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### An Giang – Piteå Municipal Partnership program



Piteå

An Giang

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#### Writing outline



#### **RICE WASTE TO ENERGY**

Strategy plan of effective management and utilization of rice biomass for energy production in climate change context for An Giang province to 2030

Increase renewable energy production and energy products

Increase the participation and interest of the whole society

Contribute to the economic growth in a sustainable way for An Giang province as well as Chau Thanh on rice production and processing

#### Strategy plan of effective management and utilization of rice biomass for energy production in climate change context for An Giang province to 2030

	2015 -	2020	2021 - 2030		
Objectives of the Strategy	Châu Thành	An Giang	Châu Thành	An Giang	
Area of straw collected	40%	20%	60%	40%	
High-tech rice planted with 1 Must 5 Reduction method (ha)	5.090	80.257	5.090	101.440	
Ratio of rice husk to be collected for rice husk power production or other energy products	50%	30%	75%	50%	
The ratio of straw collected for energy production	0%	0%	30%	15%	
CO2 reduction (ton/year)	21.848	105.305	33.601	300.888	

### Implementing progress of period 1: from 2015 to 2020

Objectives of the Strategy	Indica	tors	Results 2018		
<b>Objectives of the Strategy</b>	Châu Thành	An Giang	Châu Thành	An Giang	
Area of straw collected	40%	20%	21%	24%	
High-tech rice planted with 1 Must 5 Reduction method (ha)	5.090	80.257	47.253	297.503	
Ratio of rice husk to be collected for rice husk power production or other energy products		30%	No data	<b>69% (*)</b>	
The ratio of straw collected for energy production	0%	0%	No data	No data	
CO2 reduction (ton/year)	21.848	105.305	21.225,5	318.901,4	

(\*) 552.140 tonnes rice husk used as data from Department of Industry and Trade in 2016

### Implementing progress of period 1: from 2015 to 2020

	CO2 reduction	on (ton/year)	% CO2 redu	ced to 2018
Indicators	Châu Thành	An Giang	Châu Thành	An Giang
Straw collected	893,0	(180.929,3)	(0,39)	10,03
Fertilizer	(18.559,2)	(113.868,0)	57,75	45,84
Pesticides	(1.619,4)	(9.941,6)	57,75	45,85
Processing rice	(1.859,5)	(14.162,0)	5,39	5,29
Transportation of rice	(80,5)	(0,6)	5,38	0,00
total	(21.225,5)	(318.901,4)	7,03	13,55

Strategy plan of effective management and utilization of rice biomass for energy production in climate change context for An Giang province to 2030

	2015 – 2020 (tCO2 reduced)	2021 - 2030 (tCO2 reduced)	2018 (tCO2 reduced)	CO2 reduction compared to period 1	CO2 reduction compared to period 2
Châu Thành	21.848	33.601	21.225,5	97%	63%
An Giang	105.305	300.888	318.901,4	303%	106%

# The project "Implementation of action plan for a sustainable An Giang province"





1. Support implementation of action plan	When	Result	Comments
Establish the executing board and steering committee of action plan implementation	31 Nov.		Total: 32, 17 men and 15 woman
Organize workshops for kick up	23 March		33 people
Organize the training workshop on action plan implementation skills for key department participants and politicians	22 June		20 people
Annual meetings for experience exchange in Sweden on project	Aug.		3 men, 2 women
Annual meetings for experience exchange in An Giang	March	$\checkmark$	3 men, 2 women
Form communication programs	2018		Website; Brochures; Video clip
Meeting among executing board members and key departments	March July		33 people
Supporting materials for demonstration programs (forage, mushroom, collecting rice straw) action plan	2018		Mushroom: 20; forage: 20; straw collecting: 20
Technical training for two models of growing mushrooms, straw incubation with urea for animal feed	Dec.		* Mushroom: 48; forage: 44

2. Support establishment of cluster network between An Giang BioTechCenter and Piteå	When	Result	Comments
Establish the target groups	April		Farmers; Enterpreneurs Politicans and authorities; Technicans Universities and research centers; Students
Organize the study tours to Biotech Center in An Giang	June Dec.		34 pp: 25 men, 9 women
Organize distance meetings with Grans Competence Center/ Pitea Schools	2018	X	Established young group and had internal meeting in An Giang (online meetings moved to 2019)
Annual meetings for experience exchange in Sweden	August	$\checkmark$	7 people

3. Support activity's for rice waste to energy	All activities will be carried out in 2019			
4. Supporting activities	When	Result	Comments	
Annual meeting of the Steering group in Pitea	15 Aug.		2 women	
Annual meeting of the Steering group in An Giang	23 march	$\checkmark$	3 men, 2 women	



1. Support implementation of action plan	When	Organizer	Indicators	Progress	Problems
Organize annual workshop in An Giang for sharing experience and progress review for action plan implementation	July	Poroject Managemnet Unit in An Giang (PMU)	≥ 15 participants	Planning	
Annual meetings for experience exchange in Piteå	June	Pitea – PMU	6 people	Carrying out	
Annual experience exchange in An Giang	March	Pitea – PMU	MC and PG members		
	19-25 Oct.	Pitea – PMU	Report	Planning	
Communication programs (brochures, video clips, website, etc) – PMU, district Radio station, IT center	2019	Brochures: PMU Clips: Mr. Dinh Website: It center	Website; Borchures; Video clip; Social media	Carrying out	
02 meeting among Steering committee members and key departments in An Giang	March November	PMU, MC's members	2 meetings	01 ⊠ 01	
Supporting materials for demonstration programs in district:s: Incubating rice straw; Growing mushroom; Collecting rice straw	June – December	PMU-Chau Thanh	20 pp/ program x 3	Planning	
Technical trainings for 2 programs of growing mushroom and incubating rice straw with urea	June – December	PMU-Chau Thanh	2 classes/ programs x 2 programs	Planning	
Wrap-up workshop for demonstration programs in districts	June – December	PMU-Chau Thanh	01 workshop	Planning	

