

Livestock Environment Standard Sector

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Bureau of Livestock Standard and Certification
Department of Livestock Development

Our Mission

- Supervision in Livestock environmental aspect (farm environment/waste mng.)
- Research and Develop of Livestock environmental standardization.
- Transfer knowledge and technology of livestock environment.

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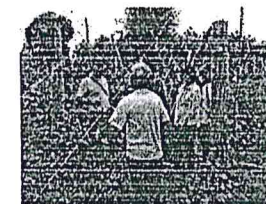
Projects / Activities

- Environmental friendly pig farm promotion project
- Biogas project (Green city)
- Zero Waste (waste recycle and utilization)
- Response to any complaint (waste water discharge/odor)
- Plan for monitoring and sampling waste water from predisposing areas.
- GHG inventory

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Environmental friendly pig farm promotion project

- Since 2007 up to now, 100 farms per year
- Reduce/reuse/recycle waste and water.
- Scoring (1-5 Stars)
- Give an advice and Certification



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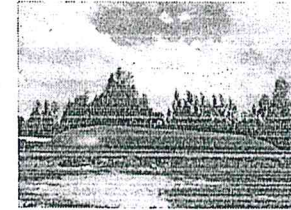
Biogas project (Green city)

- Give a support for biogas construction in pig farm.
- Provide a subsidy 500 baht/pig (maximum 1,400 heads)
- Since 2014-2017 (90 farm in 25 provinces)

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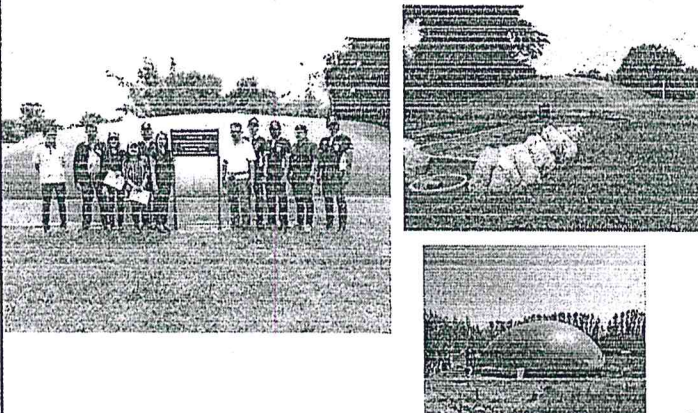
Biogas project (Green city)

- Encourage good waste management practice and utilization in agricultural field.
(Rice/Sugarcane/maize/Plam tree ect.)
- Reduce environmental impact to farm surroundings.



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Biogas project (Green city)



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Thailand Public Service Awards ★

- Project : Agricultural partnership platform for reducing production cost and environmental impact
"zero waste"
 - Excellent /Outstanding integration service Awards (2013)
 - Continuous service quality development Awards (2016)

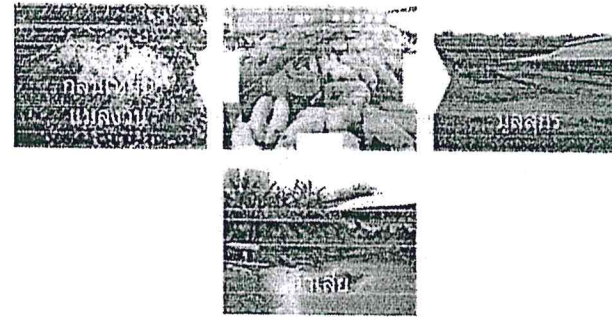
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Thailand Public Service Awards ★



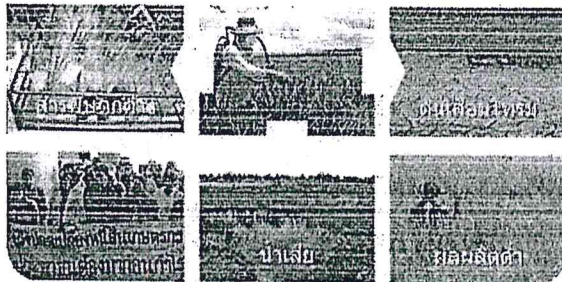
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ผลกระทบบางส่วนจากฟาร์มสุกร



