



**Piteå Kommun**



**Piteå - An Giang - Sustainable Municipalities 2013**

## Name of the project:

Piteå and An Giang – Sustainable Municipalities

### 2. Coordinator/project leader

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### 3. Reference number;

2011/0110

### 4. Summary ;

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.

The activities for the year have been according to the plan, even if things have taken more time than expected. The main work for the GIS data base has been done and has been in close collaboration between Piteå and An Giang and during the process An Giang University has been involved in the work. This work is important, both as a tool for future planning and to give basic information for the rice waste to energy plan, a plan that is expected to be approved by the People's committee during 2014.

There has been training activities both in An Giang and in Piteå, related to the GIS data base, increased participation of the local community and in production of information.

Two MC meetings, one in each country has been carried out, but no reference group meetings as the motivation for those has faded out due to different reasons. The University participation has though become even more active during 2013, with the University both in Ho Chi Minh and in An Giang and also with regular contacts with Piteå Municipality.

### 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 would be carried out, if funds were 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 invited 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 of 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 on 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.

## 6. Target groups and participants

The Swedish core group is mainly the same, but the engineer from the sanitation company is on maternity leave. On the Vietnamese side the core group is the same, but there is a wider group, PMU, involved in the cooperation with Sweden.

The Monitoring committee members are still the same on both sides.

The An Giang University has got a more active role during this year and has been involved in the work with the GIS data base and contacts between the University of An Giang and LTU, has also been.

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

*App 1: Project group and MC group*

## 7. Objectives for the Project

The following short term objectives were stated in the proposal.

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

Target groups are farmers, officials, rice mill- rice dry owners, businessmen, members of the Peoples committee and from Universities

Target groups have been involved in development of the project. From the start the core group, but in the process representatives from all mentioned target groups have been involved, in training, as interviewees, interviewers. The results are an embryo for a GIS database, increased awareness and work in Chau Thanh district.

When it comes to training sessions with officials and representatives from Peoples' committee, both men and women have been involved. The challenge is when it comes to the farmers, where most representing farmers are men.

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

During the year 20 people from Vietnam have been trained in Piteå and 91 in An Giang. Of the 91 people who have been in the training sessions about 23% have been women and among those who have been interviewed training sessions Besides that 625 have been interviewed. 557 farmers whereof 68 (12,2%) were women.

- **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.**

A big job has been done related to the need assessment, which has been carried out during the year. It might in a way be hard to make a clear relation between one activity and one target, as they often have ingredients related to more than one short term objective.

### *Questionnaires*

The questionnaires were developed and revised in collaboration between representatives from the two Vietnamese Universities, An Giang and Piteå. Here also the GIS aspects were taken into consideration. The Rural Research and Development Center at An Giang University were responsible for storing information so it can be used in the GIS data base.

### *GIS data base*

The authorities in An Giang want to become a green province and are working hard towards that goal. One important tool is to have a GIS data base. The national government has approved a grant of 1,3 billion VND (about 65 000 US \$) in order to be able to fulfill this step.

So far the server is not purchased but decisions regarding where it should be located, who will have the responsibility for it etc. are taken.

The work done in this project is a start for this specific GIS data base and in order to have it running more things have to be in place but first of all the server.

A GPS group from the Provincial level has collected GPS data in order to be able to map geographic information. The collected information is so far stored in excel sheets and as the information is limited it works, but we can foresee problems when they add more information from more districts into the data base. The information given in the questionnaires can today give the answers of today's- situation for the rice- to energy plan for Chau Thanh district.

### *Potentials in rice husk*

Linked to this project tests have been done at Energitekniskt centrum ETC, in Piteå. This test, financed by Swedish Energy Agency, SEA, indicates that the potentials for rice husk as fuel in a gasifier is almost the same as bi- products from the forestry.

One aim with the survey in Chau Thanh is to picture the situation, regarding area for production, volumes of production, rice waste, rice husk, use of fertilizers and pesticides etc. and the potentials for rice husk to be used for electricity production. Research studies of value for the area have been done in An Giang.

The analyzes will be based on these 625 interviews and is considered to be reliable as a momenta description of the situation in Chau Thanh district

### *Tool for analyzes*

For calculating the carbon balance including emissions of greenhouse gas, GHG, from rice production a "tool" developed by FAO, is also introduced. This can be used for calculations showing the impact on the climate as well as it is a great tool where you can see how change in use of fertilizers and pesticides will affect climate as well as the production. This area might be one important area for extension of this project and used in adult education as a decrease of chemicals and emissions of GHG would be desirable considering both the climate change and the quality of rice.

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

Universities in HCM city, An Giang and Luleå, different departments, local authorities, and business have and are involved.

