

Designing Low Carbon Farming and Challenges for Its Implementation

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Low Carbon Asia Research Network (LoCARNet) First Annual Meeting-
Mobilising Wisdom for a Low-carbon Asia

16-17 October 2012

Novotel Bangkok on Siam Square, Bangkok, Thailand

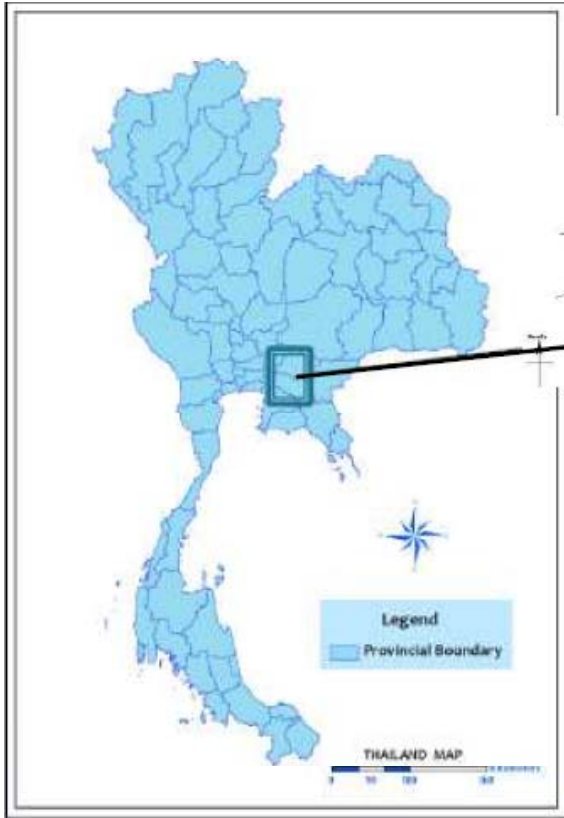


Thailand's Low Carbon City Approach: A pilot project at Muangklang Municipality



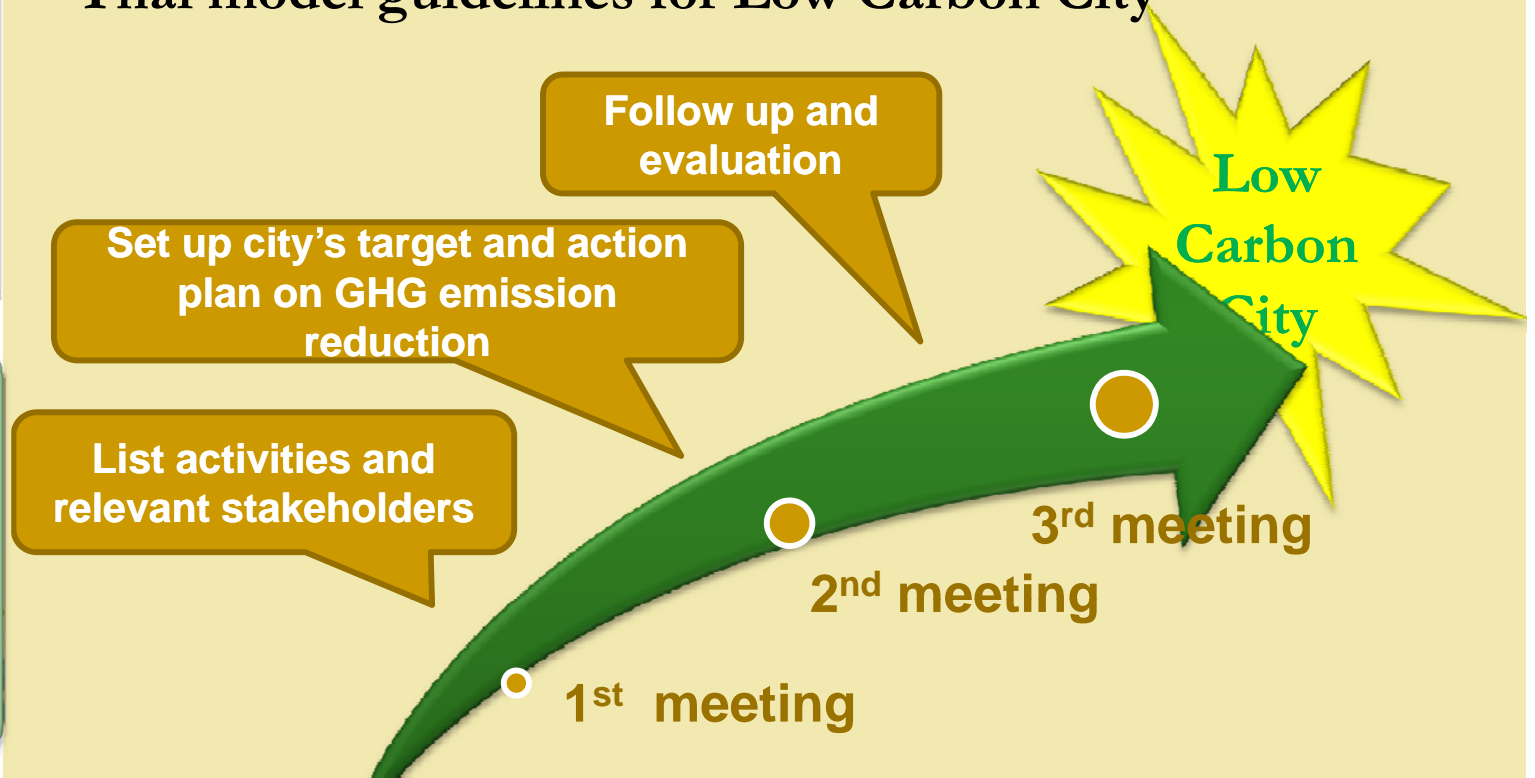
Muangklang Municipality

is a small-size municipality located in Rayong province



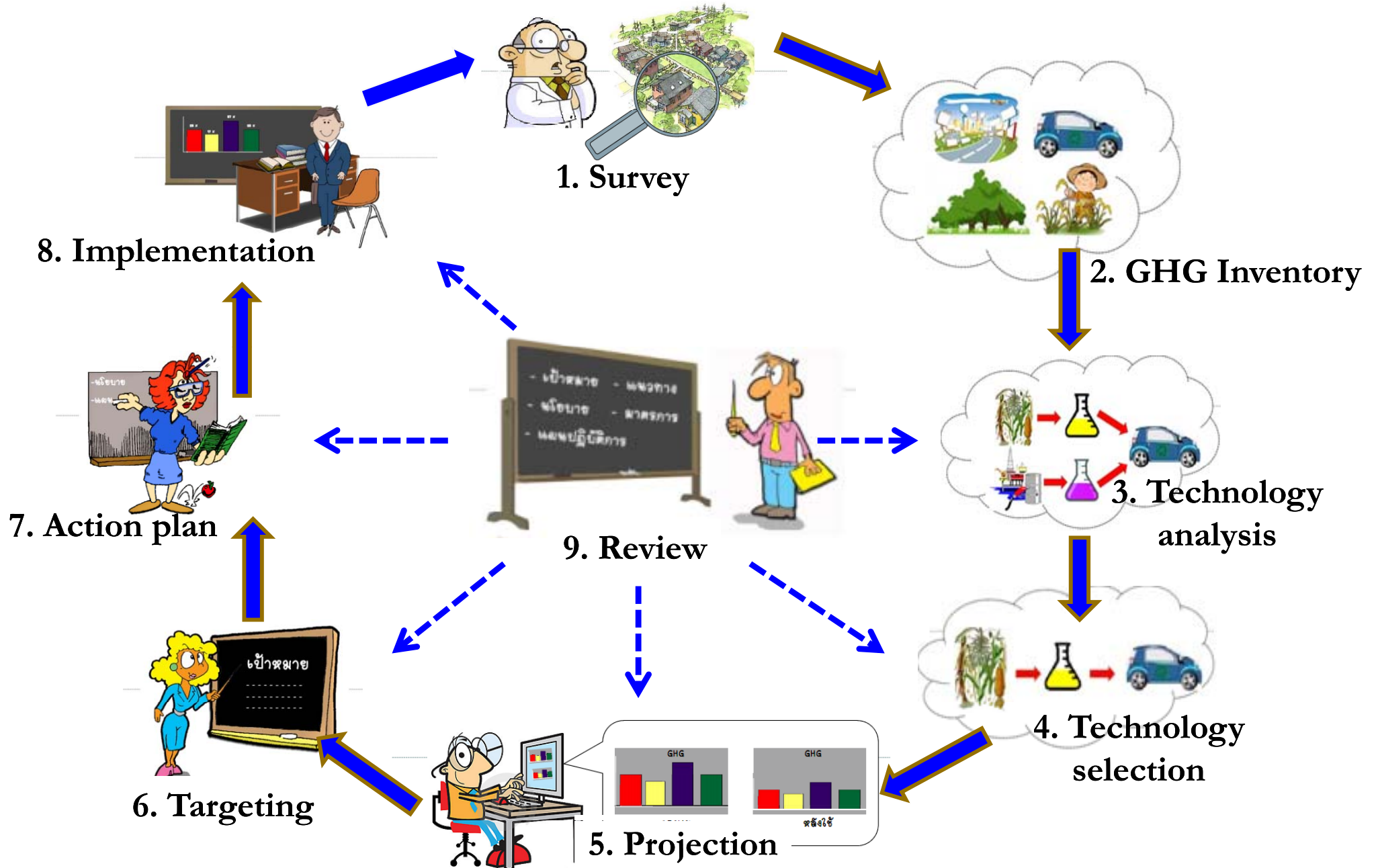
Objective : Develop Muangklang Municipality as a pioneer small-size municipality towards low carbon city approach, and enhance the city's good practice as a replication in other cities

Thai model guidelines for Low Carbon City



City area : 14.5 km²
Population : 17,197
Households : 3,309
Communities : 13

Nine-step approach to Thai Low Carbon City



AFOLU - Emission by Sources

Livestock



Manure Management



Rice Cultivation



Agricultural Burning



Agricultural Soil



AFOLU - Removal by Sink

Forest



Green Space



Planted Woody Crop – Rubber or Orchard



Data Collection

Primary Data



Secondary Data

ลักษณะการใช้พื้นที่เทศบาลตำบลเมืองแกลง

Land Use Master Plan

การใช้พื้นที่

- นาข้าว
- มั่นสำปะหลัง
- ทุเรียน
- ยางพารา
- นาทุ่ง
- ป่าไม้
- แหล่งชุมชน
- เบ็ดเตล็ด
- แหล่งน้ำ



