COUNTRY REPORT OF MALAYSIA

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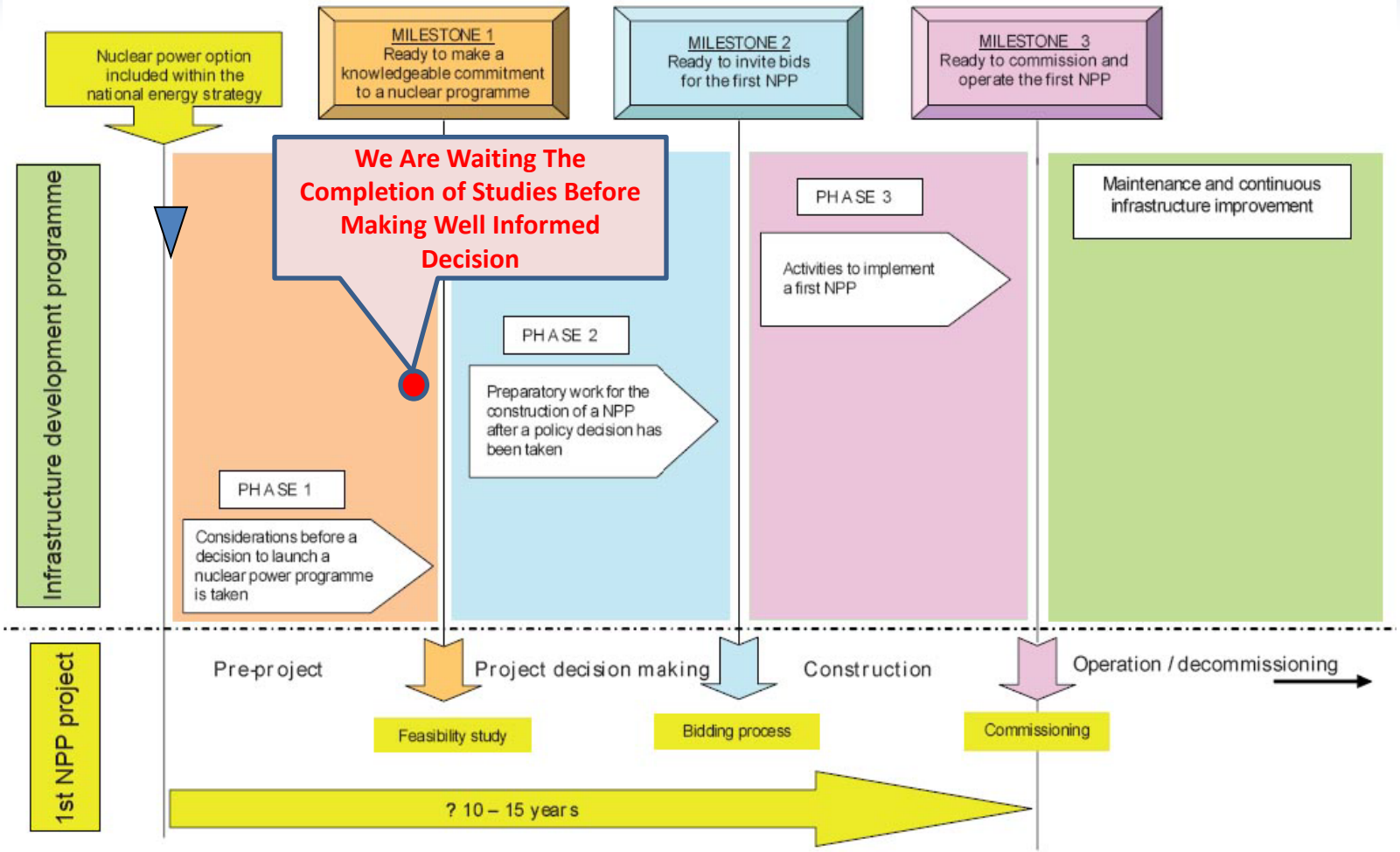
OUTLINE OF PRESENTATION

