



Environmental Impact Assessments for Nuclear Energy-Related Activities In Thailand



Thailand Institute of Nuclear Technology (Public Organization)

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- Nuclear organizations in Thailand
- Law and regulations related to environmental and health impact assessment (EHIA) study
- EHIA study process
- Current nuclear project subject to EHIA study



Nuclear Organizations in Thailand

Ministry of Science and Technology

NEC

OAP

TINT

TINT Committee

OAP: Office of Atoms for Peace

NEC: Nuclear Energy Commission

TINT: Thailand Institute of Nuclear Technology
(Public Organization)

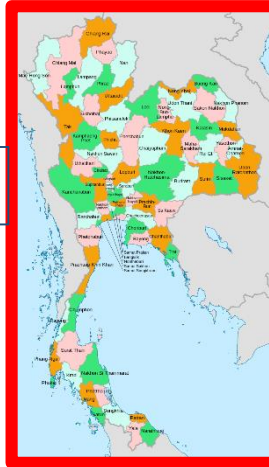
TINT comprises of 3 sites;

TINT-Ongkharak, Nakhon Nayok, Headquarter ★

TINT- Klong Ha (Phathum Thani) ★

TINT-Bangkheng, Bangkok ★

OAP is in Bangkok ★



Thailand Institute of Nuclear Technology (Public Organization)

Roles and responsibilities



TINT



OAP

Thailand Institute of Nuclear Technology (TINT)

- Promote nuclear technology and utilization
- Support research and development on nuclear technology
- Provide technical operation and service
- Provide training service and public relation in nuclear technology

Office of Atoms for Peace (OAP)

- Establish rules, regulations and measures
- Control and regulate peaceful uses of nuclear energy and nuclear facilities
- Coordinate other issues regarding atomic energy
- Be a secretariat of the NEC



Law and Regulations related in EIA

- **Constitution of The Kingdom of Thailand, B.E. 2560 (2017).**

Section 58. In regard to any undertaking by the State or that the State will permit any person to carry out, if such undertaking may severely affect the natural resources, environmental quality, health, sanitation, quality of life or any other essential interests of the people or community or environment, the State shall undertake to study and assess the impact on environmental quality and health of the people or community and shall arrange a public hearing of relevant stakeholders, people and communities in advance in order to take them into consideration for the implementation or granting of permission as provided by the law.

A person and community shall have the rights to receive information, explanation and reasons from a State agency prior to the implementation or granting of permission under paragraph one.

In the implementation or granting of permission under paragraph one, the State shall take precautions to minimise the impact on people, community, environment, and biodiversity and shall undertake to remedy the grievance or damage for the affected people or community in a fair manner without delay.



Nuclear Law and Regulations related in EIA

Nuclear Energy for Peace Act, B.E. 2559 (2016) has been enacted in August, 2016 (14 chapters)

- Chapter 5 : Nuclear Facility
- Nuclear facility means;
 - A facility utilizing a power reactor
 - A facility utilizing a research reactor
 - A milling facility with the purpose of acquiring nuclear material
 - A facility to convert or enrich nuclear material
 - A facility to fabricate or store nuclear fuel
 - A facility to store or reprocess spent nuclear fuel



Nuclear Law and Regulations related in EIA

- Chapter 5 Nuclear Facility, Part 2 Nuclear Facility Site,
 - Section 51 In establishing a nuclear facility, the establisher shall obtain a site license from the Secretary General with the approval of the Commission.
 - When applying for a license, an applicant shall submit a license application together with a site evaluation report
 - The site evaluation report shall be prepared in accordance with the specification prescribed by the Commission with at least following details:



Environmental Law and Regulations related in EIA

The site evaluation report shall be prepared in accordance with the specification prescribed by the Commission with at least following details:

- The effect of external events on the nuclear facility site either of natural origin or human induced;
- The characteristics of a site
- A site environmental report
- Population demography surrounding a nuclear facility
- Evacuation routes for the population in the case of radiological or nuclear emergency;
- Protection and mitigation of possible harm to people and the environment