0 195390 780 1,170 1,560 Unknown Units

ข้อมูลพื้นที่ปลูกพืชเศรษฐกิจของอำเภอแกลง ปี 2551/2552

ตัดยอด 31 มกราคม 2552

ตำบล	พื้นที่ถือครอง (ไร่)	พื้นที่การเกษตร (ไร่)	ครอบครัวยุทธศาสตร์	ข้าวเปลือก (ไร่)	สับปะรด (ไร่)	มันสำปะหลัง (ไร่)	อ้อย (ไร่)	ทุเรียน (ไร่)	มะม่วง (ไร่)	เงาะ (ไร่)	ขนุน (ไร่)	มังคุด (ไร่)	มะพร้าว (ไร่)	ยางพารา (ไร่)	ป่าเสื่อมโทรม (ไร่)
คลองหิน	52,255	39,348	1,035	201	117	2355	-	4,527	298	1,491	305	537	18	25,556.00	40
พังราย	23,352	13,466	700	2,670	-	450	-	563	690	80	80	85	175	830.00	120
คลองปูน	14,645	14,323	950	1,560	-	-	-	-	-	-	-	140	46	5135	-
ป่าท่าประหลาด	12,320	8,076	827	380	-	-	-	-	676	-	-	-	370	-	-
ทุ่งควายกิน	54,573	48,370	1,591	270	338	447	-	5,325	490	3,233	42	370	581	22,725.00	100
ทางควีน	47,582	34,156	766	380	320	200	-	4930	508	77	260	305	20	18,178.00	20
บ้านหา	46,575	44,113	1,399	480	1246	4010	-	2330	138	206	260	500	111	29,249.00	-
กรงหมอบ	55,031	52,231	1,224	560	1400	1830	30	6,131	151	53	179	340	49	33,566.00	800
วังหรี	43,307	36,826	1,099	250	280	305	-	5,718	0	156	306	406	5	25,725.00	116
เนินซ้อ	26,171	11,705	588	60	17	-	-	1970	248	48	29	176	126	8657	-
ห้วยยาง	23,500	19,689	507	-	88	25	-	3446	71	268	83	662	219	12,254.00	-
สองสึง	31,058	26,638	932	-	-	120	-	5,198	85	67	20	350	105	20,435.00	69
ซากโดน	23,418	22,328	840	-	-	-	-	2,591	595	95	190	1,039	295	13,680.00	-
ซากพง	35,017	21,810	703	100	100	1,315	-	2100	264	620	20	800	800	15400	-
กร้า	13,325	10,800	645	100	-	232	-	1276	208	115	90	230	674	2054	-

