

## Manual 3

# Suggestions for Selecting Suitable Public Participation Methods for NREM

### **Important Notice**

The Action Plan Handbook for Natural Resources and Environmental Management at the Provincial Level (hereinafter called the PEQMP-KPI Manual) has been published by ONEP/MNRE in order to facilitate the formulation of the Provincial Environmental Quality Management Plan (PEQMP) for KPI in 2007 by each province. The PEQMP-KPI Manual includes instructions for public participation, e.g. establishing a PEQMP-KPI Formulation Committee led by the Governor, and including LA staff as Committee members.

The JICA Study Team collaborated with their counterparts (C/P) of the Study -- ONEP and PEO staff from AYP and SKP -- on the revision of submitted PEQMP-KPI. During the course of the Study, both Team and counterparts recognized the need to further encourage and emphasize public participation in the PEQMP-KPI Manual, and the need to keep open more than one avenue of public participation for a widely-affecting issue such as NREM.

This Annex presents suggestions for suitable public participation methods, based on the Study work in two model provinces, SKP and AYP.

# **1 Introduction**

## **1.1 Public Participation in Plan Formulation**

The main executors of an environmental quality management plan would be the individuals and organizations who make direct impact on their natural resources and environment during the course of their everyday activities: in other words, all residents, factories, business enterprises and establishments, government offices, schools, and fishing unions, etc. working and living within the province.

Therefore, the participation at plan formulation, understanding of plan contents, and building of a system of cooperation for the execution/implementation of the plan by *all* interest-bearing parties, i.e. stakeholders, is a necessary precondition for the successful and realistic environmental quality management plan. In the wide-ranging and widely-affecting field of natural resources and environmental management (NREM), stakeholder participation equals public participation; NREM cannot move forward without public/stakeholder participation.

## **1.2 Public Participation in Plan Implementation**

The real worth of an environmental quality management plan is in its implementation, and not in its formulation. A plan can be beautifully formulated but completely worthless in reality if it is not put into action.

Once a plan is put in action, the next important thing is keeping up its momentum. To keep the plan in continuous action, the executors of the plan must be continually monitored, inspected, and supported. On paper, the responsibility of monitoring falls onto members on the Monitoring Committee, but practically speaking, a few members of a Committee cannot monitor all activities taking place all over the province and in various wide-ranging sectors of NREM. However, residents are already in place, all over the province. The participation of local residents is invaluable in NREM monitoring, as it allows the monitoring system to spread far and wide.

## **1.3 Necessary Pre-Conditions for Public Participation**

A precondition for public/stakeholder participation in monitoring is that they have a certain level of awareness of the problem. Residents and stakeholders cannot, for example, serve as efficient monitors for PEQMP if they do not have sufficient awareness towards environmental problems. Thus, interest towards NREM in residents is the necessary pre-condition for public participation in PEQMP monitoring. How can such interest and awareness be raised?

The answer is to include and interest residents at the plan formulation stage. The public will feel involved, and each individual become aware that environmental issues are immediate and personal issues that must be solved by his/herself, through participation in the plan formulation process.

## **2 Methods of Public Participation**

### **2.1 Steps of Public Participation**

The multiple steps and stages of public participation in PEQMP formulation and implementation are shown in the figure below, and detailed in the next section:

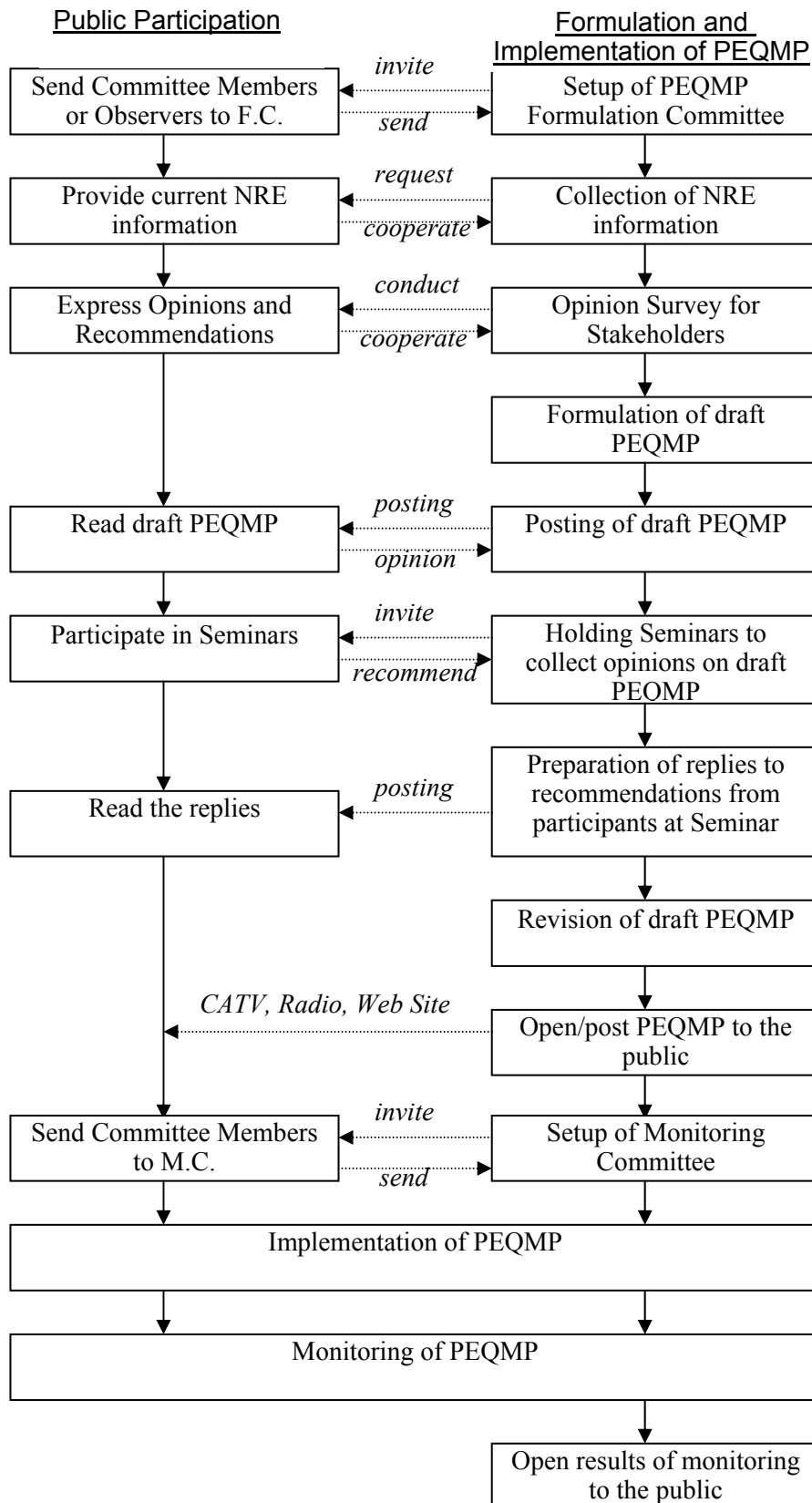


Figure 1: Steps of Public Participation

## **2.2 Methods of Public Participation**

### **2.2.1 Participation in the PEQMP Formulation Committee**

It is practically impossible to for all residents to participate in PEQMP formulation. The alternative is to send resident representatives to the PEQMP Formulation Committee.

The PEQMP Formulation Committee is made up of experts in the field, and chaired by the Governor. Members include academic experts and local administrators. The resident representatives' responsibility in this setting is not to voice opinions on technical matters, but rather to observe and make sure that the meetings are conducted fairly; that even minority opinions are debated upon when they touch upon important themes; that the health and safety of residents and the preservation and sustainable use of natural resources are always foremost concerns in policy determination.

If resident representatives are difficult to select, an option is to send Chum Chon (Community) and Mooban (Village) heads from each Tessaban or Orbortor; in any case, 3-5 representatives are necessary. If it is difficult to make resident representatives an official part of the Formulation Committee for the whole formulation period, an alternative is to send resident representatives as observers at every Formulation Committee meeting.

### **2.2.2 Participation through Stakeholder Surveys for Information and Opinions**

#### **a. Target group**

Environmental conditions of the province and the current state of natural resources must be grasped prior to PEQMP formulation. Ideally, such real-time information should be collected from residents. Considering the limits of practicality, an alternative is to conduct an environmental awareness survey among stakeholders.

By asking stakeholders what kind of environmental problems they face each day, what environmental issues concern them most, which natural resources they consider the most likely candidates for conservation, and what pollution problems must be solved, environmental information can be gleaned to a certain degree while also noting the level of stakeholder awareness in NREM issues.

The following are possible target groups for such stakeholder surveys:

- Local residents and business establishments
- Local administrative staff
- NGO

The necessary sample size for a certain population can be found in the table below. A random sampling method should be used for all target groups.

Table 1: Relationship between Population and Required Number of Samples

Population	Number of samples (Reliability 90%)
10,000	370
15,000	375
20,000	377
30,000	379
40,000	380
50,000	381
75,000	382
100,000	382
1,000,000	384

(Source) Robert V. Krejcie and Daryle W. Margan.  
Determining sample size for research activities.  
Educational and Psychological Measurement.  
Vol. 30, 1970, 607-610.

**b. Survey method**

The survey should be conducted in interview format, using a prepared questionnaire form (see Sample Forms 1-3). The sample questionnaire forms were prepared through in-depth discussions between the Study Team and ONEP for use in AYP and SKP; obviously, questions should be altered where it does not meet local conditions and new questions added where necessary, when the forms are used in other provinces.

**c. Analysis of survey results**

The survey results can be used as a source of various kinds of information. The answers for each question should be collated as percentage figures. The following table shows the answers to Question 19 in SKP, which probed the level of environmental awareness in residents:

Table 2: Sample Local Resident Answers from SKP

Q.19 How serious do you feel the following natural resources and environment problems? Please select one in each of the following environment problems.							
	1. Not serious at all	2. Not very serious	3. Some what serious	4. Very serious	5. Can't choose	6. No response	Total
1. Soil and land resources	47	8	6	2	1	0	64
2. Mangrove resources	29	12	12	4	7	0	64
3. Fishery resources	32	10	12	7	3	0	64
4. Water resources	37	13	12	2	0	0	64
5. Marine and coastal resources	26	2	15	9	12	0	64
6. Biodiversity	37	9	15	1	2	0	64
7. Water quality	35	8	15	6	1	0	64
8. Solid waste	32	15	15	2	0	0	64
9. Air quality	47	9	8	0	0	0	64
10. Noise quality	47	11	6	0	0	0	64
11. Hazardous wastes and toxic substances	55	6	3	0	0	0	64
12. Urban environment such as parks, amenity, landscape, etc.	50	3	7	0	4	0	64
13. Natural and cultural assets	53	5	3	1	2	0	64
14. Global warming / climate	11	9	29	15	0	0	64

change							
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If you select [4. Very serious], please give us reasons why you select and what aspect specifically		
Question	Aspect	Reasons why you selected "4. Very serious"
1. Soil and land resources	- salty of soil - intrusion of public areas	- soil is not proper for agriculture - conflict between government and people
2. Mangrove resources	- lost of mangrove	- lost of natural habitat for marine species
3. Fishery resources	- decrease of fishery resources - invasive fishery	- lost of income - fishery resources decrease drastically
4. Water resources	- flood	- obstacle for transportation and agriculture
5. Marine & coastal resources	- use caustic soda to catch Razor Clam - over fishing Razor Clam - degradation and intrusion of coastal areas	- Razor Clam decrease drastically - Razor Clam decrease drastically - lost of land and fishery resources
6. Biodiversity	- decrease of fishery resources	- lost of income
7. Water quality	- wastewater - dump garbage into the canals - low quality of groundwater	- caused damage to aqua culture - caused water pollution - groundwater cannot be used
8. Solid waste	- dump garbage into the canals - tons of garbage is not managed properly	- caused water pollution - caused serious environmental problems
13. Natural and cultural assets	- government do not take care of natural assets seriously	- degradation of natural assets
1.4 Global warming	- rising of temperature	- cannot gardening as long as before - decrease of marine species - season change

In the above example, the following environmental issues, listed here in order of popularity, were "4 Very Serious" to residents:

- Global warming/climate change (15/64 = 23.4%)
- Marine and coastal resources (9/64 = 14.1%)
- Fishery resources (7/64 = 10.9%)
- Water quality (6/64 = 9.3%)
- Mangrove resources (4/64 = 6.3%)
- Soil and land resources (2/64 = 3.1%)
- Water resources (2/64 = 3.1%)
- Solid waste (2/64 = 3.1%)
- Biodiversity (1/64 = 1.6%)
- Natural and cultural assets (1/64 = 1.6%)

Such information becomes an important factor in e.g. deciding on Priority Projects to be included in the PEQMP. However it is important to note, for example, that when the percentage response rate to "3 Somewhat serious" is considered together with "4 Very serious", the issues of water quality, solid waste, and biodiversity comes up in rank. Such ambiguities must be brought up and debated sufficiently in the Formulation Committee and also in open Seminar sessions.

### **2.2.3 Participation in Formulation Committee Brainstorming Sessions**

The Formulation Committee will conduct a SWOT Analysis of the implementing agency of the PEQMP, and also conduct brainstorming sessions on Priority Projects.

Stakeholder representatives to the Formulation Committee (see Section 2.2.1 above) should participate in such sessions and discuss issues and problems concerning natural resources and environment with the Formulation Committee, and take part in the decision-making on Priority Projects.

### **2.2.4 Participation in the Revision Process of PEQMP**

A classic approach to public participation for PEQMP formulation is to conduct hearing sessions and discuss environmental issues with residents *prior* to formulation; such meetings might be held in each Amphoe office (i.e. 16 sessions in AYP, 3 in SKP). However, ‘environmental issues’ can cover large ground, and any topic can be brought up for discussion as an ‘environmental issue’. In a potential worst-case scenario, a rather personal or small-scale problem, far from the concerns of PEQMP, could be brought up, extensively discussed, and the meeting adjourned without any concrete conclusions about the direction of NREM. If hearing sessions are allowed to run that way, they will simply be a huge waste of time and money.

A better and a much more productive approach would be to first present the draft PEQMP to stakeholders, ask “what is missing in this plan?” and “which issues are the most serious?”, and then discuss and debate these points. Once the draft PEQMP has been made, it should be put up for public posting so that the document will be read by as many residents as possible; and then, resident opinions should be collected from as wide a range of local residents as possible; in order to reflect these opinions back onto the revised PEQMP. If only the classical approach of hearing sessions and seminars is taken, it is simply impossible to give all residents an equal chance to participate, due to the limits in traveling distance and the number of events.

If the posting approach is to be adopted, the draft PEQMP must be put up, at minimum, in all the Amphoe offices for public viewing. Opinions and questions should be collected throughout the posting period, and afterwards, replies to recommendations should be prepared and presented as a separate document or alternatively worked into the revised PEQMP. The posting period should be as long as possible; considering that zoning regulation plans are posted for 90 days, it is recommended that draft PEQMP be posted for around 45 days.

### **2.2.5 Participation in Seminars**

A large number of residents live in urban areas. Seminars, or hearing sessions, are important occasions for residents to directly express their opinions, and should be held in addition to public postings. At least three seminars in three different venues should be held during the posting period of draft PEQMP.