Law and Regulations related in EIA

Nuclear Energy for Peace Act, B.E. 2559 (2016) has been enacted in August, 2016 (14 chapters)

- Chapter 6 Radioactive Waste, Section 80
 - Any person providing a service on radioactive waste management shall obtain a site license, a construction license, an operating license for a waste management facility from the Secretary General with the approval of the Commission.
 - The provision in the Chapter 5 on Nuclear Facility and Chapter 8 on Safety, Security, and Safe Guards as well as Penalties provisions shall be applied *mutatis mutandis*



Nuclear Law and Regulations related in EIA

- **Chapter 5 Nuclear Facility, Part 2 Nuclear Facility Site,**
 - Section 52 During the consideration to issue a site license, the office shall arrange a public hearing for the people living in the site vicinity. The public hearing results shall be used in the consideration to issue the site license. The arrangement for a public hearing shall be in accordance with the rules, procedures prescribed by the ministerial regulation.



Environmental Law and Regulations related in EIA

- Enhancement and Conservation of National and Environmental Quality Act., B.E. 2535
- Enhancement and Conservation of National and Environmental Quality Act., B.E. 2561



Environmental Law and Regulations related in EIA

Enhancement and Conservation of National and Environmental Quality Act.,

Chapter	
1	National Environmental Board
2	Environmental Fund
3	Environmental Protection
4	Pollution Control
5	Promotional Measures
6	Civil Liability
7	Penal Provisions
Interim provision	



Environmental Law and Regulations related in EIA

Enhancement and Conservation of National and Environmental Quality Act.,

Chapter 3	
Part 1	Environmental Quality Standards
Part 2	Environmental Quality Management Planning
Part 3	Conservation and Environmentally Protected Areas
Part 4	Environmental Impact Assessment



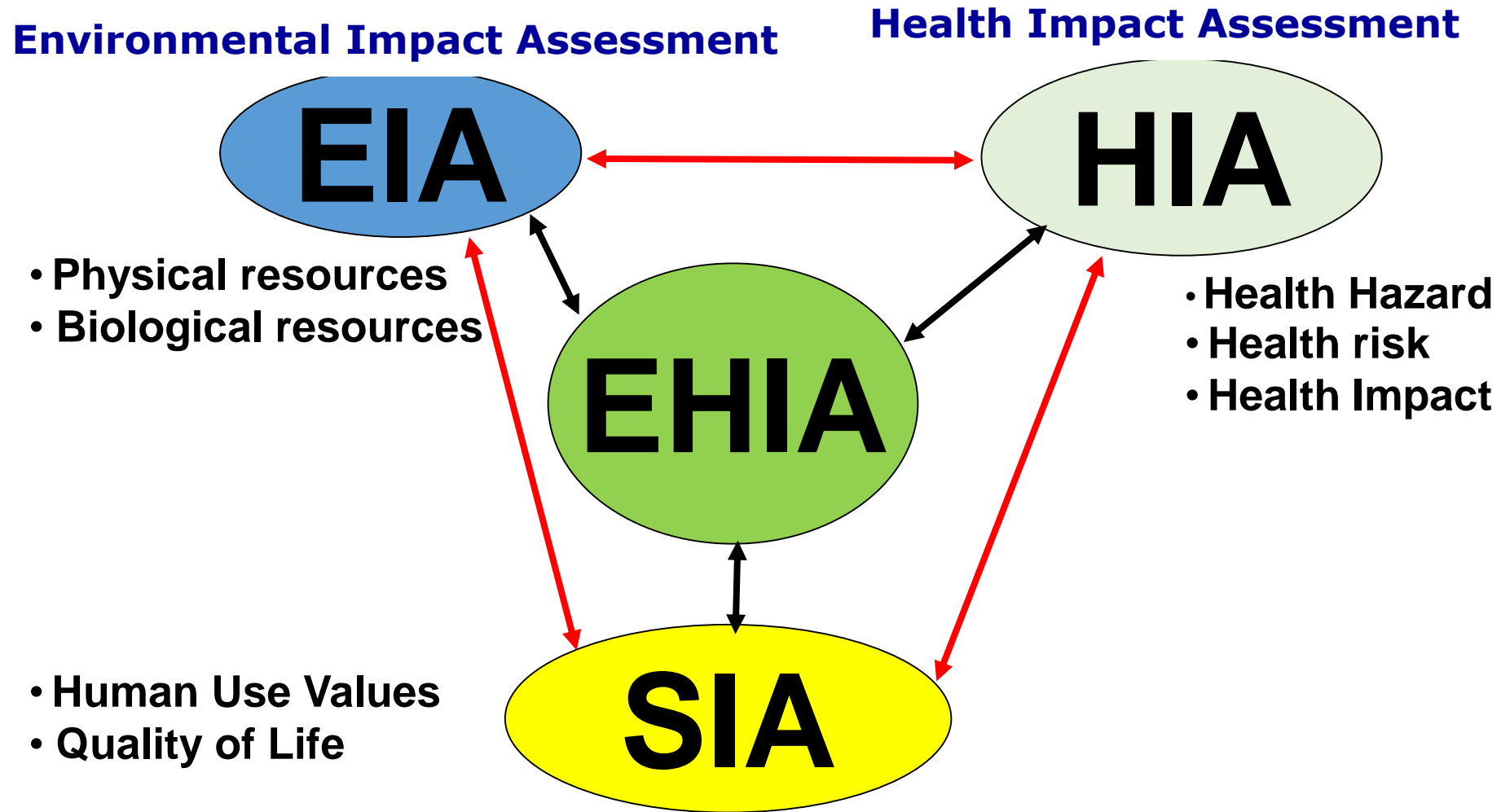
Environmental Law and Regulations related in EIA