AFOLU - Emission by Sources

Livestock



Manure Management



Rice Cultivation



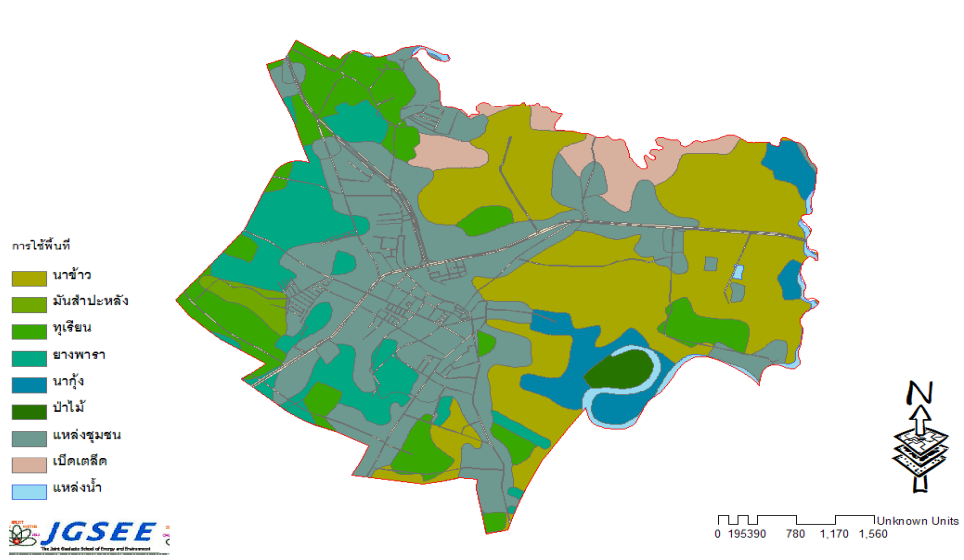
Agricultural Burning



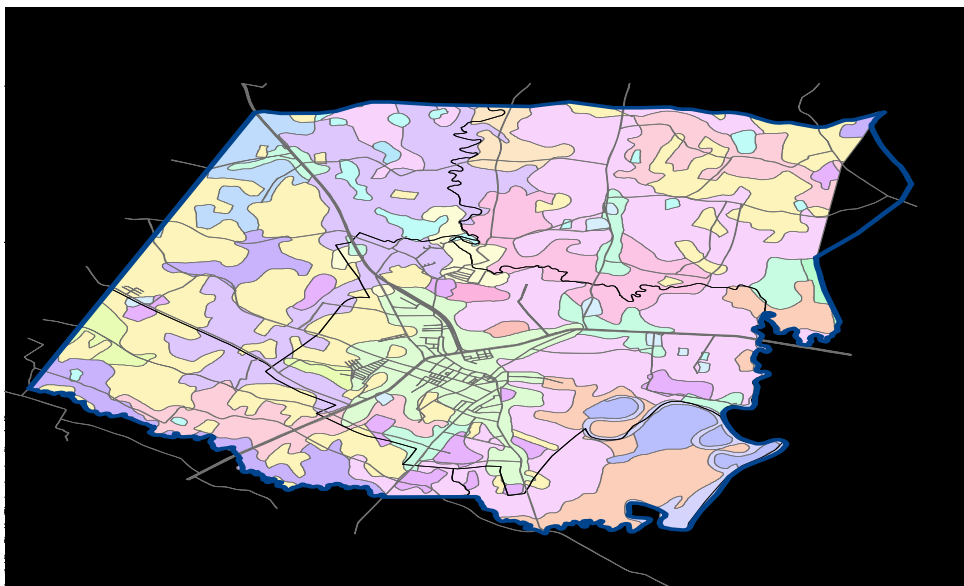
Agricultural Soil



Removal Capacity by Land Use



Old LU Master Plan: (27 km²)
 Forest/Green Space/Orchard
 : 773#WtophM#FR_{5ht}



New LU Master Plan: (66 km²)
 Forest/Green Space/Orchard
 59,5:7#WtophM#FR_{5ht}

Development of Emission/Removal Projection

Approach Based on Development of New LU Master Plan

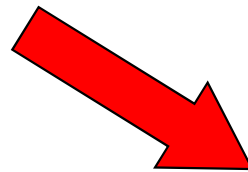
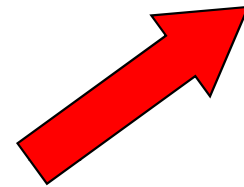
**Settlements will be developed only on
lands part of the old LU Master Plan**