- National Nuclear Energy Policy & Action Plan
- Expectation from FNCA
- Project Achievements
- Summary

NATIONAL NUCLEAR ENERGY POLICY & ACTION PLAN

NUCLEAR INFRASTRUCTURE DEVELOPMENT PROGRAM

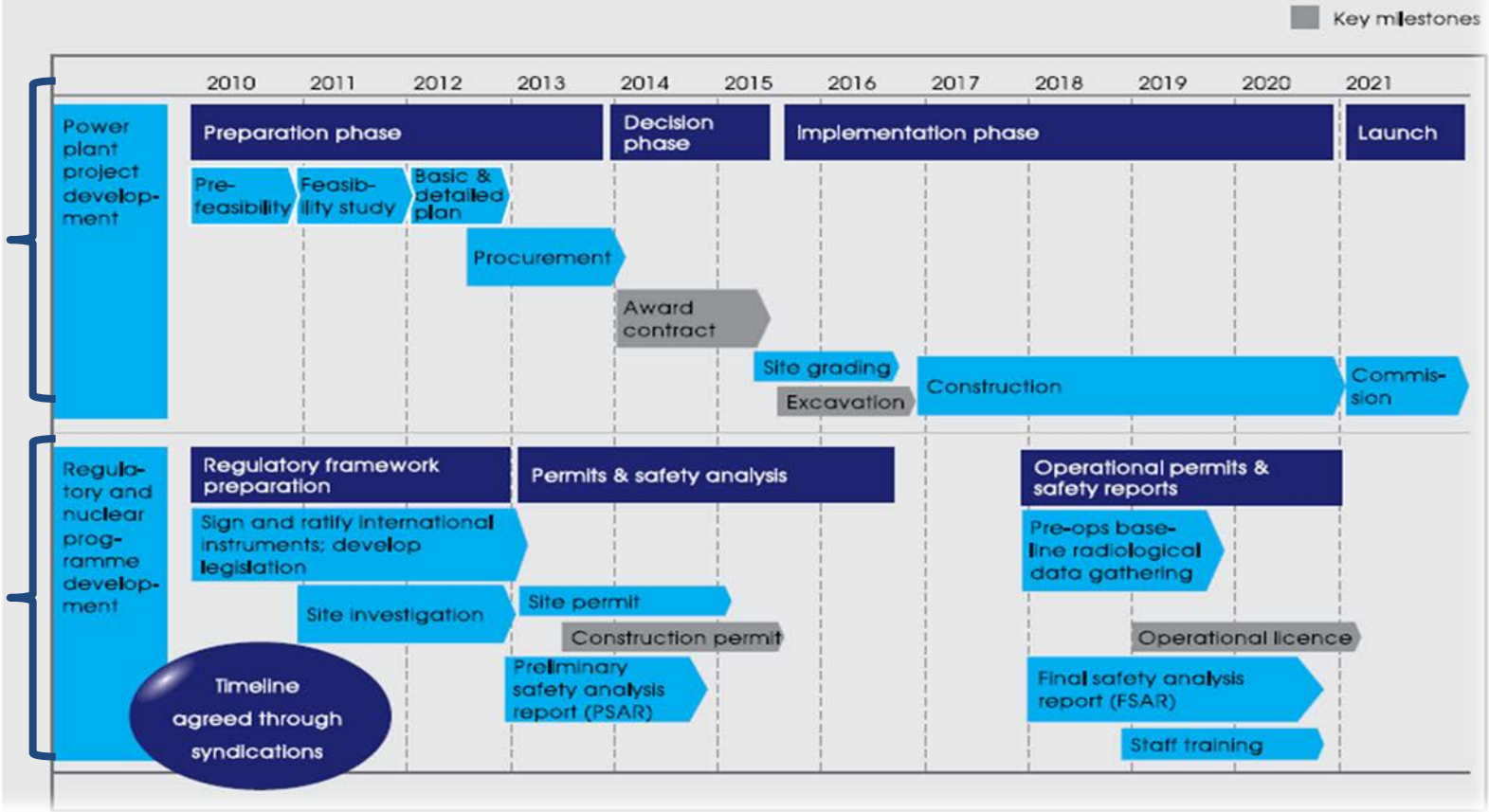


Source: IAEA NG-G-3.1, 2007

NATIONAL NUCLEAR ENERGY POLICY & ACTION PLAN (cont.)

