Vietnam Nuclear Energy Policy and Action Plan

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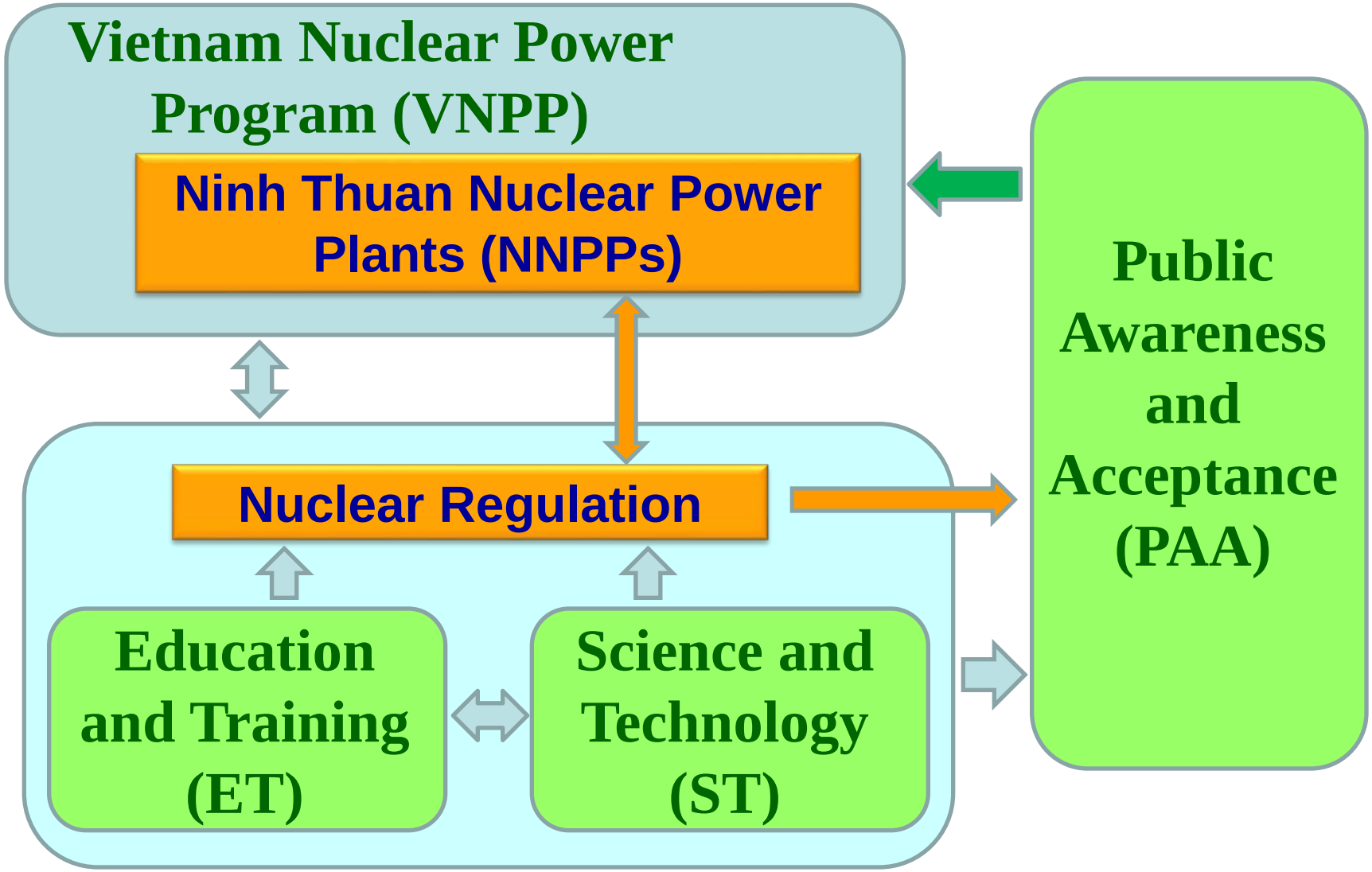
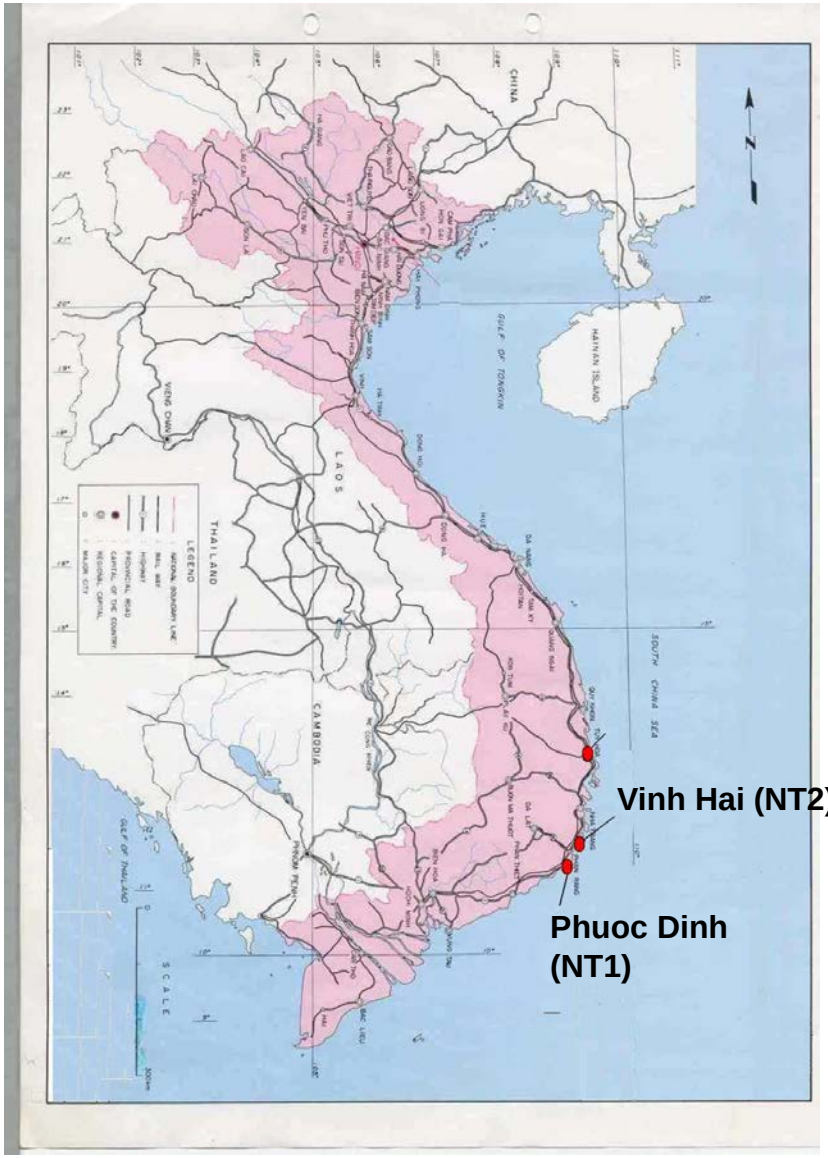
1. Nuclear Power Plant Projects