Approach Based on Municipality's Development Plan 2011-2014

Plant additional 3,000 Trees/Year



Development of Mitigation Measures: Enhancement of Removal



Option 1: 14.4 km² Rice Field + 1.1 km² Green Space

Dvxp swrc

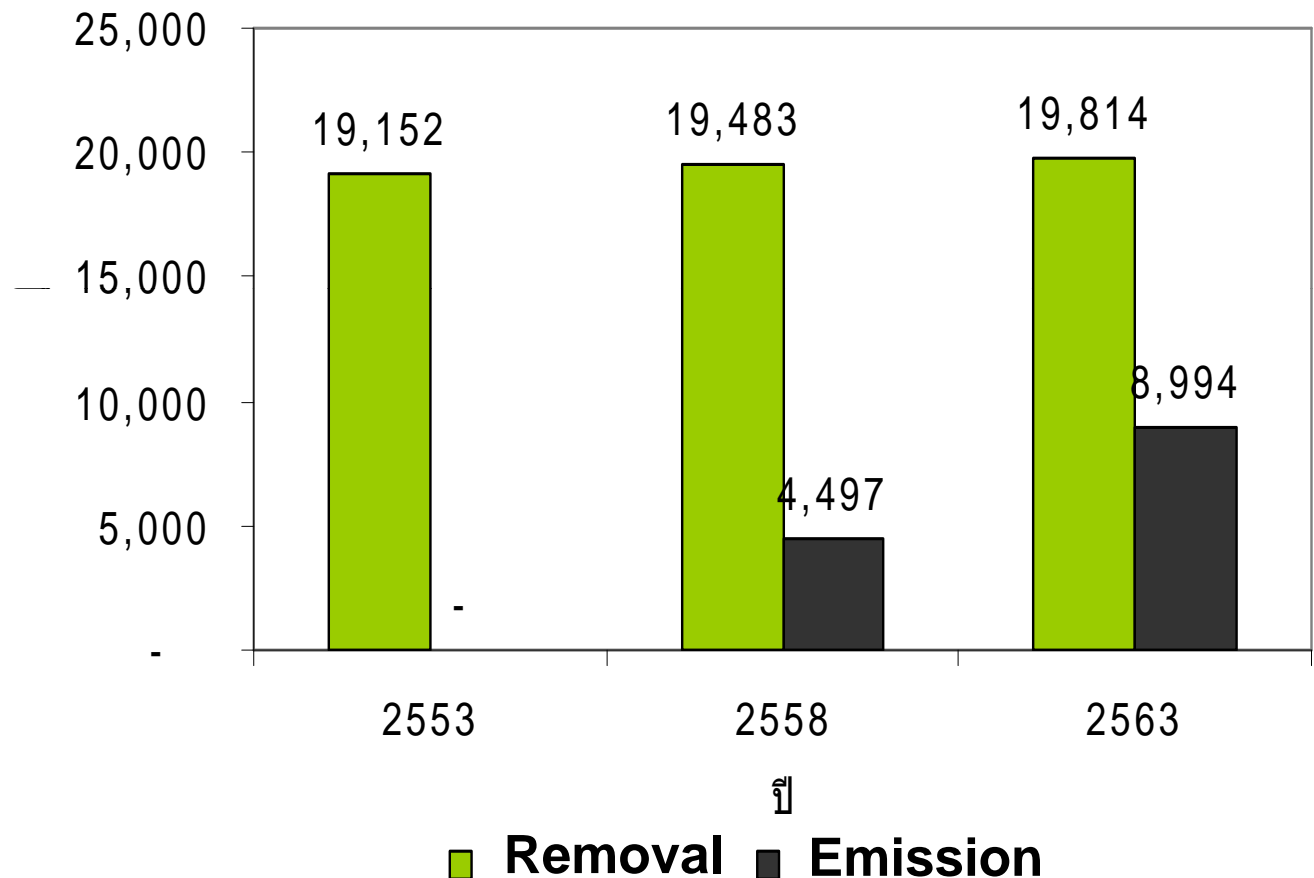
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