In June there was a seminar regarding Triple Helix, conducted by the former C.O for Smurfit Kappa

## 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

A plan for the development of the program was agreed on in November 2013

### Activities 2013

Time 2013	Activity	Responsibility for activity	Expected outcome	Status
Every Month Except July	Follow up meeting	Piteå An Giang	Development program	-----
	<b>Regular contacts via mail, web, and now video</b>		<b>To follow the process, clear out question marks, address specific issues</b>	<b>ongoing</b>
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	<b>March;</b> 10 to Piteå for training (app. X) <b>June;</b> Triple Helix seminar linked to SEA training MC meeting
During the year	Exchange in an area related to the plan	An Giang	Participating in relevant activities	<b>Feb,</b> work group meeting- outline rice to energy plan <b>Sep.</b> meeting HCMC+ training “writing for the web” in Long

				Xuyen <b>Oct.</b> part. In final seminar SEA+planning together with SEA+ Växjö
Jan- June	Prepare “rice waste to energy program”	An Giang	Material to process in the different target groups	<b>March</b> ; test of questionnaires 70 people <b>July</b> ; training of 21 officials Interviews of 625 from the targetgroups <b>Nov.</b> feedback in Chau Than to the target groups
March - September		An Giang Piteå		Traing/seminars in booth countries
March - December	Training for targeted groups in An Giang	An Giang	Training course on rice waste to energy	An Giang budget Project budget took some costs
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
<b>Time 2014</b>	<b>Activity</b>	<b>Responsibility for activity</b>	<b>Expected outcome</b>	<b>Budget</b>
Every Month Except July	Follow up meeting	Piteå An Giang	Development	-----
February to July	Produced	Piteå/An	CEP, GIS	20 000

	material	Giang	Materials, printing	
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

*Comments to the activities of the year;*

Evaluators; In the project proposal it was said that we should have one evaluator from each country. In November the Swedish evaluator Carina Ingesson participated in the group which went to An Giang in November. She, together with her Vietnamese counterpart Dr. Binh T. Ho from An Giang University met to prepare an outline for the evaluation.

Interpreter; Both for the training in September and during the visit in November we had hired an interpreter, which was really good. During the visit in November when many parallel activities went on we decided from day to day where he was most needed.

## *Piteå*

During 2013 in total 20 people, 14 men and 7 women, from AN Giang/HCM has been to Piteå for training and MC meeting, one also combined with a training course arranged by SEA. In March ten people participated in a one week training course in local democracy and transparency and in June there was a MC meeting and a workshop regarding Triple Helix.

In June there was a seminary day with a different stake holders, as well as a group from An Giang. One group was focusing on municipal partnership where Jesserina Florens from Växjö and I headed that part, while another part were more focusing on technical issues.

During the year 13 tickets (8 people, 4 men and 4 women) from Piteå have been to Vietnam for MC meeting, conducting training, work groups meetings and participation in a conference arranged by SEA in HCM and planning days where SEA, Växjö and Piteå were planning for the future together with An Giang.

## *Activites in An Giang*

### *Last weekend of vacation working together*

The last weekend of the vacation period in Vietnam, professor Ha, Mrs Xuan, Mr Thu, professor Tuan from the University of Ho Chi Minh and Mrs Truyen spent 3 days together with Åsa Wikman, Bo Wiberg and Gerd Sävenstedt to make an outline for the rice waste to energy plan and start to do a plan for the work.

### *70 people trained*

In March, professor Ha and Mrs Xuan made a test of the revised questionnaires with 70 people from An Giang, 64 men and 6 women. From that test the questionnaires were revised a second time.

### *Training class in Chau Than*

Between July 5- 12, a training class for 21 officials, 14 men and 7 women, on agriculture waste combined with training in how to interview in order to collect GIS data in Chau Thanh.

### *625 interviews*

625 persons from the target groups were interviewed after the training, 557 men and 68 women. The main part of the interviewees has been farmers, but also owners of rice mills and rice dryers have been interviewed as well as officials. In connection to the interviews there has been information about the project and talks about environmental issues.

Piteå – An Giang- HCMC University have together developed questionnaires which have been tested and revised. All questionnaires were sent to Rural Research and Development Center – An Giang University to record data while a GPS group carried out to collect GPS data. This GPS data also was sent to the recording unit to combine with GIS data. (see app. X)

### *Training classes in communication*

In September two of the members from the project group in Piteå, Lars-Olof Persson and Gerd Sävenstedt conducted a two- days training course “writing for the web” where in total 12 people, 8 men and 4 women, participated, from PMU, the university and the IT-department. (app x) Besides that there was a workgroup/planning meeting in HCMC where 7 people, 3 men and 4 women, involved in the project participated.