For example, in this Study, the PEQMP 1st draft – the main contents of which were the current situation and issues of NREM in each Model Province was disseminated among stakeholders through 1st PEQMP Seminar in order to obtain stakeholder opinion on its contents.

The PEQMP 2nd draft consisted of a revised 1st draft – revised in reflection of the opinions/requests from stakeholders voiced at 1st Seminar - and additionally, Provincial – level Priority Programs determined through discussion with Thai counterparts. To obtain



wide range of stakeholder opinion on the PEQMP 2nd draft, the 2nd PEQMP Seminar was conducted.

The PEQMP 2nd draft was revised through reflection of opinions/requests voiced at 2nd PEQMP Seminar, and detailed contents of Priority Projects were added to form the PEQMP 3rd draft.

In the Seminars, the questions, opinions, and recommendations should be submitted in writing (see Sample Form 4). Answers would be given during the Seminars where possible, and questions that require more time to answer will be answered later in written format. Replies to stakeholder input should also be posted where it will be accessible to all Seminar participants, for example at Amphoe offices.

See Section 2.3 for an example of how to reflect stakeholder opinion onto the revised PEQMP.

### **2.2.6 Participation in the Monitoring of Plan Implementation**

The implementation of PEQMP is to be monitored by the Formulation Committee, and ONEP will supervise the method of monitoring. If possible, environmental experts, representatives of NGOs, and resident representatives should also be part of the Monitoring Committee so that various stakeholders can jointly monitor the implementation of NREM. Monitoring Committee meetings shall be held twice annually, to observe and evaluate the PEQMP implementation process. Evaluation results should be presented to the public through publications, CATV, radio stations, websites, and public postings.

For all residents of a province to play a role in monitoring NREM, resident tips (or monitoring information) must be kept track of by a single organization. The Environmental Information Center in PEO is suitable for this task.

The success of NREM in the end depends entirely on the level of awareness among local residents. Environmental awareness education among residents must take first priority. If residents remain passive, as was the case in Japan, until serious environmental side effects to human health appear, then it will be too late.

## **2.3 Reflecting Stakeholder Opinion onto PEQMP: An Example from AYP in Deciding Priority Projects for NREM Administrative Capacity Improvement**

The following table is an example of how to reflect stakeholder opinion in the PEQMP formulation process: the table shows “recommendations” gathered from seminar participants to the left, and “issues and proposals” formulated as a reflection of these stakeholder opinions to the right. The “PP” numerals at far right shows the identifier number for Priority Projects to be put in motion by the PEQMP target year of 2011 (see further discussion below).

Note that this example only shows the prioritization process for Priority Projects which strengthen NREM administrative capacities. A separate but similar process was used to determine priority ranking among sector-based Priority Projects in solid waste management, wastewater treatment, and water quality improvement.

Table 3: Decision Process for Priority Project Selection Based on Recommendations to draft PEQMP from Seminar Participants in AYP

No	Recommendations of Seminar Participants	Issues and Proposals	PP
1.	Ayutthaya PEO officers should visit sites and talk to local people in order to receive up-to-date information.	Environmental administration should be strengthened.	2
2.1	Each LA from municipality level and up should provide at least 1 park in order that people in the area can use the park for recreation or exercising purposes.	Every LA should have a park.	
2.2	Waste containers for different types of waste with clear identification on the containers should be provided.	F/S of solid waste management.	2
3.	Solid waste and wastewater management are national problems. LAs should not be responsible for the problems themselves as different LAs have different administrative capacities and budgets. Additionally, conflicts on benefits and between local tycoons are also obstacles to these operations. LAs should only be responsible for making preliminary decision and leave final decision to central government. Solid waste and wastewater management are now urgent issues in many areas.	Central/Provincial government or Orborjor should implement solid waste management and wastewater management.	2
4.	Certain information stated in draft PEQMP is unclear e.g. number of canals in the area (some canals extended through many Tambons, but information received from different Tambons do not coincide). Units responsible for making the plan should pay more attention to preciseness and should invite people to participate in plan making processes.	Collection of environmental information. Participation of local people.	4 3
5.1	Employ energy technology and bio-technology for waste management e.g. producing electricity and fertilizer from waste	Solid waste management.	2
5.2	Run campaign on household waste separation.	Solid waste management	2
6.	Representatives from communities/villages which have faced environmental problems should be invited to the 2nd seminar.	Participation for formulation of PEQMP.	3
7.1	Lay down preventive measures for infectious waste from clinics.	Solid waste management.	2
7.2	After the plan is completed, LAs should be invited to join monthly meetings to discuss on the issues and resolutions of different situations/areas.	Participation for monitoring of PEQMP.	3
7.3	Develop database of environmental information to be an exchange channel between related organizations.	Development of NREM database.	4
8.	Issue regulations and guidelines for related persons to follow & continuously follow up on the results of evaluation.	Monitoring of PEQMP.	3
9.1	Solid waste management 1. Existing waste should be disposed properly	Solid waste management.	2

No	Recommendations of Seminar Participants	Issues and Proposals	PP
	<p>and completely within 2-3 years.</p> <p>2. New incoming waste should be disposed by standard central waste disposal center e.g. recycle plastic bag or use it as material for making bio-diesel or biogas.</p> <p>3. Machine processing waste into energy, which costs about 60 million Baht, can turn plastic PP, HDPE, and PE types by 20,000-30,000 tons per year into diesel at approx. 3 million liters. Diesel from the process can then be use for paddy tractors or pumping machines. Now Rayong municipality together with private company has been investing in this equipment. The province and related organizations, including LA and private sector should consider using this equipment as well.</p>	<p>Solid waste management.</p> <p>Solid waste management.</p>	
9.2	<p>Establishment of Green Foundation in order to support/promote the enforcement of afforestation policy through:</p> <p>1. Establishing private forestation companies by providing subsidies from the Foundation.</p> <p>2. Running campaign inviting people to participate in forestation.</p>	Afforestation.	
10.1	Promote environmental management processes to the public.	Environmental education and public relations.	5
10.2	Transform plan into action.	Monitoring of PEQMP.	3
10.3	Increase severity of punishment for those who violate environmental laws.	Monitoring of NREM.	3
11.	To make plan, visiting sites and conducting field survey are important. Using questionnaire or interviewing of LAs might not yield precise information.	<p>Collection of environmental information.</p> <p>Officers should know environmental situation.</p>	4
12.1	Building Control laws should be enforced in Phra Nakhon Si Ayutthaya Province thoroughly. Amend existing laws (Public Health Act) in order to control household wastewater treatment system before discharging water back to water sources.	Monitoring of NREM.	3
12.2	Issue law prohibiting waste or straw burning to reduce global warming effects.	Monitoring of global warming.	
12.3	Build awareness of current environmental issues to people starting from early childhood.	Environmental education.	5
12.4	Draft environmental regulations to be used in the province.	Monitoring of NREM.	3
13.	Change Vision to "Environment for the sustainability of social well being" as 'social' includes industries, and social and natural heritages.		
14.1	<p>Build awareness on environmental monitoring and conservation to target groups such as children, young adult, students, and general people by:</p> <p>1. Supporting and encouraging activities on maintaining quality environment by public</p>	Environmental education and	5

No	Recommendations of Seminar Participants	Issues and Proposals	PP
	<p>participation e.g. students' environmental project contest such as environmental innovation, volunteer camping, rehabilitating deteriorated areas, and environmental ambassador program.</p> <p>2. Supporting the establishment of a network collaborating between units related to environmental management and communities. The network should cover all areas from village, subdistrict, and district in order to cooperate in monitoring, preventing, and protecting activities.</p>	<p>campaign.</p> <p>Monitoring of NREM.</p>	3
14.2	Organize plan to establish, extend, and support green area.	Green area.	
14.3	Plan on factories zoning with Ministry of Industry.		
14.4	Control, monitor factories by legal measures.		
14.5	Support the publicizing/promoting of environmental conservation by developing a 'hotline' to receive information on polluters, environmental problems makers in order to act as an information center and react to problems promptly.	Setup of Environmental Information Center.	4
15.	Run campaigns to create awareness among people starting from individuals to national organizations and to international organizations.	Natural resources and environmental awareness, environmental education.	5
16.	Conduct activities on following up and examining wastewater treatment system within industrial estates, on whether wastewater is treated before discharged back to water sources, as LAs do not have capacity to operate on their own without the support from related units.	Monitoring of wastewater discharged from industrial estates.	3 4
17.1	Vision is unclear. Vision should be changed to "natural resources and environment, including Worlds Heritages are sustainably conserved and rehabilitated".		
17.2	<p>Strategies are confusing. They should be divided into 3 main points which are:</p> <p>1. Support natural resources and environmental management with efficiency and sustainability.</p> <p>2. Promote natural resources and environment, and World Heritages conservation and rehabilitation with participation of all sectors.</p> <p>3. Provide accessible and useful provincial natural resources and environmental information system.</p>	Setup of useful provincial Environmental Information Center.	4
18.	1. With extensive uses of groundwater in some Tambons, certain areas are facing subsidence, low quality groundwater situation, contaminants such as rust, odor, and sediment. Careful consideration should be given before giving permission to construct new wells from now on.	Preservation of groundwater quality.	

No	Recommendations of Seminar Participants	Issues and Proposals	PP
	<p>2. Groundwater quality examination should also be conducted consistently. If groundwater is found to be in low quality, measures for solution should be laid down to maintain quality of living in the areas.</p> <p>3. And for Tambons which are located near municipality areas, groundwater usage should be ceased and turned to waterworks provided by municipality.</p>	<p>Monitoring of groundwater quality.</p> <p>Improvement of water supply system.</p>	
19.1	To make provincial NREM plan, issues and strategies should be clearly identified and cover all items of NRE in order that operation can be done effectively.		
19.2	To make provincial NREM plan, related units and LAs should be informed in order that they could learn and understand the issues. Information should be collected entirely and cover all items of NRE management.	Participation of LAs for formulation of PEQMP.	3
19.3	Solid waste should be managed with the emphasis on public participation. Guidelines for LAs to establish sanitary waste disposal center should also be provided	Public participation. Technical support for LAs by central government and experts.	1 3
20.	Due to time limitation and tight schedule, some participants failed to understand at certain points. Therefore, related documents on environmental quality management should be sent to related organizations so they can further study and bring about more benefits.	Draft PEQMP should be posted and made available to the public.	3
21.	As speakers provided no clear explanation in the seminar, some participants did not understand the plan or the framework.	The document should be delivered or posted.	3
22.	Book on "Provincial Environmental Quality Management Plan 2007-2011" should be published by low quality paper not high quality/ expensive paper in order that environment is conserved.	Conservation of natural resources.	
23.	From existing vision below: <ol style="list-style-type: none"> <li>1. Improve and sustain natural resources and environment, includes world heritages.</li> <li>2. Preserve World Heritages, deal with pollutions, and improve and sustain environment.</li> </ol>		
24.1	<p>Recommendations on situation and problems on NREM:</p> <ol style="list-style-type: none"> <li>1. Collect all information on canals before start organizing the plan.</li> <li>2. Set priority for managing different items of natural resources such as water, groundwater, and forest.</li> <li>3. Set priority for solving environmental problems such as wastewater, air pollution, and solid waste.</li> <li>4. Provide clear cooperation framework for</li> </ol>	<p>Collection of information. Setup of priority.</p> <p>Linkage of cooperation among central government, LAs and the public.</p>	4   1

No	Recommendations of Seminar Participants	Issues and Proposals	PP
	governmental, local, and public organizations.		
24.2	<p>Recommendations on PEQMP:</p> <ol style="list-style-type: none"> <li>1. Provide knowledge, build awareness of environmental issue on communities, general people, and students.</li> <li>2. Each district or province should have canal conservation projects (3-4 canals) in accordance with geographic area i.e. North/South/East/West.</li> <li>3. The plan should contain 3-year operation plan.</li> <li>4. Attract communities to conserve canals themselves e.g. run a contest on systematic canal management.</li> </ol>	<p>Environmental education.</p> <p>Formulation of canal conservation project.</p>	5

The sorting of recommendations, issues, and proposals were followed by intensive discussions, and as a result, the following Priority Projects were selected for implementation in AYP in the three-year-period of 2009-2011.

Table 4: Priority Projects to be implemented in AYP (2009-2011)

NO	Priority Project
PP1	Strengthening linkages between central government and LA
PP2	Strengthening province-wide environmental administration
PP3	Create a system of local resident participation in both the formulation and implementation phases of PEQMP
PP4	Create an Environmental Information Center and provide environmental information
PP5	Promote environmental awareness education and the dissemination of environmental information among local residents

The details of each Priority Project listed in above are given below:

### **PP1 Strengthening linkages between central government and LA**

Tasks related to NREM have been comprehensively decentralized and devolved onto local administrations, but the LAs put in charge of these tasks do not realistically have the capacity to execute these tasks. Therefore, for the time being, problem-solving in NREM will be difficult without the strong support of central government agencies.

Supporting LAs in NREM requires more than ONEP assistance; additional requirements would be administrative support from REO in charge of the region and PEO in charge of the province, support for pollution control issues from PCD, support in information management from DEQP, and support in each natural resource sector by RFD, DNP, DMR, DMCR, DWR, and DGR. Specifically, the LAs would probably require meticulous assistance in getting to know the latest scientific theories and technical information, technical instruction, sector-based training, dispatch of and instruction by experts, building of the NREM GIS database and providing its product, formulating plans, and perhaps even in acquisition of funds and equipment.

In general, however, there is reluctance on the LAs' part to access resources within the central government. Therefore we propose that steps be taken to facilitate LAs' access to specialist assistance within the central government, by e.g. the creation of a dedicated support division within ONEP, perhaps called the "LA Support Center for NREM" which shall have as its objective "providing information, planning and technical support for NREM by LAs".

### **PP2 Strengthening province-wide environmental administration**

There are several options on how to strengthen environmental administration within a province.

The first option is to strengthen the Orborjor. Some provinces within Thailand have already established an environmental division within the Orborjor to take charge of NREM. The Orborjor of AYP already has an Environmental and City Planning Section in the Engineering Division, but since their 4 staff members are also in charge of city planning and the environment-related budget only comes to 0.2% of the total budget, it is dubious that they are successfully functioning as an environmental administration unit. There are no environmental divisions in the Orborjor of SKP. It must be pointed out that NREM is clearly written as one of the main responsibilities of Orborjor, and it is an important duty that is yet to be carried out.

The second option is to establish an environmental division under the provincial administration led by the governor. However, as this administrative unit is not a Local Administration unit, it does not conform to the decentralization directive and its policy of devolving environmental administration to local administrations.

The third option is to strengthen the environmental divisions within Tessaban and Orborjor, but as discussed in the previous section, the scale of these organizations is often too small and unsuitable for the promotion of environment-related projects.

The fourth option is for the branch offices of central government agencies to take over environmental administration, but this option has an even stronger centralization effect than the second option and directly goes against the decentralization movement. In plain terms this option would be to strengthen the PEO, but due to the above reason, it is the least likely option.

Considering the above, we suggest that the most desirable option would be to strengthen the Orborjor. If it is hard to physically increase the number of staff in Orborjor, perhaps it is possible to unify staff members from relevant divisions in provincial administration, specifically Fishery, Agriculture, Transportation, Public Health, Public Works, and Social Security, and shift them over to Orborjor as a new NREM team. Another possibility is to absorb the PEO into Orborjor, and to strengthen the capacities of the Orborjor using ex-PEO staff as the nucleus.