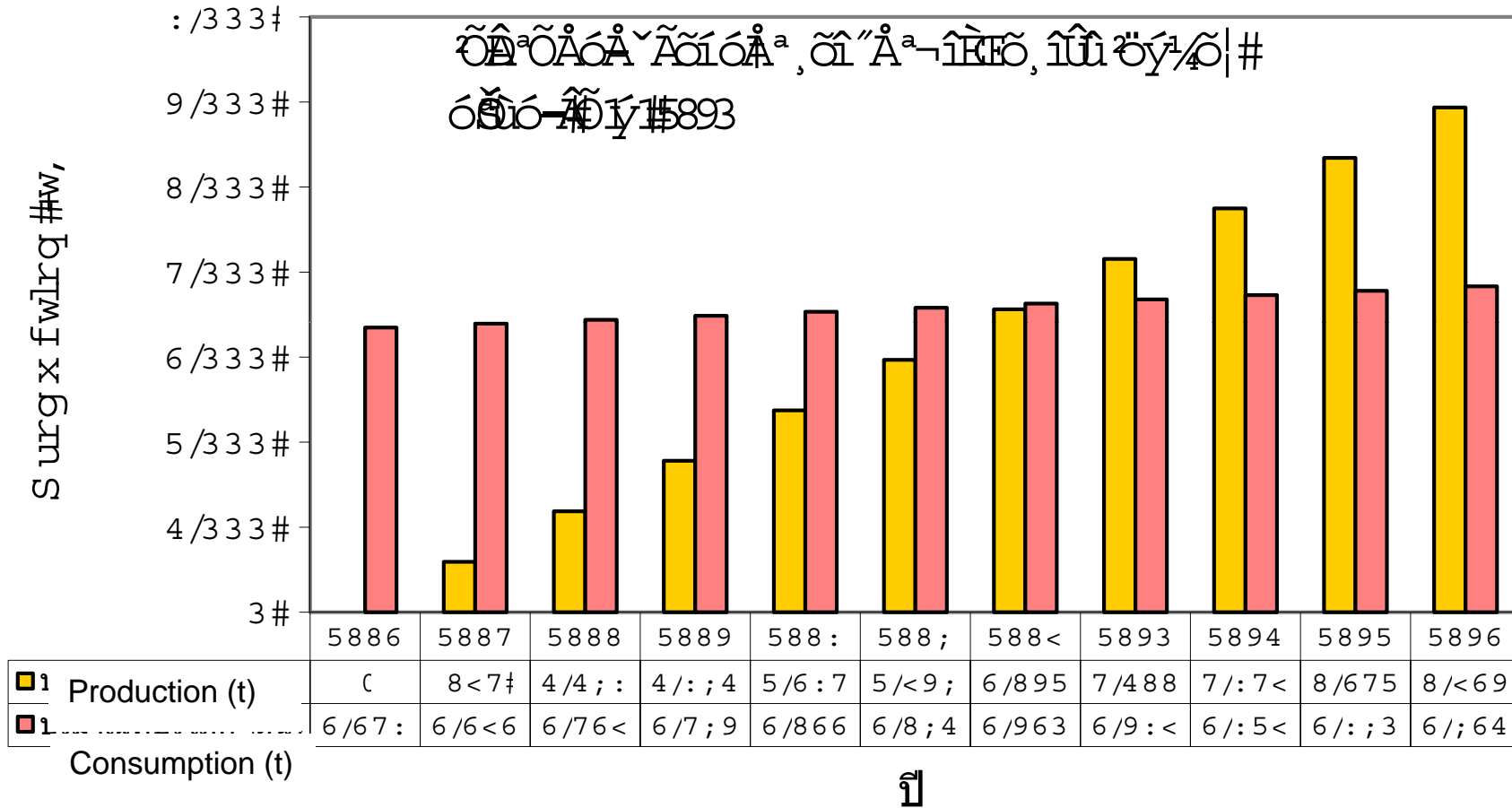
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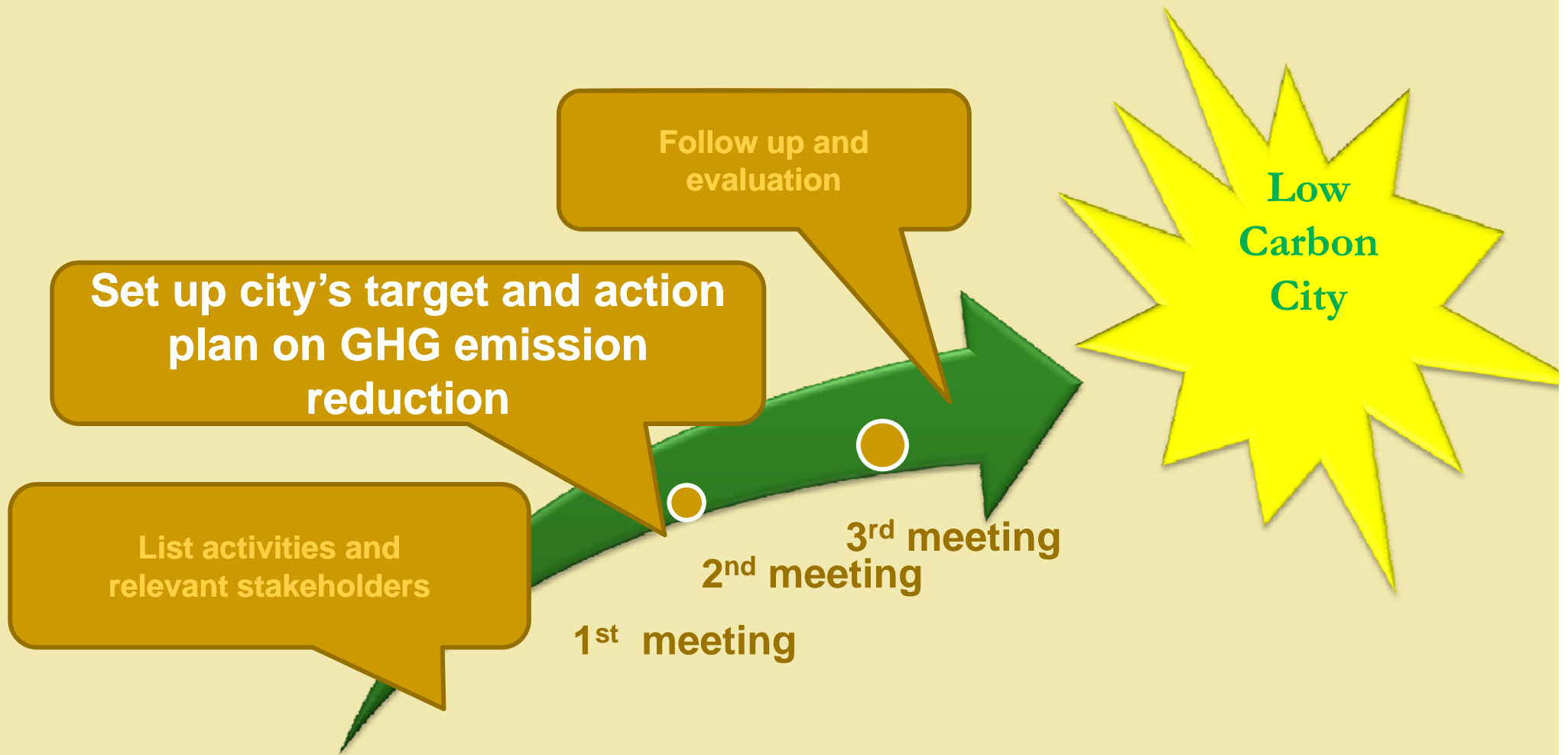