- Notification of Ministry of National Resources and Environment about defining type, size and procedure for Project or Activity which May affect community severely in respect of both the quality of Environment, Natural Resources and Health that Government agency, State Enterprise Or Private Sector should prepare environmental impact assessment report (4 January 2019) B.E. 2562.
- 12 types of projects or activities; severe impact to natural resources, environmental, social, quality of life or health.

No.	Type of Projects or Activities	Size	Rules, Procedures, Practices
6	Production, possession or use of nuclear energy from nuclear reactors	Production capacity of 2 megawatts or more	Submitted when applying for approval or permission of the project



EHIA Principles



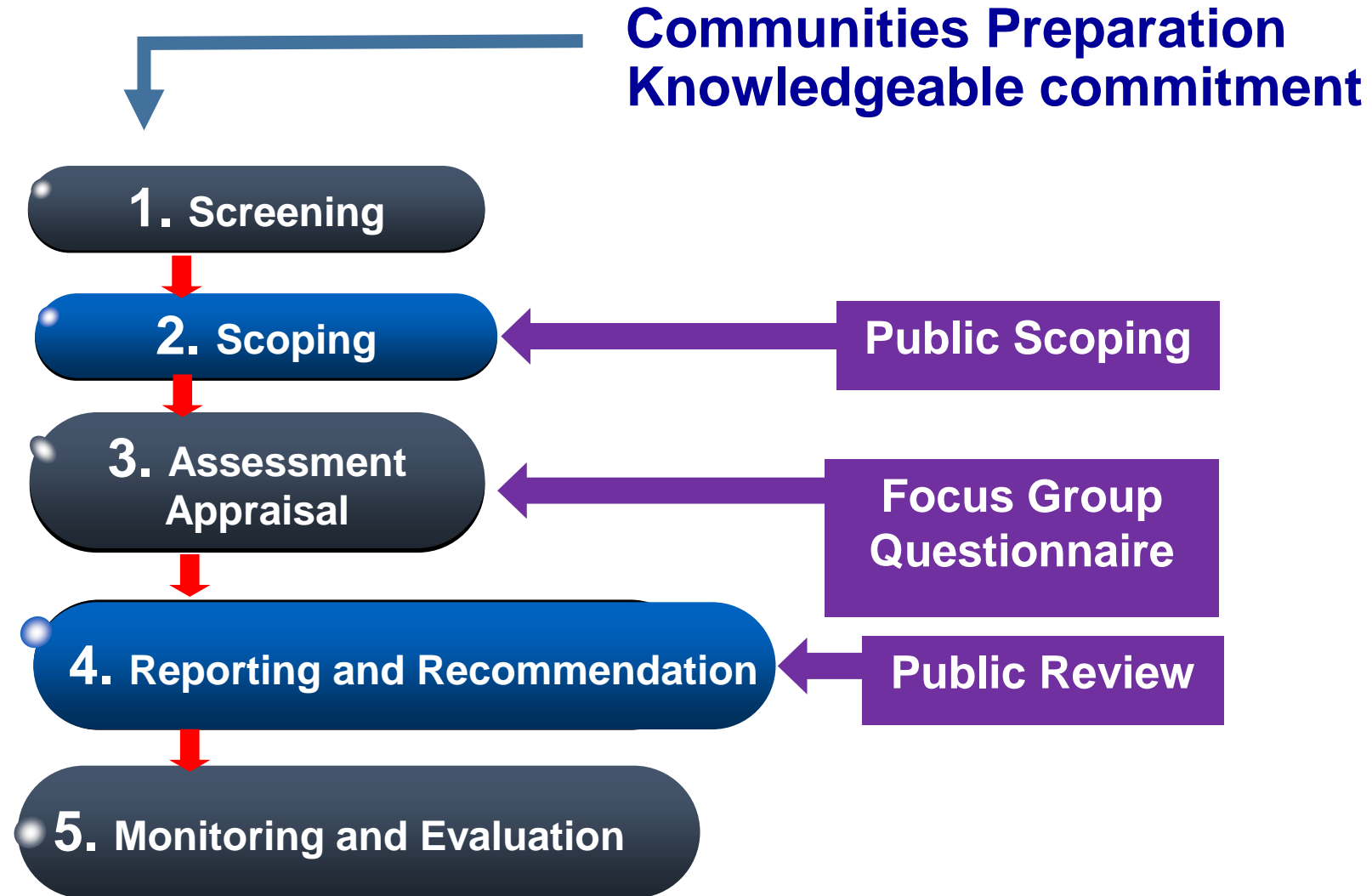
Environmental Aspects

1. Physical environmental resources
2. Biological environmental resources
3. Ecological system
4. Value for human being utilisation
5. Value for quality of life

Including: **Social Impact Assessment (SIA)**
Health Impact Assessment (HIA)
Major Hazard and Emergency Response



EIA/ EHIA Study Process



The Notification of MONRE: EHIA Preparation

A. Guideline for preparation of the environmental impact assessment report for project or activity which may seriously affect community with respect to quality of environment, natural resources and health

B. Guideline for evaluation of health impact for project or activity which may seriously affect to community in respect of quality of environment, natural resources and health

C. Guideline for consultation with the public and interested parties in the process of environmental impact assessment for project or activity which may seriously affect community in respect of quality of environment, natural resources and health

