



**EC-ASEAN ENERGY FACILITY**



Final European Dissemination Conferences for the EC-ASEAN Energy Facility (EAEF)

February 02, 2007 - Bruxelles

## **Project 56**

# **EIUP**

Feasibility study for the implementation of energy integrated urban planning (EIUP) in ASEAN cities and of applicability of European approaches

Gerhard Weihs – CENTRIC AUSTRIA INTERNATIONAL



Center for Environmental Training and International Consulting



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... is a unique non-profit professional organisation,

... based on expert memberships and partnerships from Austria, other EU countries and third countries,

... who are interested to join the international missions of the organisation.

**CENTRIC AUSTRIA INTERNATIONAL** is located in the centre of Europe.



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## CENTRIC AUSTRIA INTERNATIONAL

Founded in 1997 as a registered non-profit association according to Austria law.

By now CENTRIC AUSTRIA INTERNATIONAL has dozens of members and partners and can refer back to hundreds of experts with technical, scientific, commercial, legal and public background, who join the non-profit missions and projects of the association.

Our main purpose consists in uniting competences and experiences of our members and partners. Our main business fields are training and consulting, which we are providing tailor-made for the requirements of our clients and project partners.



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## CENTRIC AUSTRIA INTERNATIONAL

### Our main areas of activities

- Energy and Environment
- CO2 Management
- Cleaner Production
- Integrated Planning

### Our specific services

- Seminars & Workshops
- Training Courses
- Study tours
- Consulting



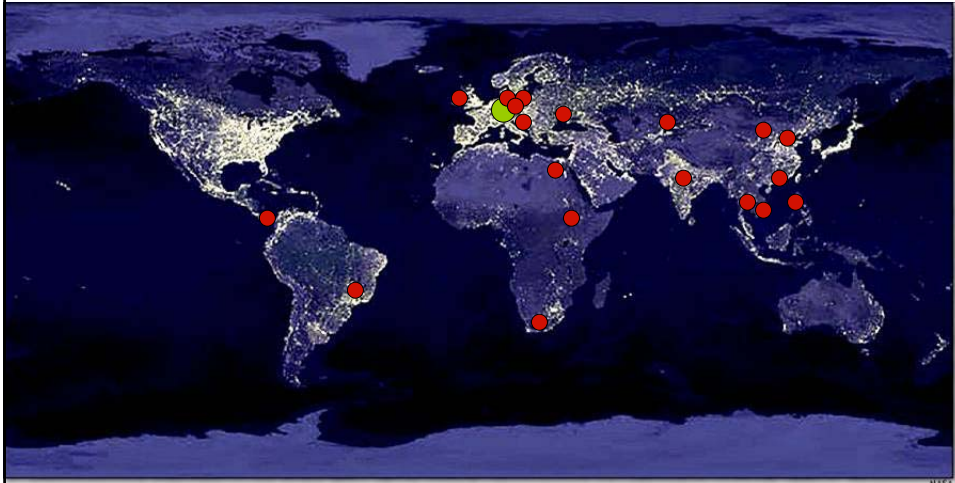
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## THE PROJECT – EIUP (April 2004 – June 2006)



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### THE PROJECT PARTNERS

	<b>CENTRIC AUSTRIA INTERNATIONAL</b> Center for Environmental Training and International Consulting (CAI)	
	<b>Centre for Energy Environment Resources Development, Foundation for International Human Resource Development (CEERD)</b>	
	<b>Institute of Urban Environment and Human Resources, Panteion University / Research Team of Economics of the Environment and Sustainable Development (EESD)</b>	
	<b>Green City Denmark (GCD)</b>	