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ผลกระทบจากการทำนาที่ใช้ปุ๋ยและสารเคมี อย่างไรให้เหมาะสม

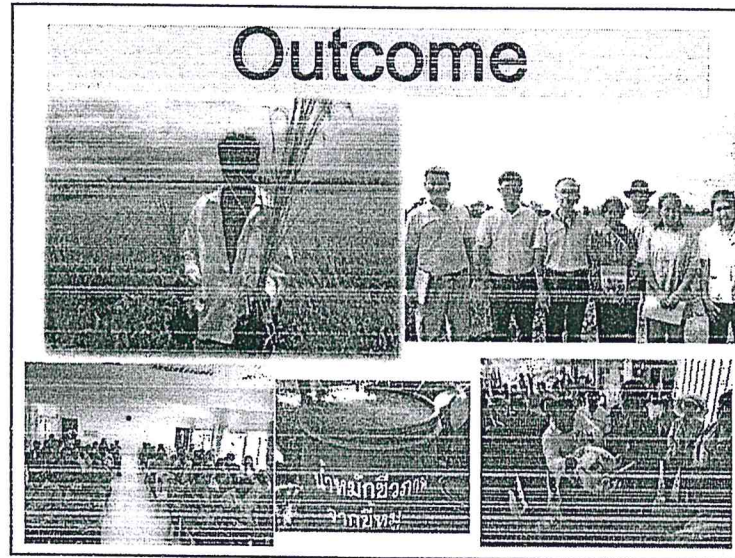


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Concept

- Agricultural alliance (Farmer-DLD -Dpt.of land development-Ministry of national resource and envi.-Kasetsart university) aim to reduce production cost and environmental impact.
- Conference : Farmer - Pig farm
- Demonstration : How to apply manure and waste water effectively in rice field. (Chai-nat province)
- Problem resulted from waste water and odor are solved.

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Conclusion

- Increase productivity
- Decrease chemical fertilizer usage
- Improve soil fertility
- Reduce waste and odor
- Renewable energy
 - cooking
 - electrical energy

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Sustainable agriculture

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Environmental Regulation & Law control

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1. Public Health Act B.E. 2535

- Public nuisance ; odor, waste water, noise, and any other nuisance, etc.
- Odor unit standard ; < 30 odor unit

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2. National Environmental Quality

Act BE 2535

- Pig farm is the source of polluted point to be control
- Size of pig farms
 Large scale : Fattening pig > 5,000
 Medium scale : Fattening pig 501 – 5000
 Small scale : Fattening pig 50 – 500
- Standard of effluent of pig farm

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Parameter	Unit	Large scale	Medium scale and Small scale
pH	-	5.5 – 9	5.5 – 9
BOD	mg/L	60	100
COD	mg/L	300	400
SS	mg/L	150	200
TKN	mg/L	120	200

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Permission permit of pig farm settlement

- Authority ; Local administration organization
 eg; TAO(Tam-Bon administration organization); local authority of permit based on various acts and public hearing
- Local act ; issued by local administration office, based on Environmental act, Public Health Act, etc.

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DLD experiences

- DLD; 2012 to propose COP of pig farm settlement to be considered by TAO, location and farm area to be considered.
- Environmental friendly pig farm promotion project; since 2007 up to now, 100 farms per year
- Livestock Waste Management in East Asia project; 2006-2012, 3 countries(China, Vietnam, Thailand), GEF, world bank, FAO
- CDM project; 2007, carbon credit, world bank support
- Green Agriculture Project; 2014
- Biogas and waste water treatment project; 2015-2017

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DLD experiences

- Carbon Foot Print; data base research
- Monitor pig farm/slaughter house; effluent discharged(pig farmer must report treatment system operation every month to Provincial Environment office)
- Promote Zero-waste project; 2012, apply waste to crop farm,(varieties of crop)

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Challenges

- Incentives; subsidies, loans, grant, support
- Technical; operation of system, gas engine knocked down from H₂S, etc.
- Cost of live pig at farm is uncertain while production cost is increased.
- CDM project in our own country; Carbon credit selling to whom, hotel association ?
- Green economy; tax

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Thank you

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