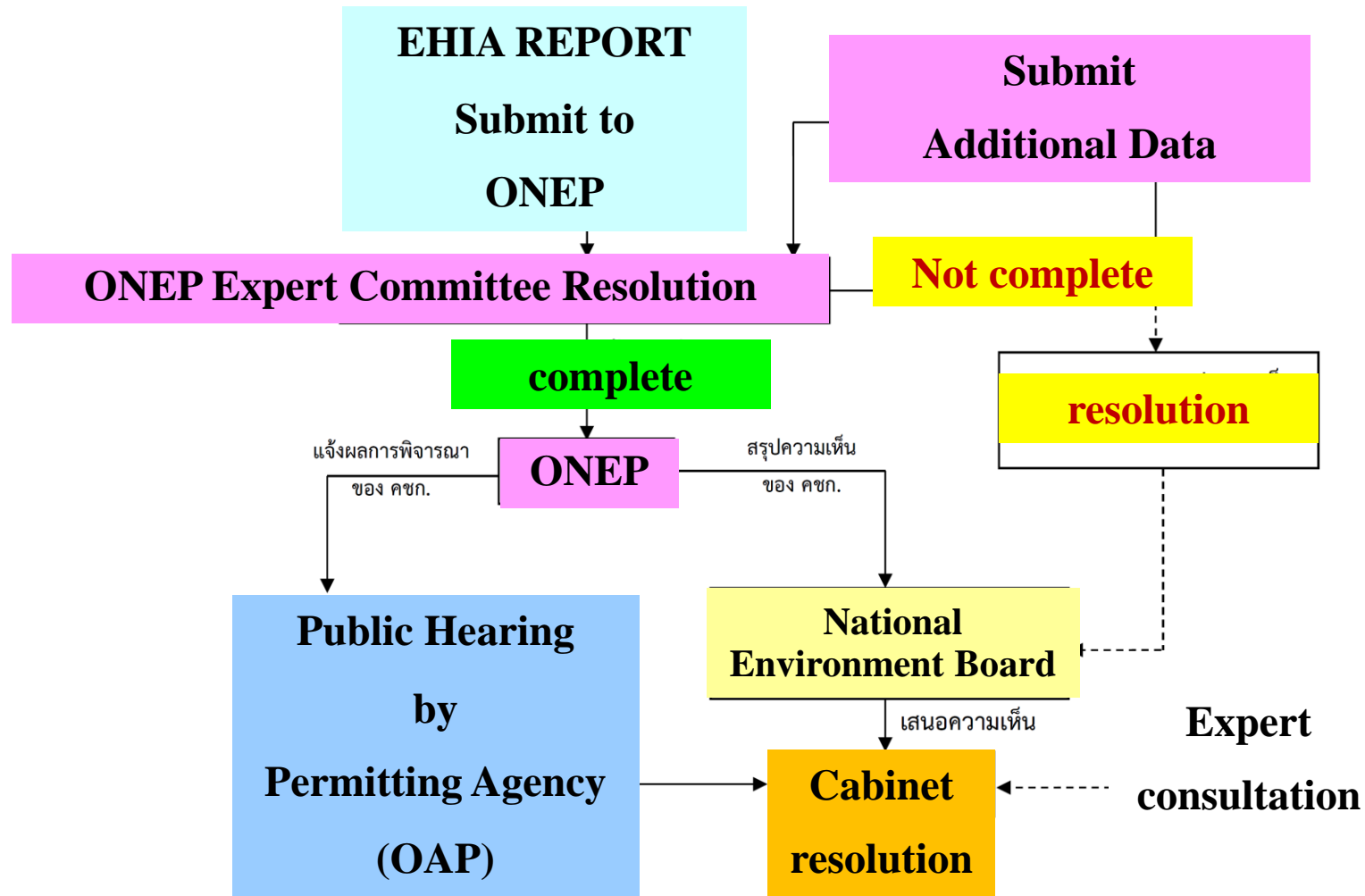
■ ■ C. 1 Consultation with the public and interested parties for determination of terms of reference and guideline for environmental and health impact assessment

■ ■ C. 2 Consultation with the public and interested parties at the stage of assessment and preparation of the environmental impact assessment report for project or activity which may seriously affect community in respect of quality of environment, natural resources and health

