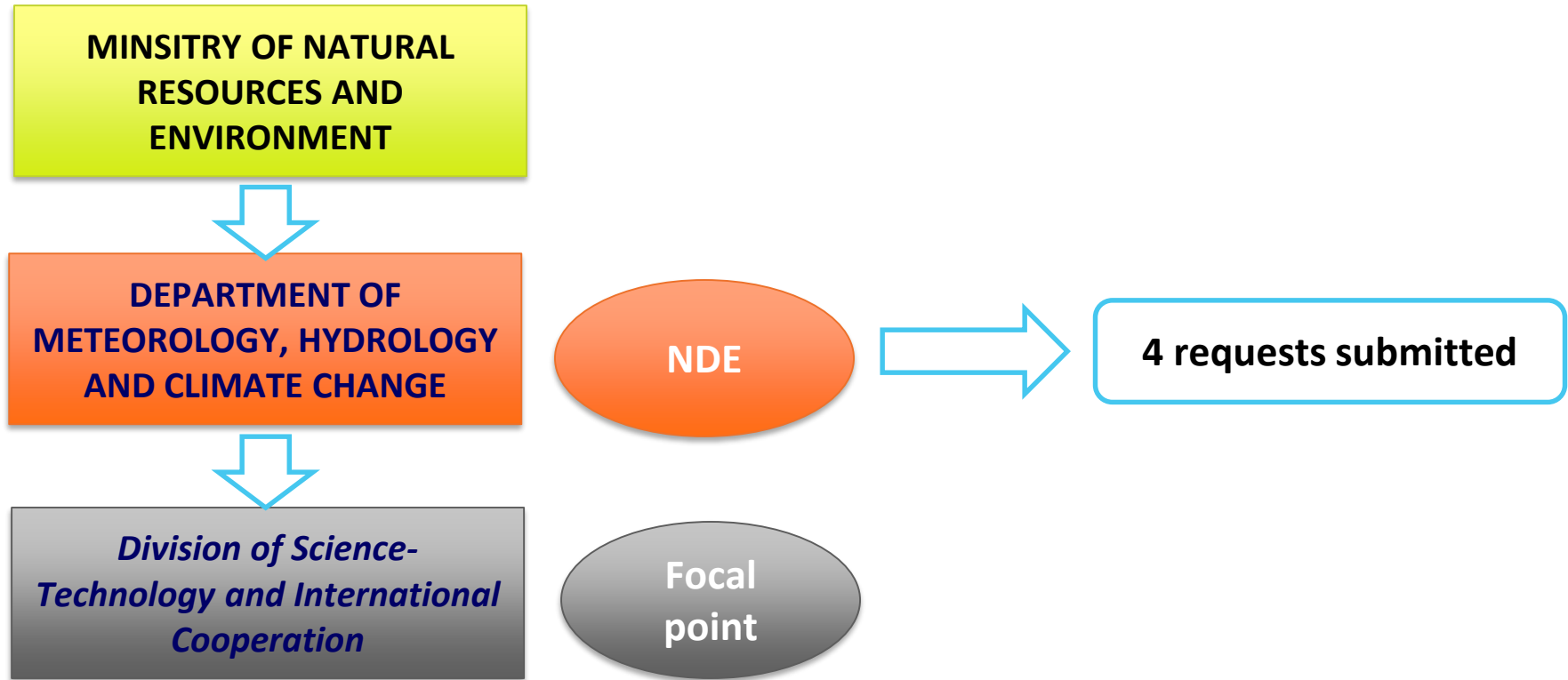




## Koronivia workshop - COP24 CTCN Technical Assistance in Vietnam

Bio-waste minimization and valorisation  
for low carbon production in the rice  
sector

Katarina Barunica, CTCN



# VIETNAM TNA - Mitigation

No.	Sector	Technology
1	Energy	Wind power
		Energy-saving compact fluorescent lamps
		Large-scale Heat and Power (Co-generation)
		Bus rapid transit
2	Agriculture	Biogas
		Nutrition improvement through controlled fodder supplements
		Wet and dry irrigation in rice cultivation
3	LULUCF	Sustainable forest management
		Afforestation and reforestation
		Rehabilitation of mangrove

# VIETNAM TNA - Adaptation

No.	Sector	Technology
1	Agriculture	Plant Genetic Breeding
		Rice to upland grain
		Triple-cropping to double-cropping + shrimp/fish/poultry crop
2	LULUCF	Plant genetics
		Agro-forestry
3	Water resources	Rooftop rainfall haversting for household
		Haversting runoff water
		Integrated Water Basin Management
4	Coastal Zone Management	Sea-dyke
		Coastal wetland rehabilitation

# Bio-waste minimization and valorisation for low carbon production in rice sector

- ✦ Rice husk has high potential to valorize in stead of dumping or burning.
- ✦ 30% of rice husk currently used as fuel for drying paddy and other product drying process; 50% can be potentially converted into thermal energy (pellet and briquette).



*Rice husk pellet used for boiler*



*Rice husk briquette used for boiler*

# CTCN Technical Assistance: Development of Request

- Develop business plan for rice husk converted product (pellet, briquette...)
- Research, test and select suitable technologies for:
  - Drying paddy (burner with technologies such as pyrolysis, gasification...)
  - Production of pellet, briquette...
  - Support companies to access to financing options, donors.
- Proposal developed for Song Hau and An Giang Food (under Vietnam Southern Food Corporation – VinaFood 2).



## ★ Song Hau Food Company

- ★ Company has 3 processing factories with total capacity of 200,000 ton/year.
- ★ Material includes: Brown rice 90%, fresh paddy 10%.
- ★ According to the plan, company will invest a system of rice husk-based dryers to ensure at least 50% of paddy dried by themselves by 2020.



*Rice husk-based tower-dryer system of Song Hau Food Company*



*Rice husk- based bed – dryer of a private company in Thoi Lai*



# Proposal implementation plan

★ **Activity 1:**

- ★ Development of decision tool/guideline in selection of suitable technology and business model.
- ★ Tool/guideline includes technical, social and sustainable indicators

★ **Activity 2:** Identification and analysis of potential business model (on-site, off-site, alternative).

★ **Activity 3:** Using tool/guideline to perform feasibility of potential business model at selected enterprise.

★ **Activity 4:** Overview of access to financing options.



- ✦ Duration: 12 months (From 2016)
- ✦ Expected benefits:
  - ✦ Effective valorization of rice husk
    - ✦ Song Hau: 32,000 ton/year
    - ✦ An Giang: 18,000 ton/year
  - ✦ Greenhouse gas emission reduction
    - ✦ Song Hau: 36,000 ton CO<sub>2</sub>/year
    - ✦ An Giang: 10,700 ton CO<sub>2</sub>/year
  - ✦ Better original tracibility when exporting rice to other coutries.
  - ✦ Better quality and higher income, higher competitiveness in the market, especially international market.
  - ✦ Increase of activeness of farmers and enterprises.
  - ✦ High potential to scale up (for rice sector and other sector related to energy demand).



# ***THANK YOU!***