**PP3 Create a system of local resident participation in both the formulation and implementation phases of PEQMP**

It is impossible for all local residents of a province to participate in PEQMP formulation through workshops, no matter how many times they are held. But it is possible to guarantee the participation of local residents by gathering their opinions on draft plans, and reflecting such opinions in further plan formulation. Specifically, we propose that the draft PEQMP formulated by the formulation committee be posted and made available to the public in branch government offices (for example, Amphoe offices) for 45 days, the same way zoning regulation changes are handled. At the same time, the posting period of the draft PEQMP should be publicized through cable TV, radio stations, and websites, with the purpose of attracting as wide a range of local resident opinions as possible, in order to reflect such opinions on the plan itself.

The implementation of PEQMP is to be monitored by the formulation committee, and MNRE will supervise the method of monitoring. We hereby also recommend that the monitoring committee include, if possible, environmental experts, representatives of NGOs, and representatives of local residents, so that various stakeholders can jointly monitor the implementation of NREM.

**PP4 Create an Environmental Information Center and provide environmental information**

We recommend that the Environmental Information Center in PEOs provide environmental information supply services; that the information provided are in paper medium and PDF file format; and that the information should come from databases maintained and updated by the REO.

The management of GIS databases requires a certain degree of technical expertise, and is difficult for generalized staff to do it by themselves. The REO should manage the NREM GIS database that has been already constructed, utilizing their existing GIS specialist staff. By creating a new Database Center in REO, the REO can update and maintain the database and provide the updated information to PEO and other administrative organizations.

The existing Environmental Information Centers in PEOs (AYP and SKP) can be utilized. In term of providing environmental information in the form of hard copies on paper medium, or if desired, PDF files. Its clients would be local residents, LAs, developers, and organizations in general, and the Environmental Information Center should not only *provide* information but also *collect* environmental information from these clients. For the latter purpose, it would be important to widely advertise the presence of the Environmental Information Center to local residents.

The opinion that “wastewater from factories should be monitored by the LA” was voiced in the First Seminar. This is a difficult task to implement, as there are issues of technique,



budget, and jurisdiction to be resolved. An alternative scheme would be to make available the biannual water quality measurements of factory discharge water through the Environmental Information Center. Among factories that have conducted an EIA, such measurements are taken by the factories themselves and reported in their "Operation Results Report on Environment" submitted twice yearly to ONEP. For factories that did not conduct EIA, the LA overseeing the factory has discharge water analysis data in their records. The Environmental Information Center can put together such information and provide them to local residents.

#### **PP5 Promote environmental awareness education and the dissemination of environmental information among local residents**

The cooperation of local residents is indispensable in monitoring PEQMP progress and realizing its goals. The environmental awareness of each resident supports the execution of the plan. Therefore, the promotion of environmental awareness education among local residents becomes extremely important.

We recommend that existing teaching aids and TV programs for environmental awareness education, created mainly by DEQP within MNRE, be actively used. The frequent use of such materials could lead to additional tasks such as content upgrades and localization. The building of cooperative structures within MNRE itself will become important in supporting such program updates and upgrades; for example, it can be envisioned that such an upgrade will be proposed and budgeted by ONEP but outsourced to other departments. As discussed previously, the promotion of resident participation in NREM and the promotion of environmental awareness both originally fell within the jurisdiction of ONEP, and the task of supporting the decentralization of such responsibilities must be inevitably shouldered by ONEP.

We also recommend that the results of PEQMP monitoring be made available to the public as a public relations move. The results can be published in information bulletins published by the province, or if such a medium is unavailable, through cable TV, radio stations, and websites. For example, in SKP, both cable TV and radio broadcasts are provided free of charge, and such measures should not be difficult to implement.

## **2.4 Questionnaire Forms for Environmental Awareness Survey**

Following sample forms are attached for the references.

Sample Form 1: Questionnaire Form for Environmental Awareness Survey (for local residents and business establishments)

Sample Form 2: Questionnaire Form for Environmental Awareness Survey (for local administration staff)

Sample Form 3: Questionnaire Form for Environmental Awareness Survey (for NGO)

Sample Form 4: Question, opinion, and/or recommendation submission form for seminars

**Opinion Survey to Local People and Enterprises  
on Natural Resources and Environmental Management  
in Samut Songkhram Province**

Sample No.: \_\_\_\_\_

Name of Interviewer: \_\_\_\_\_

Name of Respondent: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Address of Respondent: \_\_\_\_\_

Age: \_\_\_\_\_ years (between 21-60 years) Gender:  Male  Female

- Occupation:
1. Governmental officer
  2. Private company staff
  3. Business owner
  4. Student
  5. No career / Unemployed
  6. Other (specify) \_\_\_\_\_

- Education:
1. Primary School
  2. Junior High School
  3. High School
  4. Vocational School
  5. College
  6. Post-graduated level

Date of Interview: \_\_\_\_\_

Starting time: \_\_\_\_\_ Finishing time: \_\_\_\_\_

Name of Editor: \_\_\_\_\_

Date of Editing: \_\_\_\_\_

# 1. General Question

Q.1. How many persons are there in your premises?

- 1.1 Family member
- 1.2 Employee

1	
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Q.2. What type of housing are you living in now?

- 1. Detached house.
- 2. Town house
- 3. Apartment/Condominium
- 4. Commercial building
- 5. Others (please specify: \_\_\_\_\_)

2	
---	--

Q.3. What is the business Category of the House?

- 1. Residence
- 2. Restaurant/catering shop (Go to Q.5)
- 3. Retail, please specify: \_\_\_\_\_ (Go to Q.5)
- 4. Office, please specify: \_\_\_\_\_ (Go to Q.5)
- 5. Others, please specify: \_\_\_\_\_ (Go to Q.5)

3	
---	--

Q.4. How much is total income of your family per month?

- 1. Less than 10,000 Baht/month
- 2. 10,000 – 20,000 Baht/month
- 3. More than 20,000 Baht/month
- 4. No response

4	
---	--

Q.5. How many years do you dwell in present premises?

- 1. Less than 5 years
- 2. 5 - 9 years
- 3. 10 - 19 years
- 4. 20 years or more
- 5. No response

5	
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Q.6. How do you get water for your daily life?

- 1. Water supply tap (s) in my premises.
- 2. A communal water supply tap in my area.
- 3. Well/groundwater.
- 4. Others (please specify : \_\_\_\_\_ )

6	
---	--

Q.7. How much do you pay for water per month?

7	Baht/month
---	------------

Q.8. How much do you pay per month for electricity?

8	Baht/month
---	------------

Q.9. Do you have sewage service in your premise?

- 1. Yes

9	
---	--

2. No (Go to Q.12)

Q.10. Do you pay sewage service charge? 

10	
----	--

  
 1. Yes  
 2. No

Q.11. If yes, how much do you pay for sewage service per month? 

11	Baht/month
----	------------

Q.12. What type of toilet facility do you use in your premises? 

12	
----	--

  
 1. Flush toilet with septic tank  
 2. Pit latrine.  
 3. No toilet.

Q.13. Do you have solid waste collection services? 

13	
----	--

  
 1. Yes, monthly fee \_\_\_Baht (Go to Q 15)  
 2.No 

13.1	Baht/month
------	------------

Q.14. How do you dispose of your refuse? 

14	
----	--

  
 1. Open burning in the premise  
 2. Buried in the premise  
 3. Dumped in vacant lot  
 4. I do not know.  
 5. Others (please specify: \_\_\_\_\_ )

Q.15. Suppose the provincial and local administrations make a plan to construct solid waste treatment/disposal facilities in and around your region, what conditions do you set to agree with the plan? Please select all that you agree among the following choices)

15	
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01. We can participate in the planning process.
02. The location of facilities is decided, regarding human health and conservation of nature.
03. The environment impact assessment survey is thoroughly carried out.
04. The provincial and local administrations reveal all necessary information and data to public.
05. The provincial and local administrations conduct monitoring and inspections of facilities properly and gives guidance to the facilities when it is needed.
06. Waste treatment/disposal facilities take all necessary measures to prevent leakage and emission of toxic substances from facilities.
07. The provincial and local administrations promotes reuse/recycle of waste and cleaner production technology to reduce the volume of waste.
08. The provincial and local administrations provides special programs to promote local economy.
09. I won't agree with any plans to construct treatment/disposal facilities in my neighbor.
10. I do not know.
11. Other (please specify : \_\_\_\_\_)
12. No response

## 2. Prioritized Issues on Natural Resources and Environmental Management

Q.16. What do you think the most serious problem is in Samut Songkhram Province now? What is the second most serious problem? Please mark 1<sup>st</sup> and 2<sup>nd</sup> most serious problem respectively.

- |   |      |  |
|---|------|--|
| 1. Natural resources and environment degradation      | 16.1 |  |
| 2. Economic stagnation specify: _____                 |      |  |
| 3. Insufficient capability of the LG<br>specify _____ | 16.2 |  |
| 4. Politics (specify _____)                           |      |  |
| 5. Poor public health conditions (specify _____)      |      |  |
| 6. Others (specify _____)                             |      |  |

Q.17. In order to solve the most serious problem what do you think the most prioritized measure in your administrative area at present? What is the second most prioritized measure? Please specify the 1<sup>st</sup> and 2<sup>nd</sup> most prioritized measures respectively.

- |                                     |  |
|-------------------------------------|--|
| 17.1 The most prioritized measure   |  |
| 17.2 The second prioritized measure |  |

Q.18.

18.1 Are you interested in environment issues?

1. Yes
2. Yes, but a little
3. No (Go to Q 19)
4. No response (Go to Q 19)

18.1	
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18.2 If you are interested in environment issues, how do you get information on environment issues? Please select the two biggest sources of information among the following choices

- |                                |                           |
|--------------------------------|---------------------------|
| 1. TV news                     | 8. Family/Friends         |
| 2. Radio News                  | 9. Residents' association |
| 3. Newspaper                   | 10. Public announcement   |
| 4. Magazine/Journal            | 11. Other _____           |
| 5. Official bulletin           | 12. I do not know         |
| 6. Newsletter published by NGO | 13. No response           |
| 7. Internet                    |                           |

18.2.1		3.
18.2.2		

Q.19. How serious do you feel the following natural resources and environment problems? Please select one in each of the following environment problems.

	1. Not serious at all	2. Not very serious	3. Some what serious	4. Very serious	5. Can't choose	6. No response
1. Soil and land resources				Answer: Reason:		
2. Mangrove resources				Answer: Reason:		
3. Fishery resources				Answer: Reason:		
4. Water resources				Answer: Reason:		
5. Marine and coastal resources				Answer: Reason:		
6. Biodiversity				Answer: Reason:		
7. Water quality				Answer: Reason:		
8. Solid waste				Answer: Reason:		
9. Air quality				Answer: Reason:		
10. Noise quality				Answer: Reason:		
11. Hazardous wastes and toxic substances				Answer: Reason:		
12. Urban environment such as parks, amenity, landscape, etc.				Answer: Reason:		
13. Natural and cultural assets				Answer: Reason:		
14. Global warming / climate change				Answer: Reason:		
15. Others, if any Specify:				Answer: Reason:		

Q.20. How much do you feel environmental degradation affects your life?

1. It dose not affect at all.
2. It affects to some degree.
3. It causes serious problems.
4. I do not know or I am not sure.
5. Others (Please specify:\_\_\_\_\_).
6. No response

20	
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Q.21. Which is more important for you, Economic Development or Environment Conservation?

1. Economic development is more important.
2. Environment conservation is more important.
3. Others (Please specify:\_\_\_\_\_).

21	
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Q.22 What do you think the main pollutant source is for the following pollution problems? Please answer in each pollution problem.

	Source of Pollutants						
1. Air pollution	1. Factories	2. Automobile	3. Open burning by agriculture		5. Others (Specify: )	6. I do not know	7. No problem
2. Water Pollution	1. Factories	2. Household	3. Agriculture	4. Aquaculture	5. Others (Specify: )	6. I do not know	7. No problem
3. Solid Waste	1. Factories	2. Household	3. Road vender	4. Tourist	5. Others (Specify: )	6. I do not know	7. No problem
4. Noise	1. Factories	2. Construction	3. Road transportation	4. Water transportation	5. Others (Specify: )	6. I do not know	7. No problem

### 3. Willingness to Cooperate for the Improvement of Natural Resources and Environmental Management

Q.23 Do you think that environmental regulations are observed in Samut Songkhram Province?

1. Yes, they are observed
2. They are somewhat observed
3. They are seldom observed
4. I do not know
5. No response

23	
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Q.24 Do you think that environmental regulations are observed in your administrative area?

1. Yes, they are observed
2. They are somewhat observed
3. They are seldom observed
4. I do not know
5. No response

24	
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Q.25. What kind of measures do you think should be taken to make regulations observed?

(Plural answers are accepted)

1. The central government tightens control and increases penalty.
2. The provincial administration tightens control and increases penalty.
3. The local administration (Orborjor, Tessaban and Orbortor) tightens control and increases penalty.
4. Industries should be raised awareness to take pollution control measures more seriously.
5. People should be raised awareness to pay more attention to environmental issues.
6. Others (Please specify: \_\_\_\_\_)
7. I do not know
8. No response

25	
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Q.26. What do you think the government should do to improve environment?  
Please select 3 among the following choices

26			
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01. Law enforcement (for example to establish new laws and regulations, to tighten its control, etc)
02. To construct more waste water treatment facilities and solid waste treatment & disposal facilities
03. To promote the reduce of solid waste - reuse/recycle
04. To help industries/private sector improve pollution control capabilities
05. To promote environment education
06. To strengthen provincial administrations
07. To strengthen local administrations
08. To promote participation of local people
09. To open more information and data
10. I do not know

Q.27 Regarding city water supply service, how do you think the service charge?

1. Expensive
2. Proper amount
3. Cheap
4. I do not receive the services (Go to Q.30)
5. I do not know (Go to Q.30)

27	
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Q.28 Regarding city water supply, if it is improved better than the present situation, will you pay more?

1. Yes, I will pay more
2. No, I will not pay more
3. I do not know

28	
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Q.29 Regarding sewerage, if it is improved better than the present situation, will you pay some fee?

1. Yes, I will pay more
2. No, I will not pay more
3. I do not know

29	
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Q.30 Regarding solid waste collection services, how do you think the service charge?

1. Expensive
2. Proper amount
3. Cheap
4. I do not receive the services (Go to Q.32)
5. I do not know (Go to Q.32)

30	
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Q.31 Regarding refuse collection service, if it is improved better than the present situation, will you pay more?

1. Yes, I will pay more
2. No, I will not pay more
3. I do not know

31	
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Q.32 Do you try to save water and energy consumption in your daily life? If yes, what is the reason?

- 1. I always try to save water and energy
- 2. I sometimes try to save water and energy
- 3. I do not care about saving water and energy (Go to Q.33)
- 4. I do not know (Go to Q.33)
- 5. Others (Please specify: \_\_\_\_\_) (Go to Q.33)
- 6. No response (Go to Q.33)

32.1	
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(only to those who chose 1 or 2 in the Q.32)

- 1. It is for economic reason
- 2. It is for environment concern
- 3. It is both for economic and environment reason
- 4. I do not know
- 5. Others please specify: \_\_\_\_\_
- 6. No response

32.2	
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Q.33 Do you know “Environmentally Friendly Products”? (Those concerned with not damaging the Environment)

- 1. Yes
- 2. No (Go to 35)

33	
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Q.34 Which of the following statements regarding Environmentally Friendly Products is an appropriate description of your attitude?