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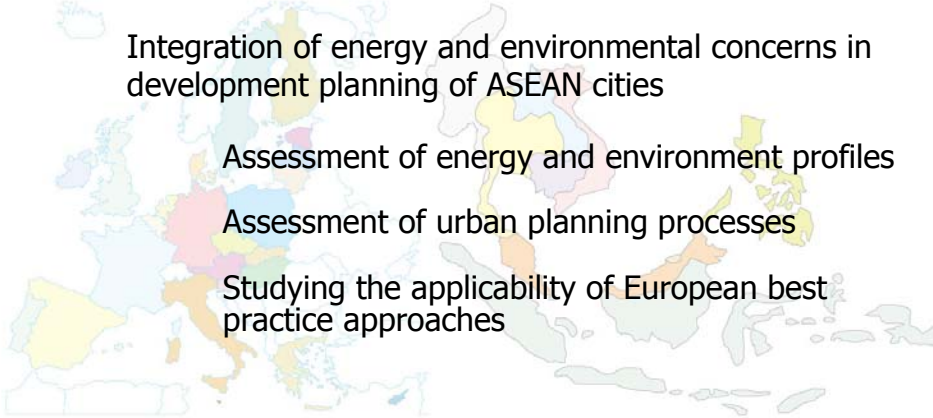
### AIM OF THE PROJECT

Integration of energy and environmental concerns in development planning of ASEAN cities

Assessment of energy and environment profiles

Assessment of urban planning processes

Studying the applicability of European best practice approaches



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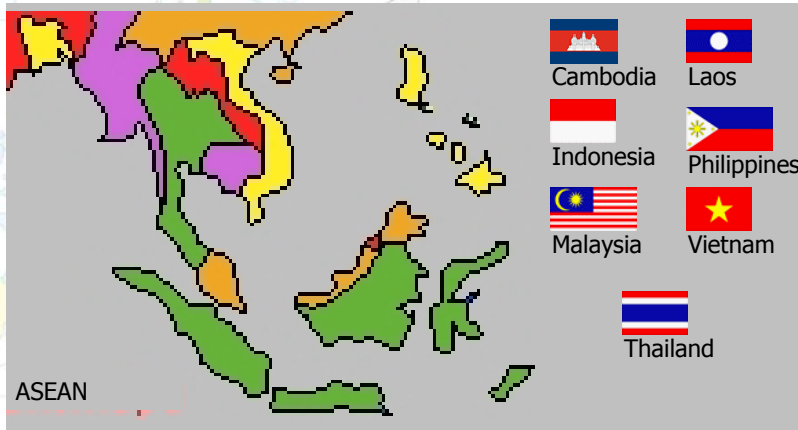


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### TARGET GROUPS OF THE PROJECT

Urban planners from selected ASEAN cities



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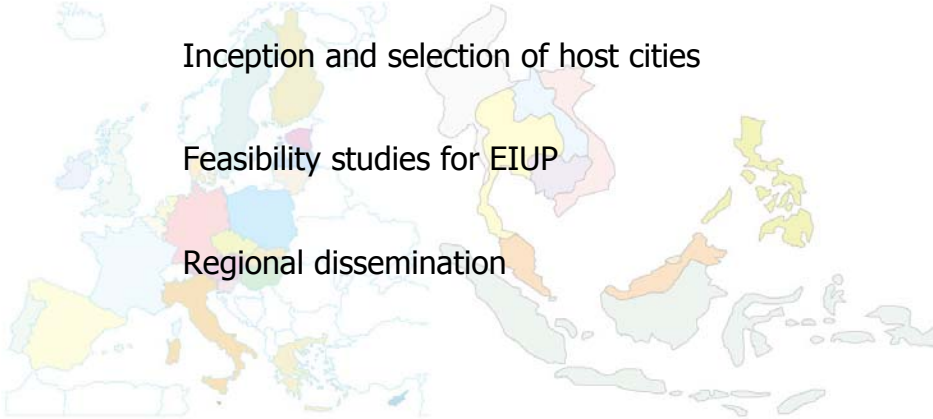


