



# **Name of the project;**

## **Piteå and An Giang - Sustainable Municipalities**

### **2. Coordinator/project leader**

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### **3. Reference number;**

2011/0110

### **4. Summery ;**

Short term objectives for the project are;

- 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.

Two MC committee meetings, one in each country has been carried out and additional two reference group meetings in Sweden. In March in An Giang and in November in Piteå when the MC group from Vietnam also participated in an Energy conference in Piteå. Dr. Kentaro Umeki from the department of Energy Science and the C.O. at that time from Meva Innovation were part of the group who went to Vietnam in March, when also planning and preparation work was done. In September a group of 9 came to Piteå for a more individualized program according to their expectations and role in the project. In November a small group from Piteå was in An Giang for a working week where the work with the questionnaire was in focus, a questionnaire which is important for the data base that will be created and a tool for both the analyzes of the situation of today and for future planning in An Giang.

A shared website [www.en.angiang-sweden.com](http://www.en.angiang-sweden.com) was published in May, which is also intended to introduce the cooperation with Swedish energy Agency and Växjö municipality, another ICLD project. At [www.pitea.se/international](http://www.pitea.se/international) the cooperation is also presented.

## **5. 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.

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 economic, 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.

## **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.





## Extract from the Report

### 6. Target groups and participants

On the Swedish side there is a core project group consisting of officials from different departments (IT, chief executive office, environmental and construction) the municipal sanitation company and the county council. At the Vietnamese side there is a core project group consisting of members from different departments, farmers association, people's committee and the university.

The members in the monitoring group in Vietnam are from People's committee, the district authorities and the university and in Sweden from the university, the municipality and the business community.

There has been a change in the Swedish MC as one member has left his position and been replaced by Professor Jan Dahl from LTU and the vacancy has been filled by Mr. Tore Persson, IS Piteå.

In these working groups the participants are chosen from their competence, experience, positions and access to networks.

In the chosen district, Chau Than the participants were chosen more or less from the same criteria and they had also shown an interest of development in their area.

In this first meeting in Chau Than there were 30 farmers, 10 representatives from the different commune heads and 10 representatives for the business community.

*App 1: Project group + MC group,*

*App 2: participants in three meetings in An Giang\_november 12*

### 7. Objectives for the Project

As this is the first of a three year project no objectives have so far been reached but the activities and the process are towards reaching the objectives stated in the application. The following short term objectives were stated in the proposal.

- **The target groups are aware and participating in developing a program**

The objectives for the project were formulated in 2011 and in that process men and women were participating. One aim in the project is to consider the situation for women as well as for men and during this phase officials, both men and women have also been involved - but out on the field there has been mainly been men involved.

- **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.**

The questionnaires are the base in this need assessment. The calculations will be done after the planned interviews in Chau Than are done.

- **A cluster network is established and involved in the process**

The process has started. So far the University, business community and the public administration has been involved in An Giang, but it is still far to go. Both during the inception phase and in September 2012 there has been sessions focusing on cluster building and in June 2013 a seminar is planned for the MC group when they visit Piteå.

## **8. Expected outcome for the project**

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

The program should be approved by 2014. Preparations for the strategic program is ongoing

*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.*

During the first year more than 50 representatives from the target groups have been informed about the project and participated in testing the questionnaires and some also participated in site visits, where also other farmers and representatives for the business community participated.

From Long Xuyen 15 people have during the year been to Piteå and participated in training activities related to the program. And 12 tickets from Sweden to An Giang have been issued during 2012. Three people were there twice during the year.

*Indicator: At the end of the project at least 30 % of the participants are women*

When it comes to number of participants from the officials the indicator has been reached. (See Gender) but the challenge is to reach also women out in the field and get them involved in the project.

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

This is an ongoing process. The effort for this year is to lay the foundation for the GIS data base which is of great importance for the foundation of the climate and energy plan, a useful tool for future planning in the An Giang district and a necessity for an analysis. The analysis will be regarding emissions from rice husk, the need for electricity and the potentials of what rice waste can contribute to cover the needs.

Piteå and An Giang have the same kind software which makes it easier, in Long Xuyen there is already one existing server that can be used, but the challenge is sharing of information as only one department ( MONRE, the department for natural resources and environment), has access to the information.