- 1. I buy them even if they are a little bit more expensive than ordinary products.
- 2. I only buy them if the price is the same.
- 3. I don't think they are environmentally friendly products.
- 4. I am not interested in to use them.
- 5. I do not know.

34	
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Q.35 Are you willing to cooperate to reduce environmental problems in your community?

- 1. Yes
- 2. No
- 3. I do not know

35	
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Q.36 If the local government would introduce a different waste collection system, such as segregating the waste into “easily decomposable” (food, gardening) and “recyclable” (metal, bottles), would you be willing to cooperate?

- 1. Yes (Go to Q.38)
- 2. No
- 3. I do not know

36	
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Q.37 Why would you not be willing (or do not know if you would be willing) to cooperate with such a system? (Plural answers are accepted)

- 1. Several containers and bags are needed.
- 2. More work and effort are needed.
- 3. I do not have time.
- 4. It is very inconvenient.
- 5. It could increase the collection fee.

37	
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- 6. I am afraid that segregated waste will be mixed when it is collected.
- 7. Other (please specify: \_\_\_\_\_ )

Q.38 The Samut Songkhram Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. Are you interested to participate in the process or attend the meetings organized by the Project?

- 1. Yes, we will without conditions
- 2. Yes, we will with conditions \_\_\_\_\_
- 3. No
- 4. I do not know
- 5. No response.

38	
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**4. Suggestions for Formulation of Provincial Environmental Quality Management Plan**

The Samut Songkhram Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. We are very welcome to receive your valuable suggestions for the plan. Please kindly state your constructive opinion on the plan in the following table.

My suggestion to the PEQMP

**----- Thank you very much!! -----**

**Opinion Survey to Local People and Enterprises  
on Natural Resources and Environmental Management  
in Ayutthaya Province**

Sample No.: \_\_\_\_\_

Name of Interviewer: \_\_\_\_\_

Name of Respondent: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Address of Respondent: \_\_\_\_\_

Age: \_\_\_\_\_ years (between 21-60 years)      Gender:  Male  Female

- Occupation:
1. Governmental officer
  2. Private company      staff
  3. Business owner
  4. Student
  5. No career / Unemployed
  6. Other (specify) \_\_\_\_\_

- Education:
1. Primary School
  2. Junior High School
  3. High School
  4. Vocational School
  5. College
  6. Post-graduated level

Date of Interview: \_\_\_\_\_

Starting time: \_\_\_\_\_ Finishing time: \_\_\_\_\_

Name of Editor: \_\_\_\_\_

Date of Editing: \_\_\_\_\_

# 1. General Question

Q.1. How many persons are there in your premises?

- 1.1 Family member
- 1.2 Employee

1	
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Q.2. What type of housing are you living in now?

- 1. Detached house.
- 2. Town house
- 3. Apartment/Condominium
- 4. Commercial building
- 5. Others (please specify: \_\_\_\_\_)

2	
---	--

Q.3. What is the business Category of the House?

- 1. Residence
- 2. Restaurant/catering shop (Go to Q.5)
- 3. Retail, please specify: \_\_\_\_\_ (Go to Q.5)
- 4. Office, please specify: \_\_\_\_\_ (Go to Q.5)
- 5. Others, please specify: \_\_\_\_\_ (Go to Q.5)

3	
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Q.4. How much is total income of your family per month?

- 1. Less than 10,000 Baht/month
- 2. 10,000 – 20,000 Baht/month
- 3. More than 20,000 Baht/month
- 4. No response

4	
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Q.5. How many years do you dwell in present premises?

- 1. Less than 5 years
- 2. 5 - 9 years
- 3. 10 - 19 years
- 4. 20 years or more
- 5. No response

5	
---	--

Q.6. How do you get water for your daily life?

- 1. Water supply tap (s) in my premises.
- 2. A communal water supply tap in my area.
- 3. Well/groundwater.
- 4. Others (please specify : \_\_\_\_\_)

6	
---	--

Q.7. How much do you pay for water per month?

7	Baht/month
---	------------

Q.8. How much do you pay per month for electricity?

8	Baht/month
---	------------

Q.9. Do you have sewage service in your premise?

9	
---	--

- 1. Yes
- 2. No (Go to Q.12)

Q.10. Do you pay sewage service charge? 

10	
----	--

- 4. Yes
- 5. No

Q.11. If yes, how much do you pay for sewage service per month? 

11	Baht/month
----	------------

Q.12. What type of toilet facility do you use in your premises? 

12	
----	--

- 1. Flush toilet with septic tank
- 2. Pit latrine.
- 3. No toilet.

Q.13. Do you have solid waste collection services? 

13	
----	--

- 1. Yes, monthly fee \_\_\_Baht (Go to Q 15)
- 2. No

13.1	Baht/month
------	------------

Q.14. How do you dispose of your refuse? 

14	
----	--

- 1. Open burning in the premise
- 2. Buried in the premise
- 3. Dumped in vacant lot
- 4. I do not know.
- 5. Others (please specify: \_\_\_\_\_)

Q.15. Suppose the provincial and local administrations make a plan to construct solid waste treatment/disposal facilities in and around your region, what conditions do you set to agree with the plan? Please select all that you agree among the following choices)

15	
----	--

- 01. We can participate in the planning process.
- 02. The location of facilities is decided, regarding human health and conservation of nature.
- 03. The environment impact assessment survey is thoroughly carried out.
- 04. The provincial and local administrations reveal all necessary information and data to public.
- 05. The provincial and local administrations conduct monitoring and inspections of facilities properly and gives guidance to the facilities when it is needed.
- 06. Waste treatment/disposal facilities take all necessary measures to prevent leakage and emission of toxic substances from facilities.
- 07. The provincial and local administrations promote reuse/recycle of waste and cleaner production technology to reduce the volume of waste.
- 08. The provincial and local administrations provide special programs to promote local economy.
- 09. I won't agree with any plans to construct treatment/disposal facilities in my neighbor.
- 10. I do not know.
- 11. Other (please specify : \_\_\_\_\_)
- 12. No response

## 2. Prioritized Issues on Natural Resources and Environmental Management

Q.16. What do you think the most serious problem is in Ayutthaya Province now? What is the second most serious problem? Please mark 1<sup>st</sup> and 2<sup>nd</sup> most serious problem respectively.

- |   |      |  |
|---|------|--|
| 1. Natural resources and environment degradation      | 16.1 |  |
| 2. Economic stagnation specify: _____                 |      |  |
| 3. Insufficient capability of the LG<br>specify _____ | 16.2 |  |
| 4. Politics (specify _____)                           |      |  |
| 5. Poor public health conditions (specify _____)      |      |  |
| 6. Others (specify _____)                             |      |  |

Q.17. In order to solve the most serious problem what do you think the most prioritized measure in your administrative area at present? What is the second most prioritized measure? Please specify the 1<sup>st</sup> and 2<sup>nd</sup> most prioritized measures respectively.

- |                                     |  |
|-------------------------------------|--|
| 17.1 The most prioritized measure   |  |
| 17.2 The second prioritized measure |  |

Q.18.

18.1 Are you interested in environment issues?

1. Yes
2. Yes, but a little
3. No (Go to Q 19)
4. No response (Go to Q 19)

18.1	
------	--

18.2 If you are interested in environment issues, how do you get information on environment issues? Please select the two biggest sources of information among the following choices

- |                                |                           |
|--------------------------------|---------------------------|
| 1. TV news                     | 8. Family/Friends         |
| 2. Radio News                  | 9. Residents' association |
| 3. Newspaper                   | 10. Public announcement   |
| 4. Magazine/Journal            | 11. Other _____           |
| 5. Official bulletin           | 12. I do not know         |
| 6. Newsletter published by NGO | 13. No response           |
| 7. Internet                    |                           |

18.2.1	
18.2.2	

Q.19 How serious do you feel the following natural resources and environment problems? Please select one in each of the following environment problems.

	1. Not serious at all	2. Not very serious	3. Some what serious	4. Very serious	5. Can't choose	6. No response
1. Soil and land resources				Answer: Reason:		
2. Water resources				Answer: Reason:		
3. Biodiversity				Answer: Reason:		
4. Water quality				Answer: Reason:		
5. Solid waste				Answer: Reason:		
6. Air quality				Answer: Reason:		
7. Noise quality				Answer: Reason:		
8. Hazardous wastes and toxic substances				Answer: Reason:		
9. Urban environment such as parks, amenity, landscape, etc.				Answer: Reason:		
10. Natural and cultural assets				Answer: Reason:		
11.. Global warming / climate change				Answer: Reason:		
12. Others, if any Specify:				Answer: Reason:		

Q.20 How much do you feel environmental degradation affects your life?

1. It dose not affect at all.
2. It affects to some degree.
3. It causes serious problems.
4. I do not know or I am not sure.
5. Others (Please specify: \_\_\_\_\_).
6. No response

20	
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Q.21 Which is more important for you, Economic Development or Environment Conservation?

1. Economic development is more important.
2. Environment conservation is more important.
3. Others (Please specify: \_\_\_\_\_).

21	
----	--

Q.22 What do you think the main pollutant source is for the following pollution problems? Please answer in each pollution problem.

	Source of Pollutants						
1. Air pollution	1.Factories	2. Automobile	3. Open burning by agriculture	/	5. Others (Specify: )	6. I do not know	7. No problem
2. Water Pollution	1.Factories	2. Household	3. Agriculture	4.Aquaculture	5. Others (Specify: )	6. I do not know	7. No problem
3. Solid	1.Factories	2. Household	3. Road	4. Tourist	5. Others (Specify: )	6. I do not	7. No

Waste			vender			know	problem
4. Noise	1.Factories	2.Construction	3.Road transportation	4.Water transportation	5. Others (Specify: )	6. I do not know	7. No problem

## 6. Willingness to Cooperate for the Improvement of Natural Resources and Environmental Management

Q.23 Do you think that environmental regulations are observed in Ayutthaya Province?

1. Yes, they are observed
2. They are somewhat observed
3. They are seldom observed
4. I do not know
5. No response

23	
----	--

Q.24 Do you think that environmental regulations are observed in your administrative area?

1. Yes, they are observed
2. They are somewhat observed
3. They are seldom observed
4. I do not know
5. No response

24	
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Q.25 What kind of measures do you think should be taken to make regulations observed?

(Plural answers are accepted)

1. The central government tightens control and increases penalty.
2. The provincial administration tightens control and increases penalty.
3. The local administration (Orborjor, Tessaban and Orbortor) tightens control and increases penalty.
4. Industries should be raised awareness to take pollution control measures more seriously.
5. People should be raised awareness to pay more attention to environmental issues.
6. Others (Please specify: \_\_\_\_\_)
7. I do not know
8. No response

25	
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Q.26 What do you think the government should do to improve environment? Please select 3 among the following choices

26			
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01. Law enforcement (for example to establish new laws and regulations, to tighten its control, etc)
02. To construct more waste water treatment facilities and solid waste treatment & disposal facilities
03. To promote the reduce of solid waste - reuse/recycle
04. To help industries/private sector improve pollution control capabilities
05. To promote environment education
06. To strengthen provincial administrations
07. To strengthen local administrations
08. To promote participation of local people
09. To open more information and data
10. I do not know



Q.27 Regarding city water supply service, how do you think the service charge?

- 1. Expensive
- 2. Proper amount
- 3. Cheap
- 4. I do not receive the services (Go to Q.30)
- 5. I do not know (Go to Q.30)

27	
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Q.28 Regarding city water supply, if it is improved better than the present situation, will you pay more?

- 1. Yes, I will pay more
- 2. No, I will not pay more
- 3. I do not know

28	
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Q.29 Regarding sewerage, if it is improved better than the present situation, will you pay some fee?

- 1. Yes, I will pay more
- 2. No, I will not pay more
- 3. I do not know

29	
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Q.30 Regarding solid waste collection services, how do you think the service charge?

- 1. Expensive
- 2. Proper amount
- 3. Cheap
- 4. I do not receive the services (Go to Q.32)
- 5. I do not know (Go to Q.32)

30	
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Q.31 Regarding refuse collection service, if it is improved better than the present situation, will you pay more?

- 1. Yes, I will pay more
- 2. No, I will not pay more
- 3. I do not know

31	
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Q.32 Do you try to save water and energy consumption in your daily life? If yes, what is the reason?

- 1.
- 1. I always try to save water and energy
  - 2. I sometimes try to save water and energy
  - 3. I do not care about saving water and energy (Go to Q.33)
  - 4. I do not know (Go to Q.33)
  - 5. Others (Please specify: \_\_\_\_\_) (Go to Q.33)
  - 6. No response (Go to Q.33)

32.1	
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2. (only to those who chose 1 or 2 in the previous question)

- 1. It is for economic reason
- 2. It is for environment concern
- 3. It is both for economic and environment reason

32.2	
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4. I do not know

5. Others Please specify: \_\_\_\_\_

6. No response

Q.33 Do you know “Environmentally Friendly Products”? (Those concerned with not damaging the Environment)

1. Yes

2. No (Go to 35)

33	
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Q.34 Which of the following statements regarding Environmentally Friendly Products is an appropriate description of your attitude?

1. I buy them even if they are a little bit more expensive than ordinary products.

2. I only buy them if the price is the same.

3. I don’t think they are environmentally friendly products.

4. I am not interested in to use them.

5. I do not know.

34	
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Q.35 Are you willing to cooperate to reduce environmental problems in your community?

1. Yes

2. No

3. I do not know

35	
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Q.36 If the local government would introduce a different waste collection system, such as segregating the waste into “easily decomposable” (food, gardening) and “recyclable” (metal, bottles), would you be willing to cooperate?

1. Yes (Go to Q.38)

2. No

3. I do not know

36	
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Q.37 Why would you not be willing (or do not know if you would be willing) to cooperate with such a system? (Plural answers are accepted)

1. Several containers and bags are needed.

2. More work and effort are needed.

3. I do not have time.

4. It is very inconvenient.

5. It could increase the collection fee.

6. I am afraid that segregated waste will be mixed when it is collected.

7. Other (please specify: \_\_\_\_\_ )

37	
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Q.38 The Ayutthaya Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. Are you interested to participate in the process or attend the meetings organized by the Project?

1. Yes, we will without conditions

2. Yes, we will with conditions \_\_\_\_\_

3. No

4. I do not know

5. No response.

38	
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#### 4. **Suggestions for Formulation of Provincial Environmental Quality Management Plan**

The Ayutthaya Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. We are very welcome to receive your valuable suggestions for the plan. Please kindly state your constructive opinion on the plan in the following table.

My suggestion to the PEQMP

***----- Thank you very much!! -----***

**Opinion Survey to Local Administration  
on Natural Resources and Environmental Management  
in Samut Songkhram (S/K) Province**

Sample No.: \_\_\_\_\_

Name of Interviewer: \_\_\_\_\_

Name of Local Administration: \_\_\_\_\_

Name of Respondent: \_\_\_\_\_

Position of Respondent: \_\_\_\_\_

Phone number: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

Starting time: \_\_\_\_\_ Finishing time: \_\_\_\_\_

Name of Editor: \_\_\_\_\_

Date of Editing: \_\_\_\_\_

# 1. Current Natural Resources and Environmental Management in Your Local Administration (LA)

Q.1. Area, population, household and employee of your local administration?