## THREE MAJOR PROJECT PHASES

Inception and selection of host cities

Feasibility studies for EIUP

Regional dissemination



## PHASE 1: Inception & selection of host cities

### 1. Survey and pre-screening of ASEAN cities

Literature review

Survey

### 2. Kick-off meeting & selection of candidate cities

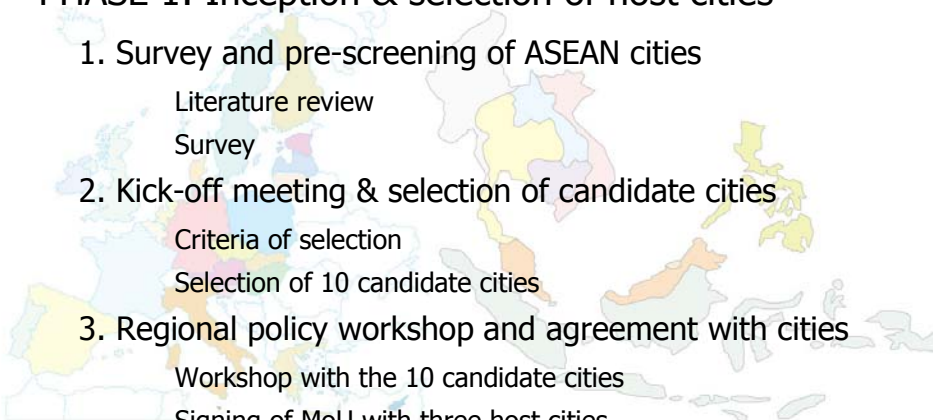
Criteria of selection

Selection of 10 candidate cities

### 3. Regional policy workshop and agreement with cities

Workshop with the 10 candidate cities

Signing of MoU with three host cities





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### THREE HOST CITIES WHERE SELECTED



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### PHASE 2: Feasibility studies for EIUP

#### 4. Community energy assessments

three-day expert missions to host cities

City energy-environment database

#### 5. Assessment of urban planning and identification of community energy and environment projects

Expert missions to host cities

Training and seminars



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## PHASE 2: Feasibility studies for EIUP

### 6. Study of applicability of European approaches

Report on European approaches

Study ASEAN context

Study tour to Europe: Austria, Denmark, Germany

### 7. Assessment of CEEPs and pre-feasibility study

Expert missions to host cities

Select one CEEP for each city

Conduct pre-feasibility



## PHASE 3: Regional dissemination

### 8. Final project report and regional dissemination workshop

Final assessment of feasibility of implementing EIUP in ASEAN  
based on experience with three cities

Regional workshop highlighting findings

Final report





## METHODOLOGY

Learning by doing

Learning from best practice

Application

What means and what intends EIUP?



## EIUP – Energy Integrated Urban Planning

EIUP is based on a reliable database.

EIUP is in line with superior given frameworks (policy, legislation).

EIUP is interrelated with other planning sectors

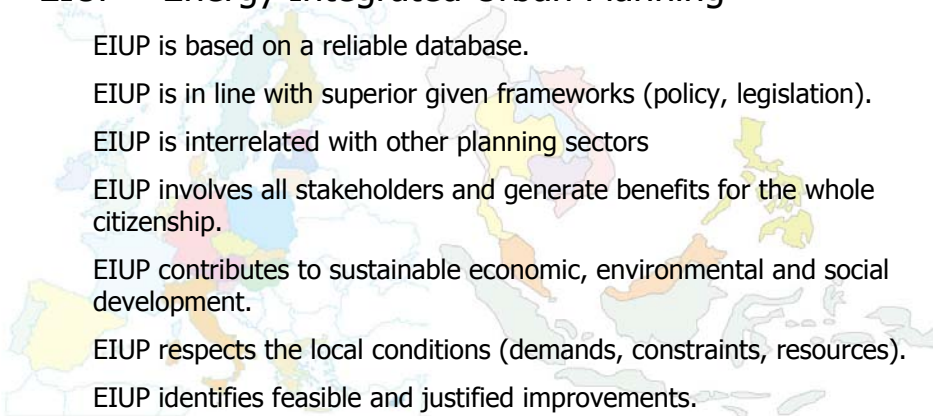
EIUP involves all stakeholders and generate benefits for the whole citizenship.