## 9. Activities 2012

Time 2012	Activity	Responsibility for activity	Expected outcome	Status 2012
January	Start of process, web meeting	Piteå		<b>Project granted 30/1 – everything delayed</b>
Every Month Except July	Follow up meeting	Piteå	Developed communication	<b>ongoing</b>
February	Steering Committee meeting + project leader	An Giang	Clarification of role, mandate, expectations and detailed planning for the year	<b>Done but in March</b>
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	<b>Done as much as we could. Linked to MC meeting nr 1</b>
April	Webb site Social media	Piteå and An Giang	Editor in each country Development of Structure Sharing information/ Communication At Social network regarding environmental issues	<a href="http://www.en.angi-ang-sweden.com">www.en.angi-ang-sweden.com</a> ,  <a href="http://www.pitea.se/international">www.pitea.se/international</a> <b>no social media</b>
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	<b>On going ETC has presented results from tests</b>
March – August	Survey and asses existing conditions of rice prod. And rice husk emission	An Giang	Data for GIS system	<b>In the pipelines but delayed. Tests in November</b>
Sept-dec	Involve target groups	An Giang	Cluster network is established	<b>Process started</b>
Aug- dec	Review and	An Giang	Base for regulations	<b>Not yet</b>

	identify gaps of policies, legislation and institution arrangement on environment and energy		and institution arrangement	<b>started</b>
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	<b>September – se App. x For program Detailed plan for 2013 partly delayed</b>
October/november	Steering Committee meeting	Piteå	Evaluation of the year, issues for the next year	<b>Evaluation = reflections and lessons learnt</b>

#### Comments to activities;

**Some activities have been according to the plan but and others not as it is shown in the table above. Both men and women have participated in all the activities.**

February became March when the first monitoring committee meeting was held in An Giang and during that meeting there was a clarification of the role and mandate for the steering committee and decisions were taken for the detailed planning for the year.

The whole project group from Piteå went on this first trip in order to start processes in the respective areas. An associative professor from the university became part of the group as it was considered to be important for the development of the project and important for establishing contacts with the University in Ho Chi Min.

#### *GIS data base/questionnaire*

In order to build up this data base with the information that is needed target groups will be interviewed. The questionnaires have been tested, revised and both LTU and HCMU have been involved in the process. As there are many requirements that need to be met, this work has taken longer time than expected and the interviews have not yet started. The results of the interviews also have an impact on the process for the CEP. When data from the interviews are presented the analyses will be done.

#### *Climate and energy plan*

Rice farming is the far most dominating farm activity in the An Giang Province. During this time of the project farming has become one focus area as it will affect the climate and energy plan. FAO, Food and Agriculture organization, a UN organization, has developed a tool for analyses which will be used

in this project. As knowledgably in this area the superintendent for the county agricultural schools has become part of the project group.

#### *Phu Than to Chau Than*

As Chau Than has showed ambition in this area the Vietnamese authorities decided to change district of participation. The first chosen district was Phu Than, where a meeting was held in March.

A meeting with the target groups was held in Chau Than where the project was presented for a group of commune leaders, owners of rice dryers and rice mills, and farmers. Besides an introduction of the project, the questionnaires that should be used as a base for information stored in the data base, were tested. In the process with the questionnaires both LTU and the University in Ho Chi Minh city have been involved. Even if the process has been slower than the paper plan, an active process is going on in the working group.

*A cluster network is established and involved in the process.*

The process has started for establishing a cluster network between the administration – the university – and the business community

During the visit in Sweden in September a session dealing with cluster network was held at Solander Science Park. A follow up workshop for the steering committee will be in June this year.

Peoples' Committee has close cooperation with the Ho Chi Minh University, who through professor van Ha and its rector professor Nguyen Dinh Tuan, is involved in the project. A memorandum of understanding with Luleå Technical University has also been signed. They have also good contacts in the business community and during last year contacts were made between enterprises. This work is supposed to take a step further this year.

#### **Web**

A common website has been launched and to keep it updated is an ongoing work. At [www.pitea.se](http://www.pitea.se) there is also information about the project both in English and in Swedish.

#### *Web meetings*

Web meetings are used. It is a process of learning for all involved and used at least once a month. Our findings are that each meeting has to handle only a few issues, that it is important to use headsets, keep the microphone off when not speaking and that they can't be too long. We can though see that we are improving.

### **10 Sustainability and dissemination**

If we fulfil the aims and objectives for the project there will be an increased knowledge regarding building up a database. The database itself will be used for the climate- and energy plan and for planning in the province. The People's committee and the administration will be the active part in involving the inhabitants and encouraging people to act accordingly to the plan.

There will also lasting cooperation between the university, the business community and the public where rice waste will be used as a resource instead of a big environmental problem.

The work that is done will also be valuable for the work of using rice husk as fuel for production of electricity where the cluster network will be a foundation for the development. In Sweden this work will add new aspects when the climate- and energy plan will be revised in 2014.