2. Support establishment of cluster network between An Giang BioTech Center - Piteå	When	Organizer	Indicators	Progress	Problems
Organize 02 study tours to Biotechnology Center	Aug Dec	PMU	02 study tours/year	01⊠ 01 in Aug.	
Organize distance meetings with Grans Competence Center / Piteå's Students *focus on exchange of experience in local democracy, culture among the young generation: Online meetings through Skype/Zoom/GoToMeeting	2019	PMU-Mr. Kha – Mr. Bo	At least 01 meeting/year	Planning	
Organize 01 idea innovation competition: Organized by Science and Technology Department	2019	Mr. Kha	01 competition/year	Carrying out	
Organize 01 workshop with focus in establish network between entrepreneurs in Piteå and An Giang organized by Piteå science park (PSP)	Oct.	Helena	01 workshop (At least 04 pp from each side)	Planning	
Organize 01 training on building of capacity on entrepreneurship, start up and commercialize products	Oct.	Helena	01 training	Planning	

3. Support activity's for rice waste to energy	When	Organizer	Indicators	Progress	Problems
Support planning study tour to China or another country focus on technology, policy and marketing experience exchange * Officials from An Giang: PMU, Industry and Trade Department, Mrs. Nguyễn Thị Vân Hà, Science and Technology Department; and invite enterprises (self-financing)	2019	PMU, MC's members	01 study visit/year	Planning	
Support planning of 02 workshop to introduce the updated information on the rice value chains and energy technologies:01 internal seminar and 01 international seminar	After study tour in China		02 workshop: 01 internal and 01 international	01⊠ 01 Planning	
Organize the expertise meetings for the knowledge exchange and sharpen the plan for a small scale pilot plant	2019		Expertise meetings (3 people/meeting)	Planning	

4. Supporting activities	When	Organizer	Indicators	Progress	Problems
Project evaluation	2019	Mr. Göran Dahlén + Mrs. Phạm Ngọc Xuân	Evaluation report	Writing	
Annual Steering group meeting in Piteå	June	PMU, MC's members	01 meeting	Carrying out	
Annual Steering group meeting in An Giang	March	PMU, MC's members	01 meeting	V	

## **Project impacts since 2012**



### **Capacity building**

Trainings for farmers, enterprises, officials Knowledge and experience exchanges Study tours workshop

#### Sustainable development

Approval of Stratergy and action plan to 2030 Supporting for projects in fileds of climate change

Learning and sharing knowledge from successful models and experts

Pursue the goal of improving rice value chain and sustainable rice communities

### **Economic profits**

2018	An Giang	Income of farmers (VND)
Area of straw collected	150.000 ha	75.000.000.000
Collected rice husk	799.418,60 tons	959.302.320

# Changes in rice communities RICE HUSK

### 2012

### Now



#### Dumped into rivers, canals









**Briquettes and pellets** 



Handicraft products

Silica powder

# Changes in rice communities RICE STRAW

### 2012

### Now





### **RAISING AWARENESS AND BUILDING CAPACITY**

### \* Managers at all levels:

- Enhanced democracy and transparency on planing and management
- Learnt and applied new ideas on management of bio-energy and renewable energy in An Giang (BioTech center)
- Changed the way to approach farmers and involved them in the projects

#### Experience exchange in Piteå 9/2012



#### Experience exchange in Piteå 3/2013 and 6/2013



#### Experience exchange in Piteå 5/2014



#### Experience exchange in Piteå 5/2015



#### Experience exchange in Piteå 8/2016



#### Experience exchange in India 9/2016



#### Silica demonstration plant





#### Experience exchange in Piteå 8/2017



#### Experience exchange in Piteå 8/2018



#### ICLD workshop and training in Indonesia 12/2018



### **Enterprises:**

- + How to build plan for ricehusk power plant
- + Background knowlegde to apply suitable technology models
- + Be aware of value of agri-byproducts
- + Actively exploring and searching the market for products from rice husk and straw



# Farmers

- + Be aware roles of Agricultural sector and farmers
- + Changed point of view: husk, straw and ash are not WASTES
- + Changed cultivation method
- + Applied demonstration programs for ultilizing rice straw
- + Contributed ideas for the stratergy and the action plan



### What we have learnt from Pitea's partner

- How to plan a stratergy as well as building up activities plan for the action plan
- How to manage and following up targets
- How to improve grass root democracy and transparency
- Ideas and lessons for management at different sectors (agriculture, forestry, environment, culture, tourism, business, etc)
- Culture understadingTRUST and FRIENDSHIP



### An Giang – Piteå Municipal Partnership Program 2012 -2020

# **Future cooperation**



### Future cooperation between An Giang and Piteå New proposals focus on young generation

- Objectives: Improving young people's engagement in society and developing the communication with citizens
- □ **Project life:** 1 year broadening and developing
- **Activities:**
- Building capacity on arranging and developing their own projects/plans
- Dialogue for sharing knowledge, experience and culture between young generation in An Giang and Piteå
- Preparing for new application for a three-year project 2021 2023



### 1 year broadening and developing

Objectives	Activities	Indicators
Building capacity on arranging and developing their own projects/plans	Training in An Giang and in Sweden in order to support for project plans	01 Training 03 project plans
Dialogue for sharing knowledge, experience and culture between young generation in An Giang and Piteå	Study visits Online meetings Workshops Website	02 study visits in Vietnam At least 01 online meeting 01 workshop
Preparing for the application for a three-year project 2021 – 2023	Writing new proposal	01 proposal

# Thank you for listening!