Production From Planned Rice Cultivation#



Brainstorming Meeting – Card Technique

Thai model guidelines for Low Carbon City



Action Plan to Implement Option 1

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Aspects	Actions	Entities
Financial support	<ul style="list-style-type: none"> • Provide budgets/ provide seedlings for rice cultivation 	Financial institute/ Ministry of Agriculture and Co-operative/ Private sector
Policy and measure	<ul style="list-style-type: none"> • Initiate a community reforestation program 	Municipality
Management	<ul style="list-style-type: none"> • Set up evaluation and monitoring program 	Municipality /Land owner/ Private sector/Communities
Social awareness	<ul style="list-style-type: none"> • Raise awareness of the public & business 	School/ Communities/ community leaders/ Industry sector
Local regulations	<ul style="list-style-type: none"> • Local ordinances on greenspace 	Municipality



Action Plan to Implement Option 1

AFOLU



JGSEE
The Joint Graduate School of Energy and Environment



CEE-PERDO
Center for Energy Technology and Environment



Outcomes of the study/pilot project

- 9-step approach towards Thai Low Carbon City:
 - City's GHG inventory and stakeholders participation
 - People view that low carbon approach can generate co-benefits for their community
- City's stakeholders participation in mitigation goals:
 - Need information and scientific data supported
 - City's voluntary mitigation goal/target set up
- Bottom-up approach mitigation measures:
 - Stemming from strong public involvement





ขอบคุณค่ะ

N kre N kxg N kd

สวัสดีค่ะ

Vdz dvghhN kd