EIUP contributes to sustainable economic, environmental and social development.

EIUP respects the local conditions (demands, constraints, resources).

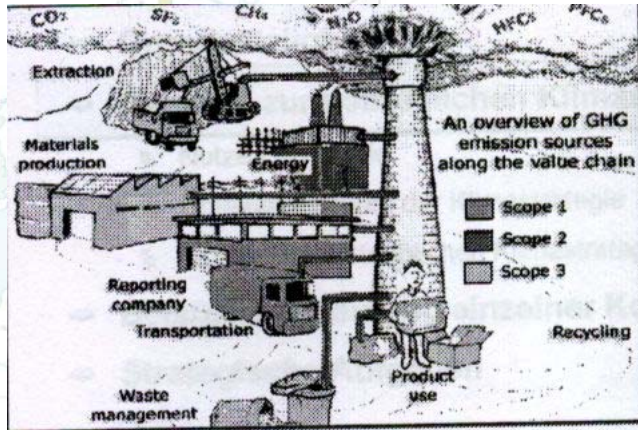
EIUP identifies feasible and justified improvements.

EIUP prepares the reliable ground to take concrete action.





EIUP potentially deals with all urban energy aspects



## EIUP WORKING REPORT



### Energy Integrated Urban Planning Working Report

Provided by

Name of the City	
Name of the Author	
Department/Institution	
Position	

The EIUP working report was especially developed to be applied within the project. It describes the methodology for Energy Integrated Urban Planning (EIUP)



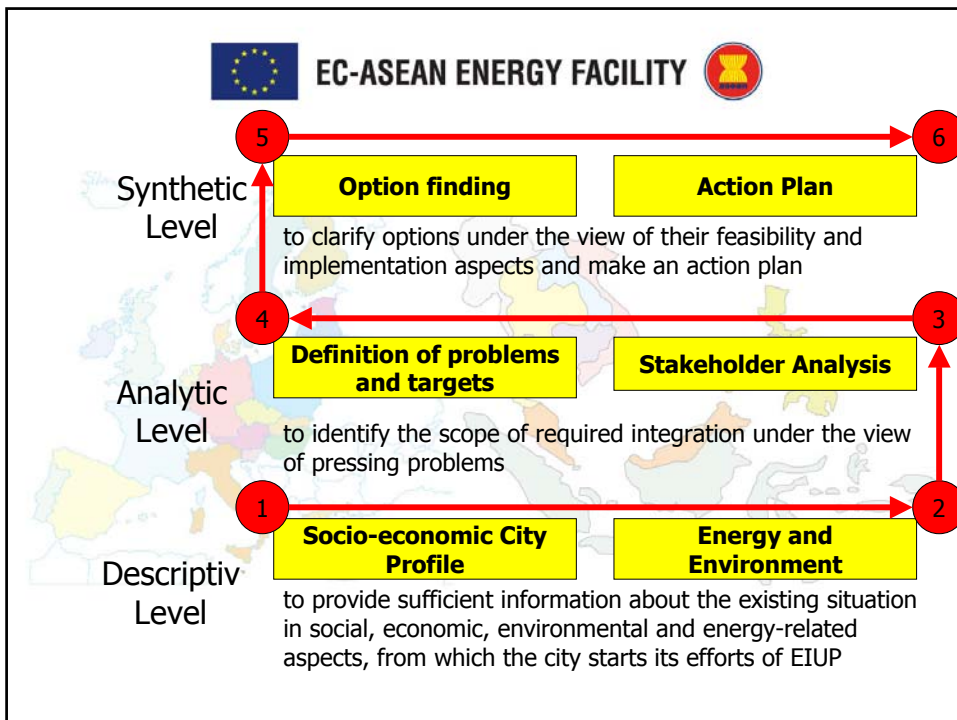
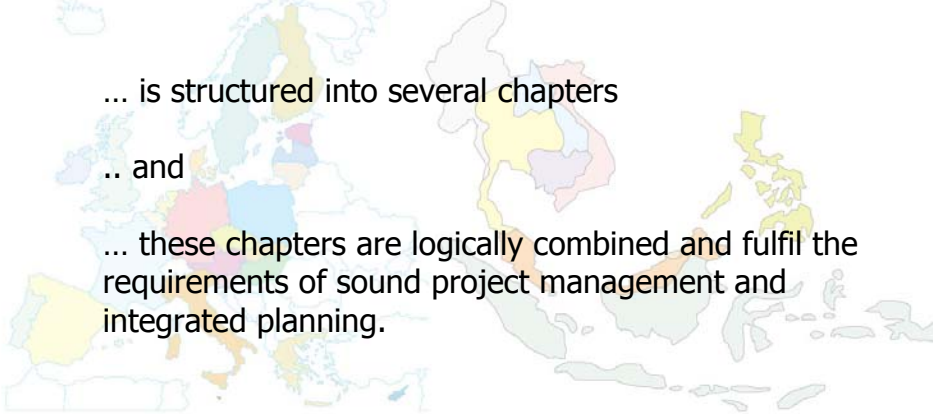