### *An Giang, SEA, Växjö and Piteå together*

In the end of October Swedish energy Agency closed their project in An Giang and invited to a big closing day where different project open for investment were presented, as well as the cooperation between An Giang and- Växjö and An Giang –Piteå. In connection to that open closing seminar we also set aside time for An Giang and the Swedish partners to address and have discussions regarding future cooperation.

As a conclusion we can say that we have done what we said we were going to do but realize there is a lot that still needs to be done before we have reached our short term objectives for the project. It is of great importance that we will follow the plan we have done for 2014.

## **10 Sustainability and dissemination**

If we fulfil the aims and objectives for the project there will be an increased knowledge regarding building 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.

The aim is that it will be a lasting cooperation between the university, the business community and the citizens, in order to find ways to use rice waste as a resource instead of creating big environmental problems.

The work will also become a valuable brick in 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.

This was what we said last year, and is still valid. What has happened is that An Giang are striving towards becoming a green province and this project has become one “smaller part” in a bigger patch work but as important as before. Anyhow it means that these issues regarding sustainability and climate change has a bigger acceptance and relevance among politicians, officials and citizens.

Dissemination

Both in Vietnam and in Sweden there is information about the project on the web, both in English and in Swedish. The main updated information on the Swedish/English page are the slide shows that you can find both in Swedish and in English.

In September we conducted a 2-days workshop “writing for the Web” in Long Xuyen, where people from the information and communication department, PMU and the University participated. The aim was to increase information about the project on the websites and make information more accessible. They report from An Giang that they have improved their writing method and now try to apply what they have learnt on the training.

At the Piteå/ Swedish page there has besides the 4 slide shows from activities during the year, been 10 blog posts related to the cooperation. When the Vietnamese ambassador was here in February there was an interview on the radio regarding our cooperation as well as an article about the cooperation in the local newspaper. There has also been an article in the staff magazine.

The An Giang site has followed activities of the project and been writing a lot of new during the years.

## **11. Poverty reduction**

### **11. Poverty reduction**

We have to say what we said last year. Poverty reduction is not a quick fix and we can't say that we can see a poverty reduction related to the project at this moment. What we can see is that farmers are interested in participating at the meetings arranged in Chau Than, that An Giang People's committee have started to make structures that can enable development work, that the university, members from the business communities and the officials have started to work together in this area. We we can see is that if these initiatives work well it can lay a foundation for development work and in the long run contribute to a decrease of poverty.

## **12. Reciprocity**

I think the reciprocity is significant for our cooperation. What has contributed is that the core groups on each side has been the same from the beginning, which also means that when new members come on board they benefit from the trust, open and respect that significant for the cooperation, is there. 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.

Reflections from the past year;

- Everything takes time, more time than anticipated

- In Vietnam they have set aside more resources for the coordination of the work and cooperation with Sweden. A new unit, PMU, is in place
- The scope of the project is an important component of the work towards a sustainable society
- The awareness has increased
- Many people are really committed and more are involved
- As officials in Vietnam and in Sweden we live in different structures which sometimes can cause confusion
- Language barriers are there but a number of those involved in the project are taking English classes in order to further improve their skills
- We meet in an open and friendly atmosphere
- We have started to see spin-off affects, as students from Sweden try to find means to do exam work in Vietnam in areas related to the project.
- We have not spent the whole grant. 131.000 were transferred from year 1 and part of the previous requisition, related to the training for 10 people in March 2013. The people who have been here have stayed in hostels, which has decreased the costs and we have also stayed at low costs hotels when we have been there.
- Informal network among the Swedish partners.

### 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 have opportunities to 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 for the project is that at least 30% of the participants are women. When are you a participant? When you are a project member or involved in an activity carried out by project members.

If we look at the exchange between An Giang and Piteå and tickets issued and paid by the project 33% of those who came from Vietnam to Piteå are women and in the the other direction it was 50%.

For the activities this year

Workgroupmeeting in February 3 days in Vietnam 62,5% women and 37,5% men.

Training in Piteå in March, participants 30% women and 70 % men

Visit in June

MC meeting and Triple Helix. 10 people in total, 40% women and 60% men. Four paid by the project and the rest by People's committee

Training in An Giang. Out of 91 trained people 23% have been women and of those 625% who have been interviewed a little more than 12 % were women.

When it comes to officials and trainings we are close to 30% but out on the field it is mainly men participating.

## **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 makes 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.

We wrote this in the previous report and it is still valid. I would say that the honey moon has passed, the relations have deepened and now we also can touch issues not always easy to address. We know that we want to broaden and deepen our cooperation further in order to contribute to a development which ordinary people can benefit from.