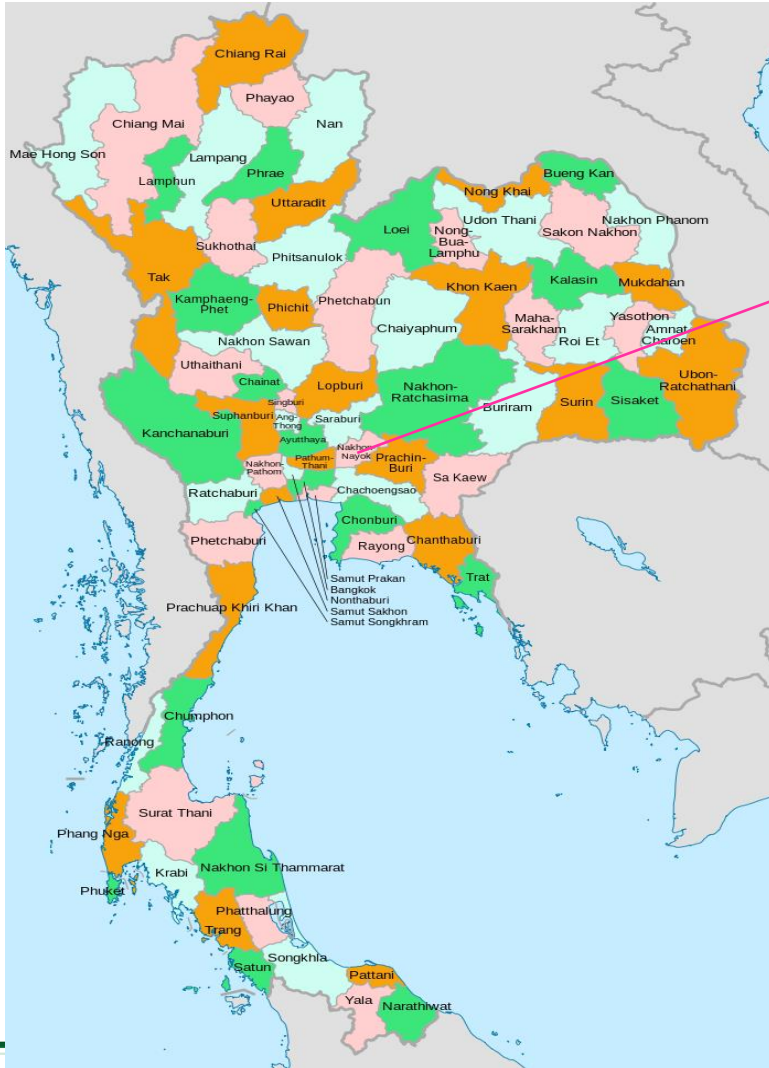
■ ■ C. 3 Consultation with the public and interested parties in reviewing the draft environmental impact assessment report for project or activity which may seriously affect community in respect of quality of environment, natural resources and health



EIA/EHIA Approval Process in Thailand

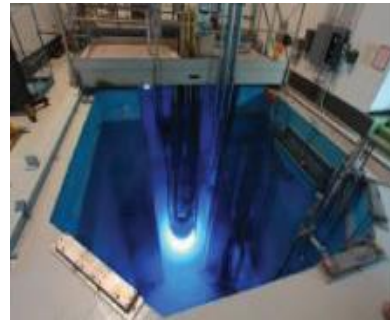


Current Nuclear Research Reactor Project in Thailand



The establishment of 20-MW nuclear research reactor facility at TINT-Ongkharak, Nakhon Nayok. (project phase I)

The environmental and health impact assessment (EHIA) of the project together with the public hearing in compliance with the environmental and nuclear law are being conducted. The task is planned to complete in 2020.