## EIUP WORKING REPORT

... is structured into several chapters

.. and

... these chapters are logically combined and fulfil the requirements of sound project management and integrated planning.



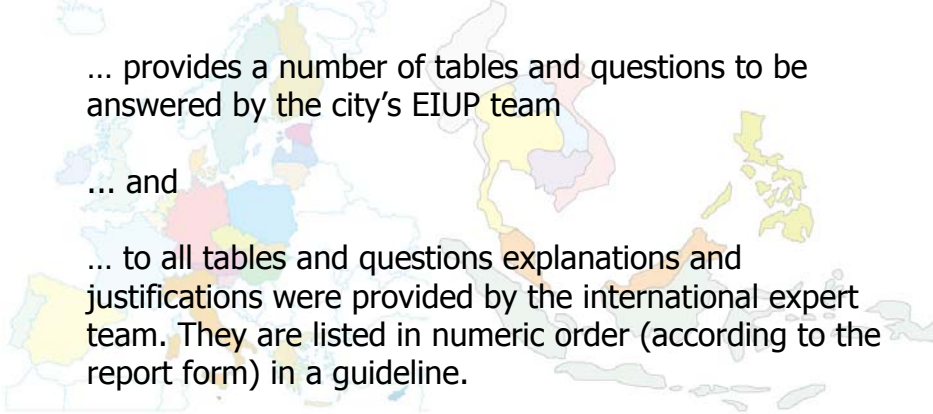


## EIUP WORKING REPORT

... provides a number of tables and questions to be answered by the city's EIUP team

... and

... to all tables and questions explanations and justifications were provided by the international expert team. They are listed in numeric order (according to the report form) in a guideline.



## EIUP WORKING REPORT

The project experiences show that this methodology should be replicable by other cities, once they are ready to follow the guideline and recommendations resulting from the pilot implementation.





EIUP is like ...

How to eat an elephant?