#### *Dissemination*

The main tools are the two web sites, the one managed in An Giang and the one in Sweden. Both in An Giang and in Sweden there is information both in the native language and in English.

There have also been articles in the newspapers, radio and newsletter focusing on energy.

Internal there has been presentations for the politicians and staff and it also renders a visit from the Vietnamese ambassador to Piteå. Even FAO wants to be informed as a tool for analyses developed by FAO for rice fields will be used.

### **11. Poverty reduction**

As power reduction not is a quick fix we can't say that we can see a poverty reduction related to the project. In An Giang People's committee and the local authorities want to build a transparency and grass-root democracy, which could be learnt from Sweden and from Piteå. 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.

The first step is to increase knowledge in these areas and that has also been a part in the seminars so far and it will also be the main focus of a training which is planned for 10 officials coming here for almost two weeks in March 2013.

### **12. Reciprocity**

During the whole process so far the reciprocity and respect has been the base for our cooperation. The programs made both in Vietnam and in Piteå have been influenced by both parties and this is also valuable for the ongoing processes where an open communication has permeated the work.

Some reflections from the Vietnamese partners spending one week in Piteå were

- After Policy group also approached the way to manage as well as building development plan sustainably, make sure that developing economy go along with protecting environment.
- Approaching the way to manage E-government to manage local cadres easily and suit to social development trend.
- Learning the way to work on international project, the difference between culture/society berries especially language barrier.
- In addition, An Giang delegation stated new idea to cooperate in straw treatment

- Building connecting network between Solander Science park and An Giang about bioenergy and renewable energy

And a couple from the Swedish project group

- Nice and competent co-partners in Vietnam
- Starting to tune into their English
- I am happy to have one counterpart in Vietnam who speaks the same “professional language” as I do.
- It is important that GIS will be an integrated part in the project

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.

### **13. Environmental impact.**

The objects have two direct dimensions; support for production of electricity and improvement of the environment as rice waste in the long run can be used as a resource instead of waste, polluting air, water and soil.

In the project we also have project members working in waste management and here Swedish and Vietnamese experiences can share experiences and knowledge, important for policy making both in Vietnam and in Sweden.

As we have to go by air we in a practical way contribute to increase emissions, but on the other hand we also use modern technology for regular distance meetings. In a longer perspective the result of the project ought to have a positive impact on the environment as waste will be used as resources.

### **14. Gender**

The goal in the project is that at least 30% of the participants are women. In the project groups in Vietnam and in Sweden we have reached that goal. In the MC 4/ 9 are women and in the total project groups 8/16 are women.

Out to the total exchange for the MC and the project there have been 27 tickets issued, 16 for men and 11 for women.

In the staff meetings in An Giang in November 18 men and 10 women participated and on the fieldtrip to Chau Than it were equal men and women and the women were at least as active as the men.

The big challenge will be to involve women in the local work as both politicians and business community mainly consists of men and farmers have so far been represented by men.

Besides that 30 farmers, 10 representatives from the different commune heads and 10 representatives for the business community.

### **15 Climate in cooperation**

*“In our project we have an open communication and aiming for the same goal. All involved in the project have an understanding of the objectives, for our partners and of the responsibilities”*

This became the result and our vision for our project in a session regarding working in international projects.

Already during the inception phase we connected and looked forward to develop the cooperation. All involved in the project are very committed and when there are issues to solve we try to find ways to do it.

Of course there are cultural differences; as cultural differences in structures and mandates. Here I as a project leader can make decisions as long as they are following the project outline but in Vietnam there is a tradition that the official/politician with the highest rank take the decision.

But I think that we have an open communication and a respect for each other experiences and there is a mutual willingness to try to understand each other and the settings we are in. Besides that we have quite fun together.

## **16 Other funders**

Piteå Kommun 50.000 S. Kr

People's Committee An Giang 50.000 S. Kr but VND185 millions. It's equal USD 9,250

## **17 Costs**

### **18: Payment**

### **19. Contribution from our partner**

In An Giang they have set aside the same amount of money for the project as Piteå Kommun. That is equivalent to 50, 000 S. Kr. In An Giang People's Committee has also set aside 1,2 billion VDONG for the cooperation for the coming two years.

The Vietnamese partner has throughout provided the project with necessary venues, transportation, and staff and made all the arrangements in order to make everything smoothly. Their hospitality and their hosting are excellent.

## **22. Continuation**

During this first year new ideas related to the same area has been discussed and it might come a new application in a related area.

## **23. Contact with ICLD**

All in all I must say it has been good, in communication, ways to meet us etc. even if it now and then has taken a bit long before replies were given.