- 1. Administration Area: ( \_\_\_\_\_ km<sup>2</sup>)
- 2. Population: ( \_\_\_\_\_ persons)
- 3. Household: ( \_\_\_\_\_ households)
- 4. Number of LA Staffs in Total: ( \_\_\_\_\_ persons)
  - 4-1 Government Officer: ( \_\_\_\_\_ persons)
  - 4-2 Permanent Staffs: ( \_\_\_\_\_ persons)
  - 4-3 Temporary & Daily Staffs: ( \_\_\_\_\_ persons)

Q.2. Budget of your local Administration (LA) in past three years?

	2005	2006	2007
2.1 Total budget	2.1.1	2.1.2	2.1.3
2.2 Budget for natural resources and environmental management (Excluding Salary)	2.2.1	2.2.2	2.2.3

Q.3. Do you have an organization responsible for the natural resources and environmental management in your LA?

- 1. Yes
- 2. No (Go to Q.5)
- 3. I do not know (Go to Q.5)

3	
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Q.4. Name of the organization responsible for the natural resources and environmental management.

Organization	Total Staff	Government Officer	Permanent Staffs	Temporary & Daily Staffs
4.1	4.1.1 persons	4.1.2 persons	4.1.3 persons	4.1.4 persons
4.2	4.2.1 persons	4.2.2 persons	4.2.3 persons	4.2.4 persons
4.3	4.3.1 persons	4.3.2 persons	4.3.3 persons	4.3.4 persons

Q.5. Do you have an organization responsible for development control (building and construction permits and enforcement) in your LA?

- 1. Yes
- 2. No (Go to Q.7)
- 3. I do not know (Go to Q.7)

5	
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Q.6.Name of the organization responsible for development control.

Organization	Total Staff	Government Officer	Permanent Staffs	Temporary & Daily Staffs
6.1	6.1.1 persons	6.1.2 persons	6.1.3 persons	6.1.4 persons

Q.7.Do you have a zoning map (area development plan, land use plan, etc.) to control development of your administrative area?

1. Yes                      2. No                      3. I do not know

7	
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Q.8.Do you have a potable water supply system in your administrative area?

- 8.1    1. Yes, whole area  
       2. Yes, but part of the area  
       3. No                      (Go to Q.9)  
       4. I do not know            (Go to Q.9)

8	
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- 8.2 Name of responsible organization: ( \_\_\_\_\_ )  
 8.3 Design supply capacity: ( \_\_\_\_\_ m<sup>3</sup>/day )  
 8.4 Average actual supply: ( \_\_\_\_\_ m<sup>3</sup>/day )  
 8.5 Coverage rate in area: ( \_\_\_\_\_ % in area )  
 8.6 Coverage rate in population: ( \_\_\_\_\_ % in population )  
 8.7 Tariff: (Between \_\_\_\_\_ to \_\_\_\_\_ Baht/m<sup>3</sup> )  
 8.8 Production cost:( \_\_\_\_\_ Baht/year )  
 8.9 Location and name of water purification plant: ( \_\_\_\_\_ )  
 8.10 Main sources of potable water: ( \_\_\_\_\_ )

Q.9.Do you have connection to sewerage system in your administrative area?

- 9.1    1. Yes, whole area  
       2. Yes, but part of the area  
       3. No                      (Go to Q.10)  
       4. I do not know            (Go to Q.10)

9.1	
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- 9.2 What kind of sewerage system?  
 1. Sewerage pipe with treatment facility covering \_\_\_\_\_ % of households  
 2. Sewerage pipe without treatment facility

9.2	
9.2.1	%

- 9.3 Name of operating organization:( \_\_\_\_\_ )  
 9.4 Coverage rate in area: ( \_\_\_\_\_ % in area )  
 9.5 Coverage rate in population: ( \_\_\_\_\_ % in population )  
 9.6 Tariff: (Between \_\_\_\_\_ to \_\_\_\_\_ Baht/m<sup>3</sup> )  
 9.7 Operation cost: ( \_\_\_\_\_ Baht/year )  
 9.8 Location and name of sewerage treatment plant: ( \_\_\_\_\_ )  
 9.9 Main treatment method of domestic waste water: ( \_\_\_\_\_ )

Q.10.Do you have a municipal solid waste (MSW) collection service in your administrative area?

- 10.1    1. Yes, whole area  
       2. Yes, but part of the area  
       3. No                      (Go to Q.11)  
       4. I do not know            (Go to Q.11)

10.1	
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- 10.2 Name of operating organization:( \_\_\_\_\_ )  
 10.3 Coverage rate in population or area: ( \_\_\_\_\_ % in population or area )  
 10.4 Tariff: (Between \_\_\_\_\_ to \_\_\_\_\_ Baht/month )

10.5 Operation cost: ( \_\_\_\_\_ Baht/year)

10.6 Total amount of solid waste collection: ( \_\_\_\_\_ ton/day)

Q.11. Do you have some treatment facilities for MSW in your administrative area?

Note: Treatment facilities for MSW include an incinerator, a composting plant, a packaging (baling) facility, a compaction machine, a transfer station, etc.

11.1 1. Yes, some treatment facilities

2. Yes, a treatment facility

3. No (Go to Q.12)

4. I do not know (Go to Q.12)

11.1

11.2 Name of operating organization: ( \_\_\_\_\_ )

11.3 Tipping fee: (Between \_\_\_\_\_ to \_\_\_\_\_ Baht/ m<sup>3</sup> or ton)11.4 Treatment amount: ( \_\_\_\_\_ m<sup>3</sup> or ton/day)

11.5 Please give us information on the MSW treatment facility by filling the following table

11.5.1 Treatment Facility No.1	
11.5.1.1	Name of Facility
11.5.1.2	Treatment Method
11.5.1.3	Operating Organization
11.5.2 Treatment Facility No.2	
11.5.2.1	Name of Facility
11.5.2.2	Treatment Method
11.5.2.3	Operating Organization

Q.12. Do you have some final disposal sites for MSW in your administrative area?

12.1 1. Yes, some final disposal sites

2. Yes, a final disposal site

3. No

(Go to Q.14)

4. I do not know.

(Go to Q.14)

12.2 Name of operating organization: ( \_\_\_\_\_ )

12.3 Tipping fee: ( \_\_\_\_\_ )

12.4 Final disposal amount: ( \_\_\_\_\_ m<sup>3</sup> or ton/day)

Q.13. Please give us information on the MSW final disposal site(s) by filling the following table.

13.1 Final Disposal Site No.1		
13.1.1	Name of Site	
13.1.2	Disposal Method	Open dump / Semi-Sanitary Landfill / Sanitary landfill
13.2 Final Disposal Site No.2		
13.2.1	Name of Site	
13.2.2	Disposal Method	Open dump / Semi-Sanitary Landfill / Sanitary landfill

Q.14. How does your LA manage final disposal of MSW?

- 14.1 1. Transport MSW to a final disposal site (FDS) by itself
- 2. Transport MSW to a FDS by private company
- 3. People manage by themselves

14.1	
------	--

14.2 Where is your final disposal site? \_\_\_\_\_

14.3 Name of operating organization ( \_\_\_\_\_ )

14.4 Tipping fee: ( \_\_\_\_\_ )

14.5 Final disposal amount: ( \_\_\_\_\_ m<sup>3</sup> or ton/day)

- 14.6 Final disposal method: 1. Sanitary landfill 2. Semi-Sanitary Landfill
- 3. Controlled tipping 4. Open dumping

Q.15. Do you have any illegal dump sites in your administrative area?

- 15.1 1. Yes
- 2. No (Go to Q.16)
- 3. I do not know (Go to Q.16)

15.1	
------	--

15.2 Please specify it (them):

(Place of illegal dump site: \_\_\_\_\_)

(Place of illegal dump site: \_\_\_\_\_)

(Place of illegal dump site: \_\_\_\_\_)

Q.16. Do you intend to have a final disposal site in your administrative area?

- 1. Yes
- 2. Yes but it seem to be difficult.
- 3. No

16	
----	--

Q.17. Do you have any special natural assets in your administrative area?

- 17.1 1. Yes, one (some)
- 2. No (Go to Q.18)
- 3. I do not know (Go to Q.18)

17.1	
------	--

17.2 Please specify it (them):

(Kind of natural resources: \_\_\_\_\_ Place: \_\_\_\_\_)

(Kind of natural resources: \_\_\_\_\_ Place: \_\_\_\_\_)

(Kind of natural resources: \_\_\_\_\_ Place: \_\_\_\_\_)

Q.18. Do you have any special cultural assets in your administrative area?

- 18.1 1. Yes, one (some)
- 2. No (Go to Q.19)
- 3. I do not know (Go to Q.19)

18.1	
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18.2 Please specify it (them):

(Kind of cultural and natural site: \_\_\_\_\_ Place: \_\_\_\_\_)

(Kind of cultural and natural site: \_\_\_\_\_ Place: \_\_\_\_\_)

(Kind of cultural and natural site: \_\_\_\_\_ Place: \_\_\_\_\_)



## 2. Prioritized Issues in Your LA

Q.19. What do you think the most serious problem is in your administrative area now? What is the second most serious problem? Please mark 1<sup>st</sup> and 2<sup>nd</sup> most serious problem respectively.

- |   |      |  |
|---|------|--|
| 1. Natural resources and environment degradation      | 19.1 |  |
| 2. Economic stagnation specify: _____                 |      |  |
| 3. Insufficient capability of the LA<br>specify _____ | 19.2 |  |
| 4. Politics (specify _____)                           |      |  |
| 5. Poor public health conditions (specify _____)      |      |  |
| 6. Others (specify _____)                             |      |  |

Q.20. In order to solve the most serious problem what do you think the most prioritized measure in your administrative area at present? What is the second most prioritized measure? Please specify the 1<sup>st</sup> and 2<sup>nd</sup> most prioritized measures respectively.

- |                                     |  |
|-------------------------------------|--|
| 20.1 The most prioritized measure   |  |
| 20.2 The second prioritized measure |  |

Q.21. Does your LA receive requests for improvement of your administrative area from your residents?

- |                               |  |  |
|-------------------------------|--|--|
| 21.1 1. Yes                   |  |  |
| 2. No (Go to Q.22)            |  |  |
| 3. I do not know (Go to Q.22) |  |  |

21.2 Please specify it in accordance the number of requests:

- (The 1<sup>st</sup> largest number of request: \_\_\_\_\_)
- (The 2<sup>nd</sup> largest number of request: \_\_\_\_\_)
- (The 3<sup>rd</sup> largest number of request: \_\_\_\_\_)

Q.22. Does your LA receive complains from your residents?

- |                               |  |  |
|-------------------------------|--|--|
| 22.1 1. Yes                   |  |  |
| 2. No (Go to Q.23)            |  |  |
| 3. I do not know (Go to Q.23) |  |  |

22.2 Please specify it in accordance the number of complains for the past year

The 1 <sup>st</sup> largest number of request:	
Year	
The 2 <sup>nd</sup> largest number of request:	
Year	
The 3 <sup>rd</sup> largest number of request:	
Year	

### 3. Prioritized Issues on Natural Resources and Environmental Management in Your LA

Q.23. How serious do you feel the following natural resources and environment problems? Please select one in each of the following environment problems.

	1. Not serious at all	2. Not very serious	3. Some what serious	4. Very serious	5. Can't choose	6. No response
1. Soil and land resources				Answer: Reason:		
2. Mangrove resources				Answer: Reason:		
3. Fishery resources				Answer: Reason:		
4. Water resources				Answer: Reason:		
5. Marine and coastal resources				Answer: Reason:		
6. Biodiversity				Answer: Reason:		
7. Water quality				Answer: Reason:		
8. Solid waste				Answer: Reason:		
9. Air quality				Answer: Reason:		
10. Noise quality				Answer: Reason:		
11. Hazardous wastes and toxic substances				Answer: Reason:		
12. Urban environment such as parks, amenity, landscape, etc.				Answer: Reason:		
13. Natural and cultural assets				Answer: Reason:		
14. Global warming / climate change				Answer: Reason:		
15. Others, if any Specify:				Answer: Reason:		

Q.24. How much do you feel environmental degradation affect your LA?

1. It dose not affect at all.
2. It affects to some degree.
3. It causes serious problems.
4. I do not know or I am not sure.
5. Others (Please specify: \_\_\_\_\_).
6. No response

24	
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Q.25. Which is more important for your LA, Economic Development or Environment Conservation?

- 1. Economic development is more important.
- 2. Environment conservation is more important.
- 3. Others (Please specify: \_\_\_\_\_).

25	
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Q.26. Do you have an environmental quality management projects as a part of your annual budget plan?

- 26.1 1. Yes
- 2. No (Go to Q.27)
- 3. I do not know (Go to Q.27)

26.2 Please specify:

26.1	
------	--

**Year 2006**

Name of Project	Budget	Target group

**Year 2007**

Name of Project	Budget	Target group

Q.27. Does your LA confront the problem of global warming?

- 1. Yes
- 2. No
- 3. I do not know (Go to Q.29)

27	
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Q.28. What kind of activities your LA do for confronting the problem of global warming? Please select all that your LA are doing.

1. Save water consumption.
2. Save energy such as raising temperature of air conditioners.
3. Promote 3Rs (waste reduction, reuse and recycling).
4. Separate collection of municipal solid waste.
5. Forestation
6. Education of residents about environmental conservation, water and energy save, 3Rs, etc.
7. Others (Please specify:\_\_\_\_\_).
8. No response.

28	
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Q.29. Do you think your residents cooperate to preserve environment of your administrative area?

1. Yes, very much
2. Yes, some extent
3. No (Go to Q.31)
4. I do not know (Go to Q.31)

29	
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Q.30. What kind of activities do your residents do for preserving environment of your administrative area? Please select all that your residents are doing at present.

1. Separate discharge of municipal solid waste.
2. Cleaning their surrounding area
3. Cleaning public area such as road, park, drain, etc.
4. Forestation
5. Others (Please specify:\_\_\_\_\_).
6. No response.

30	
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Q.31. What do you think the main pollutant source is for the following pollution problems? Please answer in each pollution problem.

	Source of Pollutants						
1. Air pollution	1. Factories	2. Automobile	3. Open burning by agriculture	/	5. Others (Specify: )	6. I do not know	7. No problem
2. Water Pollution	1. Factories	2. Household	3. Agriculture	4. Aquaculture	5. Others (Specify: )	6. I do not know	7. No problem
3. Solid Waste	1. Factories	2. Household	3. Road vender	4. Tourist	5. Others (Specify: )	6. I do not know	7. No problem
4. Noise	1. Factories	2. Construction	3. Road transportation	4. Water transportation	5. Others (Specify: )	6. I do not know	7. No problem

Q.32. Do you think that environmental regulations are observed in Samut Songkhram Province?

1. Yes, they are observed (Go to Q 34)
2. They are somewhat observed (Go to Q 34)
3. They are not observed much
4. I do not know (Go to Q 34)
5. No response (Go to Q 34)

32	
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Q.33. What kind of measures do you think should be taken to make regulations observed?

(Plural answers are accepted)

33	
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1. The central government tightens control and increases penalty.
2. The provincial administration tightens control and increases penalty.
3. The local administration (Orborjor, Tessaban and Orbortor) tightens control and increases penalty.
4. Industries should be raised awareness to take pollution control measures more seriously.
5. People should be raised awareness to pay more attention to environmental issues.
6. Others (Please specify: \_\_\_\_\_)
7. I do not know
8. No response

Q.34. What do you think the central government should do to improve environment?