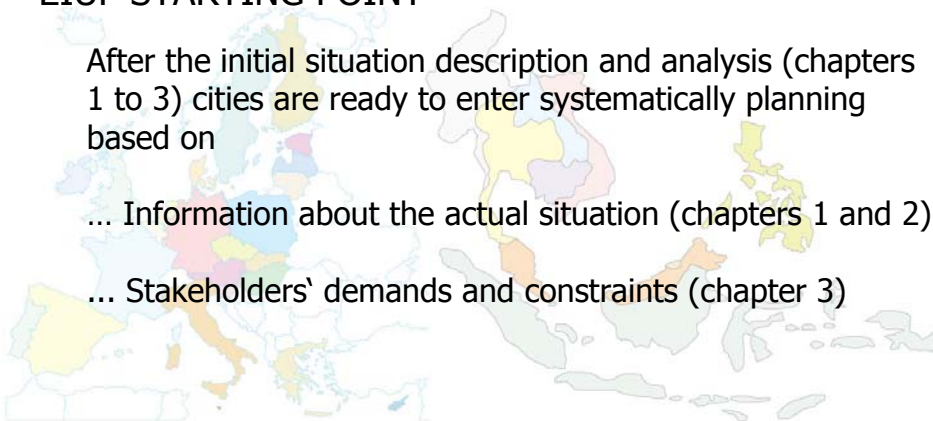


## EIUP STARTING POINT

After the initial situation description and analysis (chapters 1 to 3) cities are ready to enter systematically planning based on

... Information about the actual situation (chapters 1 and 2)

... Stakeholders' demands and constraints (chapter 3)

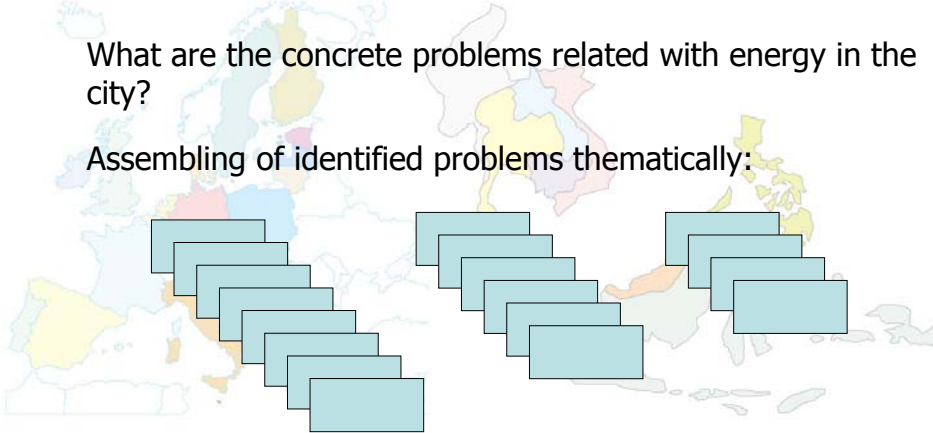




## EIUP BRAIN STORMING

What are the concrete problems related with energy in the city?

Assembling of identified problems thematically:



## EIUP PROBLEM STORAGE

Finding for each cluster of problems an expressive title (keywords like) and generating a table of major problems.

Problemstorage		
Titel		
Titel		
Titel		





## EIUP PROBLEM RANKING

Ranking of problems in the storage according to priorities (most pressing to minor problems)

Problemstorage		
Titel	● ● ●	
Titel	● ● ● ● ●	
Titel	● ●	



## EIUP PORTFOLIO ANALYSIS FORM

**1.** Where the problem concrete exists and which impact the problem has ?

**2.** What are the real causes of the problem ?

**3.** What options exist to solve the problem ?

**4.** Why this options have not been realised yet, what are the existing barriers or obstacles for realisation ?

**5.** What concrete has to be done to overcome existing barriers and obstacles ?

**6.** What are the first concrete steps to be done ?





# EIUP ACTION PLAN

what	who	with whom	until when	result

Including detailed description of steps and the pre-feasibility check of the envisaged actions.



