Country Report of Indonesia
FNCA Ministerial Meeting 2015

CLIMATE CHANGE AND ROLE OF NUCLEAR SCIENCE AND TECHNOLOGY

HE MINISTER PROF. MOHAMAD NASIR, PHD. AK, HON.DOC.ED.
THE MINISTRY OF RESEARCH, TECHNOLOGY AND HIGHER EDUCATION OF INDONESIA

CLIMATE CHANGE POLICY-1

- Indonesia is an archipelagic country, consists of more than 13 thousands islands, and having population around **255 461.70 million (2015).** (http://www.bps.go.id/linkTabelStatis/view/id/1274), with 1.49% growth rate per year
- Indonesia views its development pathway towards **climate resilience** as consistent with its commitment to contribute to the global effort for achieving **Sustainable Development Goals (SDGs).** For this development, the Indonesian Ministry of Research and Technology, are working in synergy with the focal point of climate change program in Indonesia, which is the Ministry of Environment and Forestry.

CLIMATE CHANGE POLICY-2

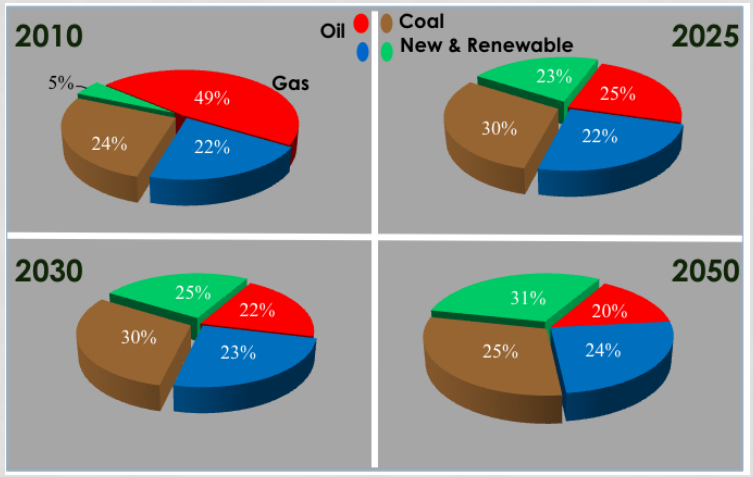
- In 2009, Indonesia voluntarily pledged to reduce Green House Gas (GHG) emissions by 26% on its own efforts, and up to 41% with international support, against the business as usual scenario by 2020,
- Indonesia has promulgated relevant legal and policy instruments, including the national action plan on GHG emissions reduction as stipulated in Presidential Regulation (PERPRES) No. 61/2011 and GHG inventory through Presidential Regulation No.71/2011.
- The current Indonesia's strategic goals, known as **Nawa Cita** (or Nine Agenda Priorities), includes priorities which are consistent with the national commitment to climate change resilience

CLIMATE CHANGE POLICY-3

- On the commemoration of the 43rd of the World Environment Day, 5 June 2015, as established by the United Nations Environment Programme (UNEP), with its theme "Seven Billion Dreams, One Planet, Consume With Care", During that time, Indonesia announced that the Index of Environment Quality (*Indeks Kualitas Lingkungan Hidup*) of 2014, is 63.42. This number is expected to be improved into 66.5 – 68.5 in 2019.
- http://www.menlh.go.id/laporan-menteri-lingkungan-hidup-dan-kehutanan-pada-peringatan-lingkungan-hidup-sedunia-5-juni-2015/
- Therefore, Indonesia considers **"climate change mitigation"** and "**adaptation efforts"**, as an integrated concept that is essential for building resilience in safeguarding **Food, Water** and **Energy** sources.

ROLE OF NUCLEAR SCIENCE AND TECHNOLOGY - ENERGY

- Indonesia has embarked on mixed energy use policy. President Regulation 79 year 2014 on National Energy Policy promotes the use of new and renewable energy sources and targeted at least 23% of total energy sources used



Government Regulation No. 79 year 2014

- Nuclear energy is part of new and renewable energy
- Nuclear is an option in National Energy Policy
- Site study in South and West Bangka (2011-2013) has been conducted by BATAN and PT PLN and showed that two sites fulfill all criteria and could host 4 and 6 units of 1000 MWe NPP, respectively

ROLE OF NUCLEAR SCIENCE AND TECHNOLOGY – AGRICULTURE

- To support adaptation of agriculture sector development to the climate change, nuclear technology is also being used to develop new varieties of Rice plants? which tolerant to multiple stress through mutation breeding.

ROLE OF NUCLEAR SCIENCE AND TECHNOLOGY – ENVIRONMENT

- Nuclear technique can be utilized for investigating groundwater dynamics and recharge rate for sustainable groundwater resource management

  http://www.batan.go.id/index.php/id/kedeputian/sains-aplikasi-teknologi-nuklir/aplikasi-isotop-dan-radiasi/1882-teknik-isotop-mampu-kelola-sumber-daya-air-lebih-efisien-dan-efektif#sthash.iXpJrYpH.dpuf

- Nuclear techniques is also applied to study climate change through analysis of stable isotopes in massive coral existing in Indonesia

FUTURE ROLE OF FNCA

- FNCA continues to pursue the cooperation to promote the nuclear technology utilization for supporting the sustainable development in each participating countries
- FNCA continues to support the development of human resources capacity in the field of nuclear science and technology
- FNCA Project activity should reflect the common needs of the participating countries
  - Information and knowledge sharing should be conducted in each project for benefit of all participating countries
  - Where ever possible, cooperation with other nuclear activity projects in the region, such as IAEA regional cooperative projects, would be plausible

THANK YOU