Please select 3 among the following choices.

34	<table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>			

01. To establish new laws and regulations.
02. To tighten its control and increase penalty.
03. To construct more waste water treatment facilities and solid waste treatment & disposal facilities.
04. To construct reuse/recycle center.
05. To help industries improve pollution control capabilities.
06. To have more programs to develop new technology.
07. To promote environment education.
08. To strengthen provincial administrations
09. To strengthen local administrations
10. To speed up decentralization.
11. To promote participation of local people.
12. To open more information and data.
13. I do not know.
14. No response.

Q.35. What do you think Provincial Administrations should do to improve environment?

Please select 3 among the following choices.

35	<table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>			

01. To establish new regulations.
02. To tighten its control and increase penalty.
03. To construct a proper waste water treatment facilities and solid waste treatment & disposal facilities.
04. To construct a reuse/recycle center.
05. To help industries improve pollution control capabilities.
06. To ask central government to introduce proper environmental management technology.
07. To promote environment education.
08. To strengthen capability of Local Administration.
09. To promote participation of local people.
10. To open more information and data.
11. I do not know.
12. No response.

#### 4. **Suggestions for Formulation of Provincial Environmental**

## Quality Management Plan

The Samut Songkhram Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. We are very welcome to receive your valuable suggestions for the plan. Please kindly state your constructive opinion on the plan in the following table.

My suggestion to the PEQMP

***----- Thank you very much!! -----***

**Opinion Survey to Local Administrations  
on Natural Resources and Environmental Management  
in Ayutthaya (A/Y) Province**

Sample No.: \_\_\_\_\_

Name of Interviewer: \_\_\_\_\_

Name of Local Administration: \_\_\_\_\_

Name of Respondent: \_\_\_\_\_

Position of Respondent: \_\_\_\_\_

Phone number: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

Starting time: \_\_\_\_\_ Finishing time: \_\_\_\_\_

Name of Editor: \_\_\_\_\_

Date of Editing: \_\_\_\_\_

## 2. Current Natural Resources and Environmental Management in Your Local Administration (LA)

Q.1. Area, population, household and employee of your local administration?

- 1. Administration Area: ( \_\_\_\_\_ km<sup>2</sup>)
- 2. Population: ( \_\_\_\_\_ persons)
- 3. Household: ( \_\_\_\_\_ households)
- 4. Number of LA Staffs in Total: ( \_\_\_\_\_ persons)
  - 4-1 Government Officer: ( \_\_\_\_\_ persons)
  - 4-2 Permanent Staffs: ( \_\_\_\_\_ persons)
  - 4-3 Temporary & Daily Staffs: ( \_\_\_\_\_ persons)

Q.2. Budget of your local Administration (LA) in past three years?

		2005	2006	2007
2.1	Total budget	2.1.1	2.1.2	2.1.3
2.2	Budget for natural resources and environmental management (Excluding Salary)	2.2.1	2.2.2	2.2.3

Q.3. Do you have an organization responsible for the natural resources and environmental management in your LA?

- 1. Yes
- 2. No (Go to Q.5)
- 3. I do not know (Go to Q.5)

3	
---	--

Q.4. Name of the organization responsible for the natural resources and environmental management.

Organization	Total Staff	Government Officer	Permanent Staffs	Temporary & Daily Staffs
4.1	4.1.1 persons	4.1.2 persons	4.1.3 persons	4.1.4 persons
4.2	4.2.1 persons	4.2.2 persons	4.2.3 persons	4.2.4 persons
4.3	4.3.1 persons	4.3.2 persons	4.3.3 persons	4.3.4 persons

Q.5. Do you have an organization responsible for development control (building and construction permits and enforcement) in your LA?

- 1. Yes
- 2. No (Go to Q.7)
- 3. I do not know (Go to Q.7)

5	
---	--



Q.6. Name of the organization responsible for development control.

Organization	Total Staff	Government Officer	Permanent Staffs	Temporary & Daily Staffs
6.1	6.1.1 persons	6.1.2 persons	6.1.3 persons	6.1.4 persons

Q.7. Do you have a zoning map (area development plan, land use plan, etc.) to control development of your administrative area?

1. Yes                      2. No                      3. I do not know

7	
---	--

Q.8. Do you have a potable water supply system in your administrative area?

- 8.1 1. Yes, whole area  
 2. Yes, but part of the area  
 3. No (Go to Q.9)  
 4. I do not know (Go to Q.9)

8	
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8.2 Name of responsible organization: (\_\_\_\_\_)

8.3 Design supply capacity: (\_\_\_\_\_ m<sup>3</sup>/day)8.4 Average actual supply: (\_\_\_\_\_ m<sup>3</sup>/day)

8.5 Coverage rate in area: (\_\_\_\_\_ % in area)

8.6 Coverage rate in population: (\_\_\_\_\_ % in population)

8.7 Tariff starting with: (Between \_\_\_\_\_ to \_\_\_\_\_ Baht/m<sup>3</sup>)

8.8 Production cost: (\_\_\_\_\_ Baht/year)

8.9 Location and name of water purification plant: (\_\_\_\_\_)

8.10 Main sources of potable water: (\_\_\_\_\_)

Q.9. Do you have connection to sewerage system in your administrative area?

- 9.1 1. Yes, whole area  
 2. Yes, but part of the area  
 3. No (Go to Q.10)  
 4. I do not know (Go to Q.10)

9.1	
-----	--

9.2 What kind of sewerage system?

1. Sewerage pipe with treatment facility covering \_\_\_\_\_ % of households  
 2. Sewerage pipe without treatment facility

9.2	
9.2.1	%

9.3 Name of operating organization: (\_\_\_\_\_)

9.4 Coverage rate in area: (\_\_\_\_\_ % in area)

9.5 Coverage rate in population: (\_\_\_\_\_ % in population)

9.6 Tariff: (Between \_\_\_\_\_ to \_\_\_\_\_ Baht/m<sup>3</sup>)

9.7 Operation cost: (\_\_\_\_\_ Baht/year)

9.8 Location and name of sewerage treatment plant: (\_\_\_\_\_)

9.9 Main treatment method of domestic waste water: (\_\_\_\_\_)

Q.10. Do you have a municipal solid waste (MSW) collection service in your administrative area?

- 10.1 1. Yes, whole area  
 2. Yes, but part of the area  
 3. No (Go to Q.11)  
 4. I do not know (Go to Q.11)

10.1	
------	--

10.2 Name of operating organization: (\_\_\_\_\_)

10.3 Coverage rate in population or area: (\_\_\_\_\_ % in population or area)

10.4 Tariff: (Between \_\_\_\_\_ to \_\_\_\_\_ Baht/month)

10.5 Operation cost: (\_\_\_\_\_ Baht/year)

10.6 Total amount of solid waste collection: ( \_\_\_\_\_ ton/day)

Q.11. Do you have some treatment facilities for MSW in your administrative area?

Note: Treatment facilities for MSW include an incinerator, a composting plant, a packaging (baling) facility, a compaction machine, a transfer station, etc.

- 11.1 1. Yes, some treatment facilities
- 2. Yes, a treatment facility
- 3. No (Go to Q.12)
- 4. I do not know (Go to Q.12)

11.1	
------	--

11.2 Name of operating organization: ( \_\_\_\_\_ )

11.3 Tipping fee: (Between \_\_\_\_\_ to \_\_\_\_\_ Baht/ m<sup>3</sup> or ton)

11.4 Treatment amount: ( \_\_\_\_\_ m<sup>3</sup> or ton/day)

11.5 Please give us information on the MSW treatment facility by filling the following table

11.5.1 Treatment Facility No.1	
11.5.1.1	Name of Facility
11.5.1.2	Treatment Method
11.5.1.3	Operating Organization
11.5.2 Treatment Facility No.2	
11.5.2.1	Name of Facility
11.5.2.2	Treatment Method
11.5.2.3	Operating Organization

Q.12. Do you have some final disposal sites for MSW in your administrative area?

- 12.1 1. Yes, some final disposal sites
- 2. Yes, a final disposal site
- 3. No (Go to Q.14)
- 4. I do not know. (Go to Q.14)

12.2 Name of operating organization: ( \_\_\_\_\_ )

12.3 Tipping fee: ( \_\_\_\_\_ )

12.4 Final disposal amount: ( \_\_\_\_\_ m<sup>3</sup> or ton/day)

Q.13. Please give us information on the MSW final disposal site(s) by filling the following table.

13.1 Final Disposal Site No.1		
13.1.1	Name of Site	
13.1.2	Disposal Method	Open dump / Semi-sanitary Landfill / Sanitary landfill
13.2 Final Disposal Site No.2		
13.2.1	Name of Site	
13.2.2	Disposal Method	Open dump / Semi-sanitary Landfill / Sanitary landfill

Q.14. How does your LA manage final disposal of MSW?

- 14.1 1. Transport MSW to a final disposal site (FDS) by itself
- 2. Transport MSW to a FDS by private company
- 3. I do not know

14.1	
------	--

- 14.2 Where is your final disposal site? \_\_\_\_\_
- 14.3 Name of operating organization ( \_\_\_\_\_ )
- 14.4 Tipping fee: ( \_\_\_\_\_ )
- 14.5 Final disposal amount: ( \_\_\_\_\_ m<sup>3</sup> or ton/day)
- 14.6 Final disposal method: 1. Sanitary landfill 2. Semi-sanitary Landfill  
3. Controlled tipping 4. Open dumping

Q.15. Do you have any illegal dump sites in your administrative area?

- 15.1 1. Yes  
2. No (Go to Q.16)  
3. I do not know (Go to Q.16)

15.1	
------	--

15.2 Please specify it (them):

- (Place of illegal dump site: \_\_\_\_\_ )  
 (Place of illegal dump site: \_\_\_\_\_ )  
 (Place of illegal dump site: \_\_\_\_\_ )

Q.16. Do you intend to have a final disposal site in your administrative area?

1. Yes  
2. Yes but it seem to be difficult.  
3. No

16	
----	--

Q.17. Do you have any special natural assets in your administrative area?

- 17.1 1. Yes, one (some)  
2. No (Go to Q.18)  
3. I do not know (Go to Q.18)

17.1	
------	--

17.2 Please specify it (them):

- (Kind of natural resources: \_\_\_\_\_ Place: \_\_\_\_\_ )  
 (Kind of natural resources: \_\_\_\_\_ Place: \_\_\_\_\_ )  
 (Kind of natural resources: \_\_\_\_\_ Place: \_\_\_\_\_ )

Q.18. Do you have any special cultural assets in your administrative area?

- 18.1 1. Yes, one (some)  
2. No (Go to Q.19)  
3. I do not know (Go to Q.19)

18.1	
------	--

18.2 Please specify it (them):

- (Kind of cultural and natural site: \_\_\_\_\_ Place: \_\_\_\_\_ )  
 (Kind of cultural and natural site: \_\_\_\_\_ Place: \_\_\_\_\_ )  
 (Kind of cultural and natural site: \_\_\_\_\_ Place: \_\_\_\_\_ )

2.

### Prioritized Issues in Your LA

Q.19. What do you think the most serious problem is in your administrative area now? What is the second most serious problem? Please mark 1<sup>st</sup> and 2<sup>nd</sup> most serious problem respectively.

- 1. Natural resources and environment degradation 

19.1	
------	--
- 2. Economic stagnation specify: \_\_\_\_\_
- 3. Insufficient capability of the LA 

19.2	
------	--

  
specify \_\_\_\_\_
- 4. Politics (specify \_\_\_\_\_)
- 5. Poor public health conditions (specify \_\_\_\_\_)
- 6. Others (specify \_\_\_\_\_)

Q.20. In order to solve the most serious problem what do you think the most prioritized measure in your administrative area at present? What is the second most prioritized measure? Please specify the 1<sup>st</sup> and 2<sup>nd</sup> most prioritized measures respectively.

- 20.1 The most prioritized measure
- 20.2 The second prioritized measure

Q.21. Does your LA receive requests for improvement of your administrative area from your residents?

- 21.1 1. Yes
  - 2. No (Go to Q.22)
  - 3. I do not know (Go to Q.22)
- |      |  |
|------|--|
| 21.1 |  |
|------|--|

21.2 Please specify it in accordance the number of requests:

- (The 1<sup>st</sup> largest number of request: \_\_\_\_\_)
- (The 2<sup>nd</sup> largest number of request: \_\_\_\_\_)
- (The 3<sup>rd</sup> largest number of request: \_\_\_\_\_)

Q.22. Does your LA receive complains from your residents?

- 22.1 1. Yes
  - 2. No (Go to Q.23)
  - 3. I do not know (Go to Q.23)
- |      |  |
|------|--|
| 22.1 |  |
|------|--|

22.3 Please specify it in accordance the number of complains for the past year

The 1 <sup>st</sup> largest number of request:	
Year	
The 2 <sup>nd</sup> largest number of request:	
Year	
The 3 <sup>rd</sup> largest number of request:	
Year	

### 3. Prioritized Issues on Natural Resources and Environmental Management in Your LA

Q.23. How serious do you feel the following natural resources and environment problems? Please select one in each of the following environment problems.

	1. Not serious at all	2. Not very serious	3. Some what serious	4. Very serious	5. Can't choose	6. No response
1. Soil and land resources				Answer: Reason:		
2. Water resources				Answer: Reason:		
3. Biodiversity				Answer: Reason:		
4. Water quality				Answer: Reason:		
5. Solid waste				Answer: Reason:		
6. Air quality				Answer: Reason:		
7. Noise quality				Answer: Reason:		
8. Hazardous wastes and toxic substances				Answer: Reason:		
9. Urban environment such as parks, amenity, landscape, etc.				Answer: Reason:		
10. Natural and cultural assets				Answer: Reason:		
11. Global warming / climate change				Answer: Reason:		
12. Others, if any Specify:				Answer: Reason:		

Q.24. How much do you feel environmental degradation affect your LA?

1. It dose not affect at all.
2. It affects to some degree.
3. It causes serious problems.
4. I do not know or I am not sure.
5. Others (Please specify: \_\_\_\_\_).
6. No response

24	
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Q.25. Which is more important for your LA, Economic Development or Environment Conservation?

1. Economic development is more important.
2. Environment conservation is more important.
3. Others (Please specify: \_\_\_\_\_).

25	
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Q.26. Do you have an environmental quality management projects as a part of your annual budget plan?

- 26.1
1. Yes
  2. No (Go to Q.27)
  3. I do not know (Go to Q.27)

26.1	
------	--

26.2 Please specify:

**Year 2006**

Name of Project	Budget	Target group

**Year 2007**

Name of Project	Budget	Target group

Q.27. Does your LA confront the problem of global warming?

- 1. Yes
- 2. No
- 3. I do not know (Go to Q.29)

27	
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Q.28. What kind of activities your LA do for confronting the problem of global warming? Please select

all that your LA are doing.

- 1. Save water consumption.
- 2. Save energy such as raising temperature of air conditioners.
- 3. Promote 3Rs (waste reduction, reuse and recycling).
- 4. Separate collection of municipal solid waste.
- 5. Forestation
- 6. Education of residents about environmental conservation, water and energy save, 3Rs, etc.
- 7. Others (Please specify: \_\_\_\_\_).
- 8. No response.

28	
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Q.29. Do you think your residents cooperate to preserve environment of your administrative area?

