piteå	Reflections regarding objectives and outcome New proposal	175 000
March - December	Training for targeted groups in An Giang	An Giang	Training course on rice waste to energy	An Giang budget
Yearly	2 steering group meetings	Steering groups	Wrap up Lessons learnt continuation	Funded from management and coordination budget
Interpreter	Piteå/ An Giang			20 000
visa				10 000
vaccination				10 000
Auditor				10 000
Evaluator				20 000
Not budgeted expe.				15 000
				500 000 s.kr

5. Participants

Monitoring Committee:

An Giang

-Huynh The Nang, Vice Chairman, Ta Anh Thu, Deputy Director of Department of Natural Resources and Environment, Nguyen Thi Van Ha, Head of executing team for An Giang-Sweden cooperation program, and Deputy Director of Department of International Relations for An Giang (will be identified later).

The program will include people from the People's Committees, Departments, Universities, consultants, enterprises, farmers, communities, citizens and investors.

Piteå

Mats Berg, Chief Executive Officer, Peter Roslund Mayor, Ulf Hedman, Director Environment and planning, Åsa Wikman, Society Development Officer;

Reference Group:

Erik Persson: Head of development, industry and energy, Johan Hedin, Project leader Solander Science Park, ETC, Marcus Öhman professor Luleå Technical University and Håkan Holmberg, Meva Innovation

Projectleader and team

Project leader; Gerd Sävenstedt, head of international relations

The program will include people from the Council, Municipal companies, Solander science park u educational institution.

In the process from Sweden Maria Widman, engineer, Krister Vikström, GIS engineer, Lars-Olof Persson, Webb developer and others will be engaged.

6. Plan for monitoring and evaluation

The follow up will focus on the indicators and in the evaluation we would like to enlarge the picture by making a transnational evaluation with a qualitative approach.

Through the process and in the monthly meetings we will continuously follow up the indicators and throughout the process we will use evaluation forms. After the activities interviews/evaluation forms will be used. The result from the evaluation will be taken into consideration both in the work to improve the strategy program and when it comes to the implementation phase.

7. Expected results

1. The target groups are aware and participate in developing a program.

Indicator: A strategic program on turning waste to energy is approved.

2. The cluster network is established and involved in the process with the program of rice husk to energy

Indicator: At the end of the project 50 local politicians/ officials and 200 representatives from the target groups are trained and have participated in the program.

Indicator: At the end of the Project at least 30% of the participants are women.

3. An analysis is done regarding, emissions from rice husk, the need for electricity and the potentials of what rice waste can contribute to cover the need

Indicator: A GIS database on rice waste emissions and utilization is established.

8. Reciprocity

From the first time we met we connected and we are looking forward to develop the cooperation. In our more informal meetings there were many eye openers, not at least based on our differences and similarities. The site visits we made both in Vietnam and in Piteå gave us a basis for development of the discussions regarding issues related to increased electricity production based on renewable fuels and how we in our different environments can contribute to a sustainable development in a global context.

This type of interaction is important for expanding our networks, create new business opportunities, insight and capacity. All of us need international contacts in order to broaden our minds and gain new knowledge from a global perspective.

9. Sustainability

Program on turning rice husk to energy is an example of sustainable development of communities in An Giang, which could be extended and applied in other Provinces in the Mekong Delta. The program will create potentials to replace fuel used today with rice husk, and therefore, create high potential to decrease green house gas emission.

Documentations will be made by all workshops and experience interchange, which will provide a possibility to go back and repeat the knowledge acquired when necessary. The strategy program for turning waste from rice to energy is a living document that guarantees a continuing process.

This program will be reviewed again in 2020 and be continued, or even it can be extended to the other program such as renewable energy plan, climate and energy strategy, climate changes adaptation plan, etc. The waste-to-energy program will be the orientation for sustainable development not only for An Giang but also for other provinces in Mekong Delta.

10. Sharing of the results and communication

Internal communication

The ordinary channels we use for information and communication will also be used both for presenting the project and enhancing the results. Staff magazine, internal web, exhibitions, reports, regular meetings, etc will be used. There will also be occasions to present and discuss these issues among the political body as they also will be represented in the work.

External communication

One way will be to have a “common web room”, where the work in Piteå will be presented both on our site and on the Vietnamese site. The Vietnamese work will be presented also both on their own site as well as ours.

Social media will be used in Piteå and in An Giang television channel, local newspaper, communal websites and project website as a platform for communication regarding different issues and activities stated in the plan of action. We are also aiming at using webb/social media as a communication tool regarding issues related to the project.

11. Poverty reduction

In An Giang there is a lack of Energy at the same time as there are great environmental challenges. At this point they are at a crossroad where one way leads to fossil energy/ nuclear energy and the other to bio energy. Access to electricity is a necessity to increase the standard of living for the locals and create conditions for a local environment which is safe, healthy and good for the environment.

This means that it's important to collaborate with the locals in the countryside to enhance knowledge regarding pre conditions on how to use rice husk as fuel in small scale energy.

The project has a dimension of working together with the community in awareness activities and also give the community a chance to make their voiced heard.

12. Horizontal goals

Gender equality

Gender issue will be looked after in the beginning and throughout the project. We hope this project will engage female participants and give them more opportunities to participate in activities. Goal for this project is that at least 30% of participants are women.

This project is important for the next generation. The decisions we make today will affect both the environment and the health situation in common. Our decisions to day will have impact on environment and health situation in common.

As the project is focused on environmental issues there could only be positive environmental effects from the project.

13. Assessments of risks

The project will be managed by officials who have many tasks and also might get new tasks which can make it hard to fulfill their commitments. If key persons have to be replaced it will slow down the process. But as we plan to have distance meetings every month we will be able to react on changes and problems we are facing.

Another risk we might face is that our ambitions are higher than we can handle due to time we can spend and the approved budget. In order to reach our objectives it is important that we yearly make a detailed activity plan where we state who is responsible for each activity, budget and follow ups.

14. Co-financiers

The Municipality of Piteå will add 50 000 S.kr yearly to the project if the application will be granted.

The Peoples Committee of An Giang will also add 50 000 s.kr yearly to the project if the application will be granted. This money will be spent on activities in the project not covered by the ICLD funding.

15. Project budget