Vietnam needs sustainable development of nuclear power



1. Nuclear Power Plant Projects



The First 2 NPP Projects

- ✓ *Pre-FS: 2002-2009*
- ✓ *Ninh Thuan 1 – NT1:*

2x1000 MWe + 2x1000 MWe

(Construction: 2017-2023)

- ✓ *Ninh Thuan 2 – NT2:*

2x1000 MWe + 2x1000 MWe

(Construction: Unclear)

- ✓ *Location:*

300 km from Ho Chi Minh City, 140 km from Dalat

1. Nuclear Power Plant Projects

Feasibility Study (FS) for Ninh Thuan NPP Projects

Ninh Thuan 1:

- ***Consultant:*** *E4 (Moscow EnergoPromTechnology -- EPT and Kiev EnergoProject – KIEP, Ukraine) +* ***AES-Buran***
- *FS start: November 2011*
- *Full FS first submission: December 24, 2013*
- *Technology selection: 4 technologies AES-91, AES-92,* ***AES2006*** *(design* ***V392M*** *of Moscow and designV491 of S.Peterburg)*

1. Nuclear Power Plant Projects

Feasibility Study (FS) for Ninh Thuan NPP Projects

Ninh Thuan 2:

- ***Consultant:*** *Japan Atomic Power Company (JAPC)*
- *FS start: September 2011*
- *Full FS first submission: May 2013*
- *Technology selection: ABWR, MPWR+,* ***AP1000****, ATMEA1*

1. Nuclear Power Plant Projects

Next Tasks

Ninh Thuan 1 and Ninh Thuan 2 NPP Projects:

- Completion of FS reports
- Technology selection
- Review of the FS reports and design aspects
- Formulation of technical tasks for the Technical Designs
- Preparation for Contracts
- Licensing (construction and operation)
- Preparation for NPPs construction
- Other tasks

5 Main Issues for Vietnam Nuclear Power Program

1. *Nuclear Power Plant (NPP) Projects*
2. *Nuclear Regulation System*
3. *Development of R&D to support the VNPP*
4. *Nuclear Human Resource Development (HRD)*
5. *Public Information*

2. Applications of nuclear energy

-Vietnam currently has three accelerators:

+ 31 Mev accelerator was installed at 108 Hospital
+ 11 Mev accelerator was installed at Cho Ray Hospital
+ 13 Mev accelerator was installed at Hanoi Irradiation Center

- Promoting nuclear energy applications in health: using research reactor to produce radioisotopes and drugs
- Mutation breeding plays important role for crop breeding: Up to date, number of mutant varieties is more than 50 varieties including rice, soybean, and flowers. Some good varieties are VND95-19, VND95-20, VND99-3, VN121, VN124, VN24-4, TNDB-100, OM2717, OM2718, and OM2496
- Developing the radioactive tracer technology: HCM Nuclear Center has applied that technology in order to research groundwater resources

3. FNCA Expectation

International cooperation plays an important role in the VNPP, especially for the human resource training in the forthcoming years. Thus, In this regards, Vietnam is in the opinion that, the Japanese leadership in NPP and Non-NPP through FNCA is very much appreciated and need to be continued. Member countries benefitted a lot, especially for newcomer countries with objective of preparing the infrastructure for NPP, where, through FNCA, early planning and capacity development could be achieved.

4. Concluding Remarks

- Vietnam has introduced an ambitious nuclear power program (VNPP), the first 2 NPP projects are under consideration (FS phase)
- Vietnam needs to develop a sustainable nuclear power program *(otherwise it can be danger*), in which the human resources and R&D are essential
- Vietnam also focus on promoting application of nuclear energy for peaceful purposes.
- International cooperation in general and FNCA in particular plays an important role in the VNPP, especially for the human resource training in the forthcoming years

Thank you!