- 1. Yes, very much
- 2. Yes, some extent
- 3. No (Go to Q.31)
- 4. I do not know (Go to Q.31)

29	
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Q.30. What kind of activities do your residents do for preserving environment of your administrative area? Please select all that your residents are doing at present.

- 1. Separate discharge of municipal solid waste.
- 2. Cleaning their surrounding area
- 3. Cleaning public area such as road, park, drain, etc.
- 4. Forestation
- 5. Others (Please specify: \_\_\_\_\_).
- 6. No response.

30	
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Q.31. What do you think the main pollutant source is for the following pollution problems? Please answer in each pollution problem.

	Source of Pollutants						
1. Air pollution	1. Factories	2. Automobile	3. Open burning by agriculture	/	5. Others (Specify: )	6. I do not know	7. No problem
2. Water Pollution	1. Factories	2. Household	3. Agriculture	4. Aquaculture	5. Others (Specify: )	6. I do not know	7. No problem
3. Solid Waste	1. Factories	2. Household	3. Road vender	4. Tourist	5. Others (Specify: )	6. I do not know	7. No problem
4. Noise	1. Factories	2. Construction	3. Road transportation	4. Water transportation	5. Others (Specify: )	6. I do not know	7. No problem

Q.32. Do you think that environmental regulations are observed in Ayutthaya Province?

- 1. Yes, they are observed (Go to Q 34)
- 2. They are somewhat observed (Go to Q 34)
- 3. They are not observed much
- 4. I do not know (Go to Q 34)
- 5. No response (Go to Q 34)

32	
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Q.33. What kind of measures do you think should be taken to make regulations observed?  
(Plural answers are accepted)

- 1. The central government tightens control and increases penalty.
- 2. The provincial administration tightens control and increases penalty.
- 3. The local administration (Orborjor, Tessaban and Orbortor) tightens control and increases penalty.
- 4. Industries should be raised awareness to take pollution control measures more seriously.
- 5. People should be raised awareness to pay more attention to environmental issues.
- 6. Others (Please specify: \_\_\_\_\_)
- 7. I do not know
- 8. No response

33	
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Q.34. What do you think the central government should do to improve environment?

Please select 3 among the following choices.

34			
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- 01. To establish new laws and regulations.
- 02. To tighten its control and increase penalty.
- 03. To construct more wastewater treatment facilities and solid waste treatment & disposal facilities.
- 04. To construct reuse/recycle center.
- 05. To help industries improve pollution control capabilities.
- 06. To have more programs to develop new technology.
- 07. To promote environment education.
- 08. To strengthen provincial administrations
- 09. To strengthen local administrations
- 10. To speed up decentralization.
- 11. To promote participation of local people.
- 12. To open more information and data.
- 13. I do not know.
- 14. No response.

Q.35. What do you think Provincial Administrations should do to improve environment? Please select 3 among the following choices.

35			
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- 01. To establish new regulations.
- 02. To tighten its control and increase penalty.
- 03. To construct a proper waste water treatment facilities and solid waste treatment & disposal facilities.
- 04. To construct a reuse/recycle center.
- 05. To help industries improve pollution control capabilities.
- 06. To ask central government to introduce proper environmental management technology.
- 07. To promote environment education.
- 08. To strengthen capability of Local Administration.
- 09. To promote participation of local people.
- 10. To open more information and data.
- 11. I do not know.
- 12. No response.



#### 4. **Suggestions for Formulation of Provincial Environmental Quality Management Plan**

The Ayutthaya Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. We are very welcome to receive your valuable suggestions for the plan. Please kindly state your constructive opinion on the plan in the following table.

My suggestion to the PEQMP

***----- Thank you very much!! -----***

**Opinion Survey to NGO  
on Natural Resources and Environmental Management  
in Samut Songkhram (S/K) Province**

Sample No.: \_\_\_\_\_

Name of Interviewer: \_\_\_\_\_

Name of NGO: \_\_\_\_\_

Name of Respondent: \_\_\_\_\_

Position of Respondent: \_\_\_\_\_

Phone number: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

Starting time: \_\_\_\_\_ Finishing time: \_\_\_\_\_

Name of Editor: \_\_\_\_\_

Date of Editing: \_\_\_\_\_

### 1. Activities of Your NGO

Q.1.How many members does your NGO have?

1	persons
2	persons

Q.2.How many staffs does your NGO have?

Q.3.When was your NGO established?

3	Year	Month
---	------	-------

Q.4.What are the main activities of your NGO?

4.1	
4.2	
4.3	
4.4	
4.5	

Q.5.What are the main activities of your NGO in Samut Songkhram Province?

5.1	
5.2	
5.3	
5.4	
5.5	

Q.6.Budget or expenditure for the activities in Samut Songkhram Province in the past three years?

- 1. 2005: ( \_\_\_\_\_ Baht)
- 2. 2006: ( \_\_\_\_\_ Baht)
- 3. 2007: ( \_\_\_\_\_ Baht)

Q.7.What are the issues and problems on your activities? Please select all that your NGO is facing?  
(Plural answers are accepted)

- 1. Insufficient financial resources
- 2. Insufficient human resources
- 3. Insufficient cooperation of central government
- 4. Insufficient cooperation of local government
- 5. Insufficient cooperation of local people
- 6. Insufficient coordination with other NGOs
- 7. Others (Please specify \_\_\_\_\_)
- 8. No, we do not have any problems

7	
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## 2. Prioritized Issues on Natural Resources and Environmental Management

Q.8. What do you think the most serious problem is in your administrative area now? What is the second most serious problem? Please mark 1<sup>st</sup> and 2<sup>nd</sup> most serious problem respectively.

- |   |     |  |
|---|-----|--|
| 1. Natural resources and environment degradation      | 8.1 |  |
| 2. Economic stagnation specify: _____                 |     |  |
| 3. Insufficient capability of the LG<br>specify _____ | 8.2 |  |
| 4. Politics (specify _____)                           |     |  |
| 5. Poor public health conditions (specify _____)      |     |  |
| 6. Others (specify _____)                             |     |  |

Q.9. In order to solve the most serious problem what do you think the most prioritized measure in your administrative area at present? What is the second most prioritized measure? Please specify the 1<sup>st</sup> and 2<sup>nd</sup> most prioritized measures respectively.

- |                                    |  |
|------------------------------------|--|
| 9.1 The most prioritized measure   |  |
| 9.2 The second prioritized measure |  |

Q.10.

10.1 Are you interested in environment issues?

1. Yes
2. Yes, but a little
3. No (Go to Q 11)
4. No response (Go to Q 11)

10.1	
------	--

10.2 If you are interested in environment issues, how do you get information on environment issues? Please select the two biggest sources of information among the following choices

- |                                |                           |
|--------------------------------|---------------------------|
| 1. TV news                     | 8. Family/Friends         |
| 2. Radio News                  | 9. Residents' association |
| 3. Newspaper                   | 10. Public announcement   |
| 4. Magazine/Journal            | 11. Other _____           |
| 5. Official bulletin           | 12. I do not know         |
| 6. Newsletter published by NGO | 13. No response           |
| 7. Internet                    |                           |

10.2.1	
10.2.2	

Q.11.How serious do you feel the following natural resources and environment problems? Please select one in each of the following environment problems.

	1. Not serious at all	2. Not very serious	3. Some what serious	4. Very serious	5. Can't choose	6. No response
1. Soil and land resources				Answer: Reason:		
2. Mangrove rources				Answer: Reason:		
3. Fishery resources				Answer: Reason:		
4. Water resources				Answer: Reason:		
5. Marine and coastal resources				Answer: Reason:		
6. Biodiversity				Answer: Reason:		
7. Water quality				Answer: Reason:		
8. Solid waste				Answer: Reason:		
9. Air quality				Answer: Reason:		
10. Noise quality				Answer: Reason:		
11. Hazardous wastes and toxic substances				Answer: Reason:		
12. Urban environment such as parks, amenity, landscape, etc.				Answer: Reason:		
13. Natural and cultural assets				Answer: Reason:		
14.. Global warming / climate change				Answer: Reason:		
15. Others, if any Specify:				Answer: Reason:		

Q.12.How much do you feel environmental degradation affects your life?

1. It dose not affect at all.
2. It affects to some degree.
3. It causes serious problems.
4. I do not know or I am not sure.
5. Others (Please specify:\_\_\_\_\_).
6. No response

12	
----	--

Q.13.Which is more important for you, Economic Development or Environment Conservation?

1. Economic development is more important.
2. Environment conservation is more important.
3. Others (Please specify:\_\_\_\_\_).

13	
----	--

Q.14.What do you think the main pollutant source is for the following pollution problems? Please answer in each pollution problem.

Source of Pollutants							
1. Air pollution	1. Factories	2. Automobile	3. Open burning by agriculture	/	5. Others (Specify: )	6. I do not know	7. No problem
2. Water Pollution	1. Factories	2. Household	3. Agriculture	4. Aquaculture	5. Others (Specify: )	6. I do not know	7. No problem
3. Solid Waste	1. Factories	2. Household	3. Road vender	4. Tourist	5. Others (Specify: )	6. I do not know	7. No problem
4. Noise	1. Factories	2. Construction	3. Road transportation	4. Water transportation	5. Others (Specify: )	6. I do not know	7. No problem

### 3. Willingness to Cooperate for the Improvement of Natural Resources and Environmental Management

Q.15. Do you think that environmental regulations are observed in Samut Songkhram Province?

- 1. Yes, they are observed (Go to Q 17)
- 2. They are somewhat observed (Go to Q 17)
- 3. They are not observed much
- 4. I do not know (Go to Q 17)
- 5. No response (Go to Q 17)

15	
----	--

Q.16. What kind of measures do you think should be taken to make regulations observed?

(Plural answers are accepted)

- 1. The central government tightens control and increases penalty.
- 2. The provincial administration tightens control and increases penalty.
- 3. The local administration (Orborjor, Tessaban and Orbortor) tightens control and increases penalty.
- 4. Industries should be raised awareness to take pollution control measures more seriously.
- 5. People should be raised awareness to pay more attention to environmental issues.
- 6. Others (Please specify: \_\_\_\_\_)
- 7. I do not know
- 8. No response

16	
----	--

Q.17. What do you think the central government should do to improve environment?

Please select 3 among the following choices.

- 01. To establish new laws and regulations.
- 02. To tighten its control and increase penalty.
- 03. To construct more wastewater treatment facilities and solid waste treatment & disposal facilities.
- 04. To construct reuse/recycle center.
- 05. To help industries improve pollution control capabilities.
- 06. To have more programs to develop new technology.
- 07. To promote environment education.
- 08. To strengthen provincial administrations
- 09. To strengthen local administrations
- 10. To speed up decentralization.
- 11. To promote participation of local people.
- 12. To open more information and data.
- 13. I do not know.
- 14. No response.

17			
----	--	--	--

Q.18. What do you think Provincial Administrations should do to improve environment? Please select 3 among the following choices.

- |    |  |  |  |
|----|--|--|--|
| 18 |  |  |  |
|----|--|--|--|
01. To establish new regulations.
  02. To tighten its control and increase penalty.
  03. To construct a proper wastewater treatment facilities and solid waste treatment & disposal facilities.
  04. To construct a reuse/recycle center.
  05. To help industries improve pollution control capabilities.
  06. To ask central government to introduce proper environmental management technology.
  07. To promote environment education.
  08. To strengthen capability of Local Administration.
  09. To promote participation of local people.
  10. To open more information and data.
  11. I do not know.
  12. No response.

Q.19. What do you think Local Administrations (Orborjor, Tessaban and Orbortor) should do to improve environment? Please select 3 among the following choices.

- |    |  |  |  |
|----|--|--|--|
| 19 |  |  |  |
|----|--|--|--|
01. To establish new regulations.
  02. To tighten its control and increase penalty.
  03. To construct a proper waste water treatment facilities and solid waste treatment & disposal facilities.
  04. To construct a reuse/recycle center.
  05. To help industries improve pollution control capabilities.
  06. To ask central government to introduce proper environmental management technology.
  07. To promote environment education.
  08. To promote participation of local people.
  09. To open more information and data.
  10. I do not know.
  11. No response.

Q.20. Proper management of environment requires an additional cost such as installation of sewerage for domestic wastewater, sanitary landfill for municipal solid waste, maintenance of national parks, etc. Do you agree to pay more tax and/or more fee for the environmental conservation?

- |    |  |
|----|--|
| 20 |  |
|----|--|
1. Strongly agree.
  2. Somewhat agree
  3. Neither agree nor disagree
  4. Somewhat disagree.
  5. Strongly disagree.
  6. Others (Please specify: \_\_\_\_\_)
  7. No response

Q.21. Does your NGO confront the problem of global warming?

- |    |  |
|----|--|
| 21 |  |
|----|--|
1. Yes
  2. No (Go to Q.23)
  3. I do not know (Go to Q.23)

Q.22. What kind of activities do you do for confronting the problem of global warming? Please select all that you are doing.

- |    |  |
|----|--|
| 22 |  |
|----|--|
1. Save water consumption.
  2. Save energy such as raising temperature of air conditioners.
  3. Promote 3Rs (waste reduction, reuse and recycling).
  4. Separate collection of municipal solid waste.
  5. Forestation
  6. Education of residents about environmental conservation, water and energy save, 3Rs, etc.
  7. Others (Please specify: \_\_\_\_\_).
  8. No response.

Q.23. Do you think residents in Samut Songkhram Province cooperate to preserve environment of the province?

- |    |  |
|----|--|
| 23 |  |
|----|--|
1. Yes, very much
  2. Yes, some extent
  3. No (Go to Q.25)
  4. I do not know (Go to Q.25)

Q.24. What kind of activities do the residents do for preserving environment of the province? Please select all that the residents are doing at present.

- |    |  |
|----|--|
| 24 |  |
|----|--|
1. Separate discharge of municipal solid waste.
  2. Cleaning their surrounding area
  3. Cleaning public area such as road, park, drain, etc.
  4. Forestation
  5. Others (Please specify: \_\_\_\_\_).
  6. No response.

Q.25. The Samut Songkhram Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. When the plan will be finalized, the provincial government will organize a committee to monitor the implementation of the plan and recruit members of the committee from various stakeholders including NGOs. Will your NGO be able to be a member of the committee?

- |    |  |
|----|--|
| 25 |  |
|----|--|
1. Yes, we will without conditions.
  2. Yes, we will with conditions. (Please specify the conditions.)
  3. No
  4. I do not know
  5. No response.



#### 4. **Suggestions for Formulation of Provincial Environmental Quality Management Plan**

The Samut Songkhram Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. We are very welcome to receive your valuable suggestions for the plan. Please kindly state your constructive opinion on the plan in the following table.

My suggestion to the PEQMP

***----- Thank you very much!! -----***

**Opinion Survey to NGO  
on Natural Resources and Environmental Management  
in Ayutthaya (A/Y) Province**

Sample No.: \_\_\_\_\_

Name of Interviewer: \_\_\_\_\_

Name of NGO: \_\_\_\_\_

Name of Respondent: \_\_\_\_\_

Position of Respondent: \_\_\_\_\_

Phone number: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

Starting time: \_\_\_\_\_ Finishing time: \_\_\_\_\_

Name of Editor: \_\_\_\_\_

Date of Editing: \_\_\_\_\_

### 1. Activities of Your NGO

Q.1.How many members does your NGO have?

1	persons
2	persons

Q.2.How many staffs does your NGO have?

Q.3.When was your NGO established?