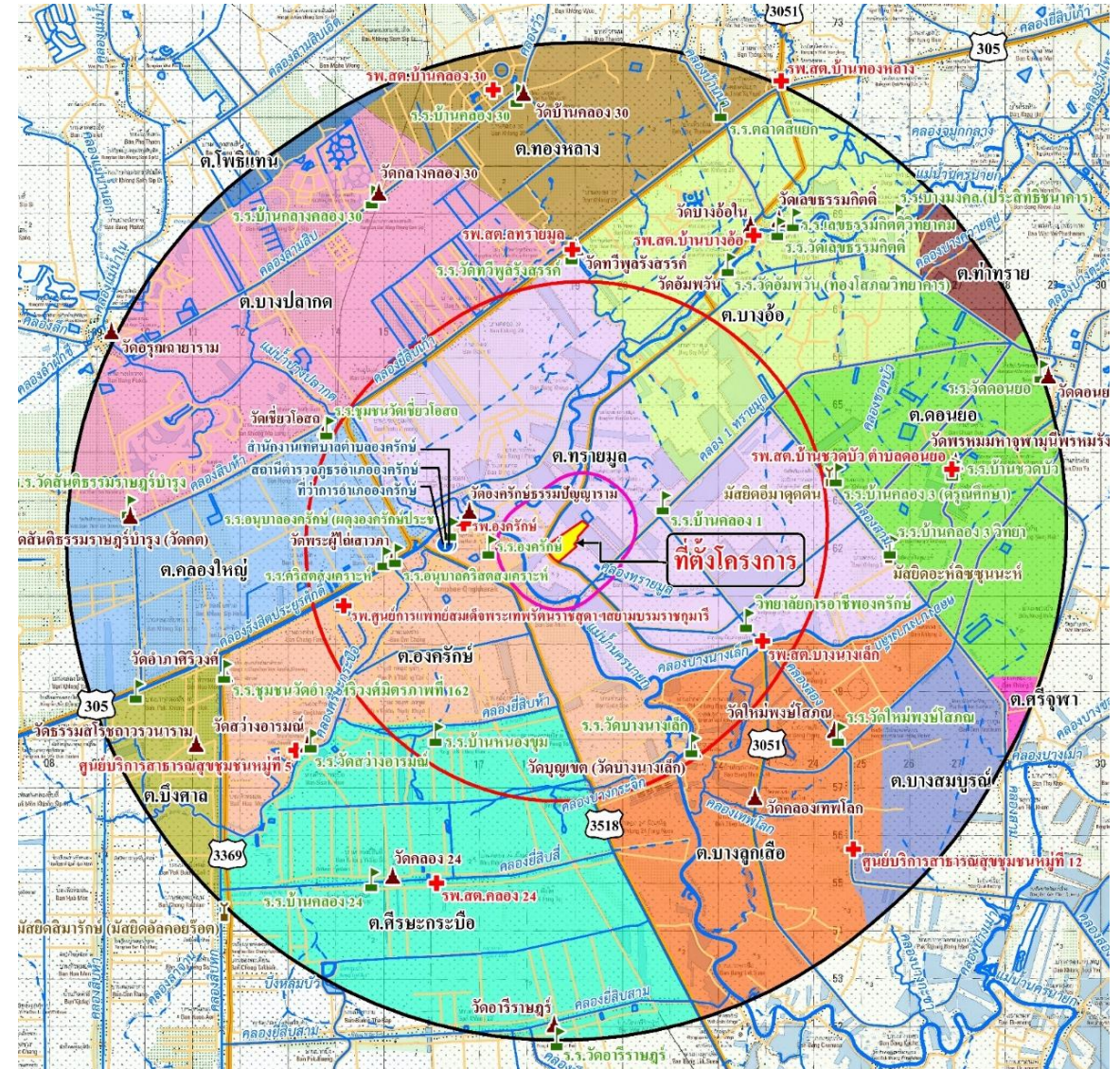
Current Nuclear Project Related to EHIA in Thailand

1 km : 2 Tambons

- Tambon Saimun
- Tambon Ongkharak

5 Km : 3 Amphor 8 Tambon

- Amphor Ongkharak (Saimun, Ongkharuk, Klongyai, Sisakrabue, Bangluksuea, Bangplakod)
- Amphor Banna (Bang-ao)
- Amphor Muang Nakhonnayok (Don-yo)



Example: Public Hearing: C1, 26 DEC 2018



About 720 people living surrounding the project site are invited to the 1st public hearing for the development of 20-MW nuclear research reactor facility at the TINT-Ongkharak, 26 Dec 2018.