## 6 Action plan

### 6.1 Strategy of the city's EIUP

6.1.1 The city's EIUP policy

6.1.2 Visions and goals





### 6.1.3 Priority objectives

High priority objectives	Criteria applied to rank priority

Medium priority objectives	Criteria applied to rank priority

Low priority objectives	Criteria applied for non-selection

### 6.1.4 List of actions



### 6.1.5 Relevance for planning sectors and target groups (stakeholders)

Sector affected by the plan	Major effects for the sector /target group)





### 6.2 Detailed description of actions

Title of the action	
Sectors affected by the action	
Summary description of the action	
Targets of the action	
Tasks and sub-activities	
Qualitative effects, which should be achieved by the action	
Quantitative effects, which should be achieved by the action	

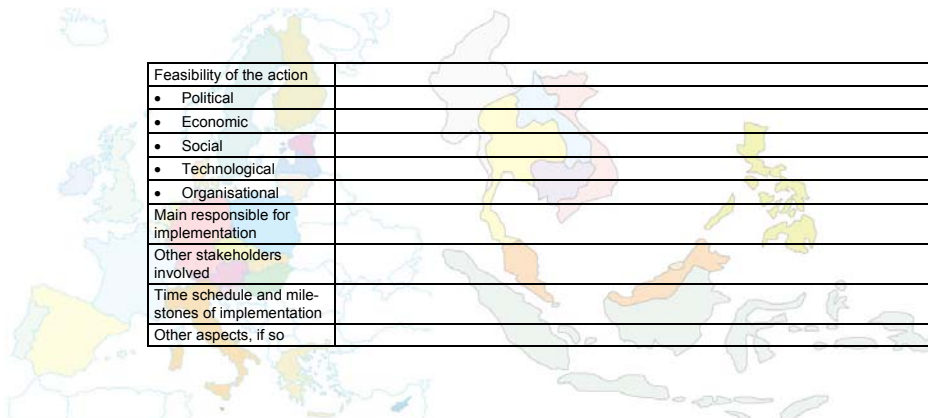


Means for realisation	
• Required political commitments	
• Laws and regulations to be issued	
• Financial requirements	
• Organisational requirements	
• Technical requirements	
• Other requirements	
Risks and assumptions	
Countermeasures to reduce risks	





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Feasibility of the action	
• Political	
• Economic	
• Social	
• Technological	
• Organisational	
Main responsible for implementation	
Other stakeholders involved	
Time schedule and milestones of implementation	
Other aspects, if so	



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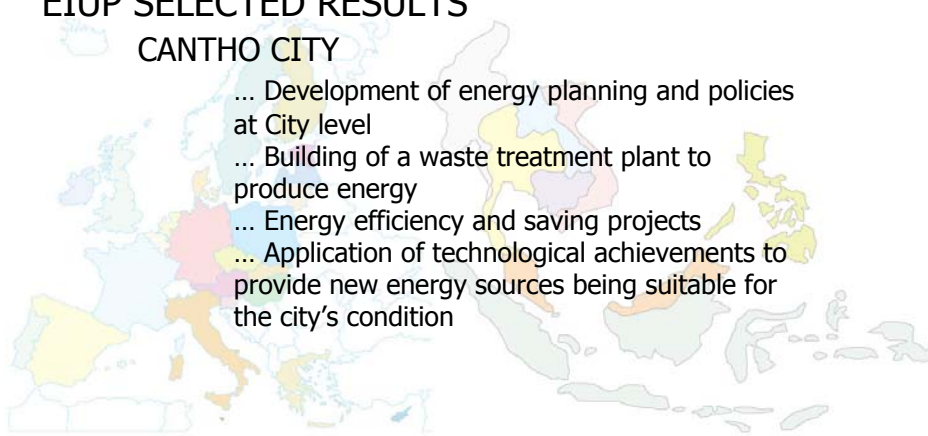
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## EIUP SELECTED RESULTS CANTHO CITY



- ... Development of energy planning and policies at City level
- ... Building of a waste treatment plant to produce energy
- ... Energy efficiency and saving projects
- ... Application of technological achievements to provide new energy sources being suitable for the city's condition