3	Year	Month
---	------	-------

Q.4.What are the main activities of your NGO?

4.1	
4.2	
4.3	
4.4	
4.5	

Q.5.What are the main activities of your NGO in Ayutthaya Province?

5.1	
5.2	
5.3	
5.4	
5.5	

Q.6.Budget or expenditure for the activities in Ayutthaya Province in the past three years?

- 1. 2005: ( \_\_\_\_\_ Baht)
- 2. 2006: ( \_\_\_\_\_ Baht)
- 3. 2007: ( \_\_\_\_\_ Baht)

Q.7.What are the issues and problems on your activities? Please select all that your NGO is facing?  
(Plural answers are accepted)

- 1. Insufficient financial resources
- 2. Insufficient human resources
- 3. Insufficient cooperation of central government
- 4. Insufficient cooperation of local government
- 5. Insufficient cooperation of local people
- 6. Insufficient coordination with other NGOs
- 7. Others (Please specify \_\_\_\_\_)
- 8. No, we do not have any problems

7	
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## 2. Prioritized Issues on Natural Resources and Environmental Management

Q.8. What do you think the most serious problem is in your administrative area now? What is the second most serious problem? Please mark 1<sup>st</sup> and 2<sup>nd</sup> most serious problem respectively.

- |   |      |  |
|---|------|--|
| 1. Natural resources and environment degradation      | 19.1 |  |
| 2. Economic stagnation specify: _____                 |      |  |
| 3. Insufficient capability of the LG<br>specify _____ | 19.2 |  |
| 4. Politics (specify _____)                           |      |  |
| 5. Poor public health conditions (specify _____)      |      |  |
| 6. Others (specify _____)                             |      |  |

Q.9. In order to solve the most serious problem what do you think the most prioritized measure in your administrative area at present? What is the second most prioritized measure? Please specify the 1<sup>st</sup> and 2<sup>nd</sup> most prioritized measures respectively.

- |                                    |  |
|------------------------------------|--|
| 9.1 The most prioritized measure   |  |
| 9.2 The second prioritized measure |  |

Q.10.

10.1 Are you interested in environment issues?

1. Yes
2. Yes, but a little
3. No (Go to Q 11)
4. No response (Go to Q 11)

10.1	
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10.2 If you are interested in environment issues, how do you get information on environment issues? Please select the two biggest sources of information among the following choices

- |                                |                           |
|--------------------------------|---------------------------|
| 1. TV news                     | 8. Family/Friends         |
| 2. Radio News                  | 9. Residents' association |
| 3. Newspaper                   | 10. Public announcement   |
| 4. Magazine/Journal            | 11. Other _____           |
| 5. Official bulletin           | 12. I do not know         |
| 6. Newsletter published by NGO | 13. No response           |
| 7. Internet                    |                           |

10.2.1	
10.2.2	

Q.11.How serious do you feel the following natural resources and environment problems? Please select one in each of the following environment problems.

	1. Not serious at all	2. Not very serious	3. Some what serious	4. Very serious	5. Can't choose	6. No response
1. Soil and land resources				Answer: Reason:		
2. Water resources				Answer: Reason:		
3. Biodiversity				Answer: Reason:		
4. Water quality				Answer: Reason:		
5. Solid waste				Answer: Reason:		
6. Air quality				Answer: Reason:		
7. Noise quality				Answer: Reason:		
8. Hazardous wastes and toxic substances				Answer: Reason:		
9. Urban environment such as parks, amenity, landscape, etc.				Answer: Reason:		
10. Natural and cultural assets				Answer: Reason:		
11.. Global warming / climate change				Answer: Reason:		
12. Others, if any Specify:				Answer: Reason:		

Q.12.How much do you feel environmental degradation affects your life?

1. It dose not affect at all.
2. It affects to some degree.
3. It causes serious problems.
4. I do not know or I am not sure.
5. Others (Please specify:\_\_\_\_\_).
6. No response

12	
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Q.13.Which is more important for you, Economic Development or Environment Conservation?

1. Economic development is more important.
2. Environment conservation is more important.
3. Others (Please specify:\_\_\_\_\_).

13	
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Q.14. What do you think the main pollutant source is for the following pollution problems? Please answer in each pollution problem.

	Source of Pollutants						
1. Air pollution	1. Factories	2. Automobile	3. Open burning by agriculture	/	5. Others (Specify: )	6. I do not know	7. No problem
2. Water Pollution	1. Factories	2. Household	3. Agriculture	4. Aquaculture	5. Others (Specify: )	6. I do not know	7. No problem
3. Solid Waste	1. Factories	2. Household	3. Road vender	4. Tourist	5. Others (Specify: )	6. I do not know	7. No problem
4. Noise	1. Factories	2. Construction	3. Road transportation	4. Water transportation	5. Others (Specify: )	6. I do not know	7. No problem

### 3. Willingness to Cooperate for the Improvement of Natural Resources and Environmental Management

Q.15. Do you think that environmental regulations are observed in Ayutthaya Province?

- 1. Yes, they are observed (Go to Q 17)
- 2. They are somewhat observed (Go to Q 17)
- 3. They are not observed much
- 4. I do not know (Go to Q 17)
- 5. No response (Go to Q 17)

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Q.16. What kind of measures do you think should be taken to make regulations observed?  
(Plural answers are accepted)

- 1. The central government tightens control and increases penalty.
- 2. The provincial administration tightens control and increases penalty.
- 3. The local administration (Orborjor, Tessaban and Orbortor) tightens control and increases penalty.
- 4. Industries should be raised awareness to take pollution control measures more seriously.
- 5. People should be raised awareness to pay more attention to environmental issues.
- 6. Others (Please specify: \_\_\_\_\_)
- 7. I do not know
- 8. No response

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Q.17. What do you think the central government should do to improve environment?  
Please select 3 among the following choices.

- 01. To establish new laws and regulations.
- 02. To tighten its control and increase penalty.
- 03. To construct more waste water treatment facilities and solid waste treatment & disposal facilities.
- 04. To construct reuse/recycle center.
- 05. To help industries improve pollution control capabilities.
- 06. To have more programs to develop new technology.
- 07. To promote environment education.
- 08. To strengthen provincial administrations
- 09. To strengthen local administrations
- 10. To speed up decentralization.
- 11. To promote participation of local people.
- 12. To open more information and data.

17			
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- 13. I do not know.
- 14. No response.

Q.18. What do you think Provincial Administrations should do to improve environment? Please select 3 among the following choices.

- |    |  |  |  |
|----|--|--|--|
| 18 |  |  |  |
|----|--|--|--|
- 01. To establish new regulations.
  - 02. To tighten its control and increase penalty.
  - 03. To construct a proper waste water treatment facilities and solid waste treatment & disposal facilities.
  - 04. To construct a reuse/recycle center.
  - 05. To help industries improve pollution control capabilities.
  - 06. To ask central government to introduce proper environmental management technology.
  - 07. To promote environment education.
  - 08. To strengthen capability of Local Administration.
  - 09. To promote participation of local people.
  - 10. To open more information and data.
  - 11. I do not know.
  - 12. No response.

Q.19. What do you think Local Administrations (Orborjor, Tessaban and Orbortor) should do to improve environment? Please select 3 among the following choices.

- |    |  |  |  |
|----|--|--|--|
| 19 |  |  |  |
|----|--|--|--|
- 01. To establish new regulations.
  - 02. To tighten its control and increase penalty.
  - 03. To construct a proper waste water treatment facilities and solid waste treatment & disposal facilities.
  - 04. To construct a reuse/recycle center.
  - 05. To help industries improve pollution control capabilities.
  - 06. To ask central government to introduce proper environmental management technology.
  - 07. To promote environment education.
  - 08. To promote participation of local people.
  - 09. To open more information and data.
  - 10. I do not know.
  - 11. No response.

Q.20. Proper management of environment requires an additional cost such as installation of sewerage for domestic wastewater, sanitary landfill for municipal solid waste, maintenance of national parks, etc. Do you agree to pay more tax and/or more fee for the environmental conservation?

- |    |  |
|----|--|
| 20 |  |
|----|--|
- 1. Strongly agree.
  - 2. Somewhat agree
  - 3. Neither agree nor disagree
  - 4. Somewhat disagree.
  - 5. Strongly disagree.
  - 6. Others (Please specify: \_\_\_\_\_)
  - 7. No response

Q.21. Does your NGO confront the problem of global warming?

- 1. Yes
- 2. No (Go to Q.23)
- 3. I do not know (Go to Q.23)

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Q.22. What kind of activities do you do for confronting the problem of global warming? Please select all that you are doing.

- 1. Save water consumption.
- 2. Save energy such as raising temperature of air conditioners.
- 3. Promote 3Rs (waste reduction, reuse and recycling).
- 4. Separate collection of municipal solid waste.
- 5. Forestation
- 6. Education of residents about environmental conservation, water and energy save, 3Rs, etc.
- 7. Others (Please specify: \_\_\_\_\_).
- 8. No response.

22	
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Q.23. Do you think residents in Ayutthaya Province cooperate to preserve environment of the province?

- 1. Yes, very much
- 2. Yes, some extent
- 3. No (Go to Q.25)
- 4. I do not know (Go to Q.25)

23	
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Q.24. What kind of activities do the residents do for preserving environment of the province? Please select all that the residents are doing at present.

- 1. Separate discharge of municipal solid waste.
- 2. Cleaning their surrounding area
- 3. Cleaning public area such as road, park, drain, etc.
- 4. Forestation
- 5. Others (Please specify: \_\_\_\_\_).
- 6. No response.

24	
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Q.25. The Ayutthaya Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. When the plan will be finalized, the provincial government will organize a committee to monitor the implementation of the plan and recruit members of the committee from various stakeholders including NGOs. Will your NGO be able to be a member of the committee?

- 1. Yes, we will without conditions.
- 2. Yes, we will with conditions. (Please specify the conditions.)
- 3. No
- 4. I do not know
- 5. No response.

25	
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#### **4. Suggestions for Formulation of Provincial Environmental Quality Management Plan**

The Ayutthaya Province is now formulating a Provincial Environmental Quality Management Plan (PEQMP) in order to establish a sustainable natural resources and environmental management in the Province. We are very welcome to receive your valuable suggestions for the plan. Please kindly state your constructive opinion on the plan in the following table.

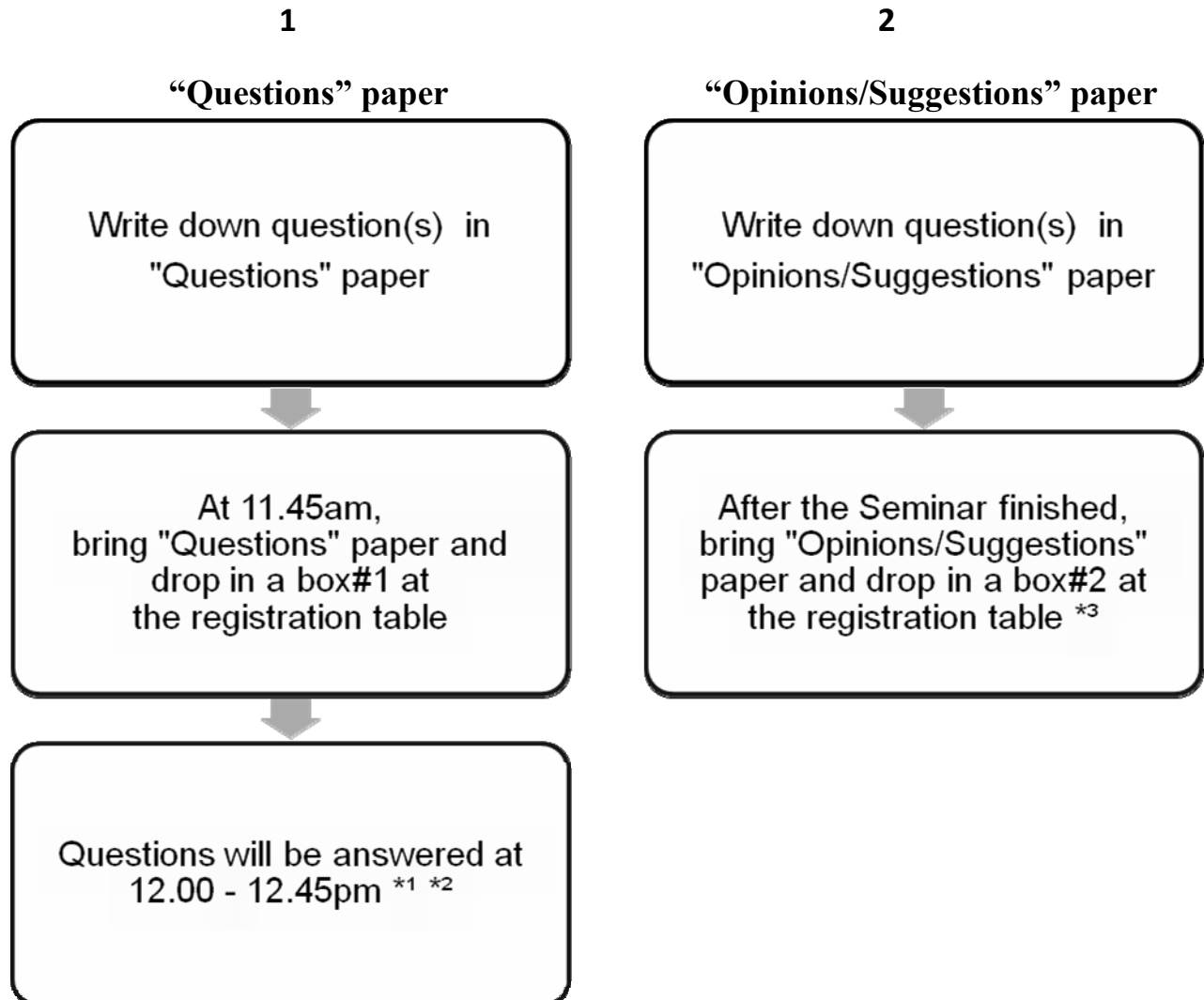
My suggestion to the PEQMP

***----- Thank you very much!! -----***

# Instruction

## For Questions Paper and Opinions/Suggestions Paper

Participants will receive 1. "Questions" paper, and, 2. "Opinions/Suggestions" paper. Please follow the instruction below:



**\*Remark:** 1. Spontaneous questions are allowed during “question answering” session.


2. Due to limited time, AYP PEO will try to deliver the answer to unanswered questions via your convenient method as you specified.

3. You can also send further opinions/suggestions to Mr./Ms., until March 31<sup>st</sup>, 2008:

Address: Samut Songkhram Provincial Environmental Office 250/32 Tambon Mae Klong, Amphoe Mueang, Samut Songkhram Province 75000

Tel# XXX -XXX-XXX Fax#:XXX -XXX-XXX Email: XXXXXX@hotmail.com

**The Second Seminar  
For Formulation of PEQMP for Samut Songkhram Province**

By : The Study on Supporting System for Local Administrations on Natural Resources and Environmental Management in the Kingdom of Thailand  
Wednesday, 12th March, 2008 at Ban Thip Suan Thong, Samut Songkhram Province

**“Questions”**

Name .....

Position ..... Section .....

Way of Communication (Mailing Address, Telephone, Fax, Email Address etc)  
.....  
.....

**Questions on Current Situations and Issues for Natural Resources and Environmental Management (NREM) in Samut Songkhram:**

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**Questions on the First Draft of PEQMP:**

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