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## EIUP SELECTED RESULTS

### NAGA CITY

- ... Have prepared EIUP and integrate plan in the City Medium-term Development Plan in 1 year
- ... Have all municipal waste processed in the way of recycling and waste-to-energy use in case of non-recyclable waste in 5 years
- ... Have at least 5% biofuels in consumption of motor fuels in the year 2010
- ... Have energy audit and conservation campaign expanded to all sectors in 5 years
- ... Reduce system losses below 10% and reach national standards in power supply quality in 5 years
- ... Have 100% connection of households in Naga City in 5 years



## EIUP SELECTED RESULTS

### LUANG PRABANG

- ... Development of Energy Plan Unit at District Level
- Capacity building on energy issues of District government officers
- ... Systematic (annual) development of Energy Surveys in all sectors and creation and maintenance of Energy Database
- ... Development and implementation of energy efficiency plans
- ... Capacity building on RETs of District government officers
- ... Increased community awareness on energy issues





## CONCLUSIONS

Can Tho in Vietnam, Luang Prabang in Lao PDR, and Naga City in the Philippines have participated in an EU-funded partnership and capacity building project on energy policy, planning, and strategy formulation at local government level.

These three cities have had diverse economic and political structures but comparable economic dynamism necessitating increased attention to energy as well as environment issues.

The project had aimed at institutionalizing the integration of these issues in the urban planning and decision-making processes through learning-by-doing.



## CONCLUSIONS

The project has succeeded in formulating energy strategies and action plans for each of the cities. The strategies highlight the energy vision and mission of the cities, while the action plans identify priority community energy projects that can be implemented in the near term.

These results have been achieved by forming a team of local experts and discussing with local stakeholders. The blessing and commitment of local political leadership could not be underestimated and in fact had to be secured right from the start of the project.

The learning-by-doing approach has ensured local ownership of the results and responsibility for carrying them out. While the actual adherence to the strategies and implementation of the action plans remain to be seen, the project has demonstrated the key elements for a successful energy-integrated urban planning.





## CONCLUSIONS

At project start the cities had a mere vague idea of integrated planning; they had only some ideas of energy projects, which may make sense. But there was a lack of know how to bring the projects forward and how to get the financing. Other questions concerned the selection of proper technologies.

In general the former approaches of the cities were restricted to single projects and a comprehensive framework was missing. Even reliable data about energy consumption and future demand were not available.

Except Naga City, the cities had not really a proper understanding how to involve stakeholders and how to make use of these involvements. Superior policies were seen more as restrictions than a framework, which can be filled in with own initiatives.



## CONCLUSIONS

The EIUP project has changed these views and the three host cities are now equipped with adequate capacity to tackle energy as an integrated part of their development.

The first lesson to be learned was that without a reliable database planning is a mere blind flight and the management of projects based on this deficient situation becomes a random-like undertaking. The cities learned that by collecting reliable data the city and its demands and constraints become clearer and clearer.

Stakeholders, who had been even assumed as opponents or obstacles for progressive ideas, figured out to be potential partners. Existing planning and policies served as platform to build on. Other departments and planning sectors changed from competitors to partners in the project. It became obvious that integration means not something abstract, but the involvement of people, ideas, data, and opinions in first instance.





## CONCLUSIONS

The tools provided within the applied methodology helped to structure the planning work into manageable steps, going from the rough to the details.

With the background of restricted resources it was very important how to set priorities and like in a critical path analysis how to set the activities that they can harmonize and build upon each other, which is another more technical aspect of integration.

It became obvious that business planning is not only to run for donors and investors, but in first instance to design justified projects, which have the desired impact and which are accepted and feasible in terms of means, technology and policy.

Finally the cities understood that EIUP is not a single activity, but a permanent process, which needs continuation and periodical updates. The elaborated EIUP Working Reports are an impressive proof of the progress made by the three host cities in all this respects.