NUCLEAR TIMELINE IN ETP REPORT (*no longer valid*)

To generate nuclear power by 2021, Government will provide resources to proceed with planned activities



NATIONAL NUCLEAR ENERGY POLICY & ACTION PLAN (cont.)

NPRIDP (Completed)	Formulation of **Nuclear Power Regulatory Infrastructure Development Plan (NPRIDP)** with a comprehensive, clear short and medium term actions, benchmarked against IAEAs 19 Infrastructures Issues for comprehensive nuclear regulatory development
Feasibility Study (Nearly Completion)	Detailed technical, financial & economic analysis of the viability of nuclear power as part of national energy mix vis-à-vis other sources
NPIDP (Nearly Completion)	Formulation of a **Nuclear Power Infrastructure Development Plan (NPIDP)** based on a comprehensive assessment of national state-of-preparedness on IAEA 19 Infrastructures Issues
Communications Plan (Just Started)	Formulate a **10-Year Comprehensive Communications Plan** and Strategies on Nuclear Energy in Malaysia with the additional task to advise, coach and support the implementation of the Plan & Strategies

The outcome of these studies coupled with the receptiveness of the public will assist Malaysia to make an informed decision before embarking the nuclear power programme

EXPECTATION FROM FNCA

- FNCA projects formulation should take into account the needs from member countries to enhance regional collaboration and cooperation.

- FNCA continues to assist the new comer countries like Malaysia, in the nuclear power development program by sharing knowledge and experiences, especially on public acceptance and human capacity building.

PROJECT ACHIEVEMENTS

1. RADIATION PROCESSING OF NATURAL POLYMERS

Achievements of Oligochitosan as Plant Growth Promoter (PGP) or Elicitor

Year 2012

Agarwood plant

- **Increase 57% (field scale) on plant height and diameter**

Year 2013

Chili Kulai Hybrid F1 469 Plant
Increase of yield using PGP

- Spray 100ppm oligochitosan
+ white onion = 1.6 kg/plant
- Chemical = 1.39kg/plant
- Control = 0.57kg/plant

Without oligochitosan treatment

With oligochitosan treatment

PROJECT ACHIEVEMENTS (cont.)

1. RADIATION PROCESSING OF NATURAL POLYMERS

R&D Status on Oligochitosan as Plant Growth Promoter (PGP) or Elicitor in Year 2014

Rice plant (MR 219 and 2 Variety of mutant rice plant MR 219-4 and Mr 219-9

- Ongoing season 2/2014
- Season 1/2014 – combination treatment Biofertilizer+liquid smoke+oligo Mwt : 7000 g/mol
- **Yield increased up to 3 tonne/ha compare to Control for MR 219**

Chili Kulai Hybrid F1 469 Plant (fertigation system), Tissue culture (pineapple, rice plant)

- Treatment of oligochitosan with different molecular weight.
- On going activity (Oct 2014 – Feb 2015)
- Fellowship training (KACST) – effect of different molecular weight on yield, elicitation and growth

PROJECT ACHIEVEMENTS (cont.)

2. MUTATION BREEDING

Dendrobium SoniaKeenaPearl

- **Collaboration with Industrial Partner**, Hexagon Green Sdn Bhd for production of **new orchid mutant for export market.**

Mutant varieties of rice, MR219-4 and MR219-9

- Registration of 2 new mutant varieties of rice, **MR219-4** and **MR219-9**

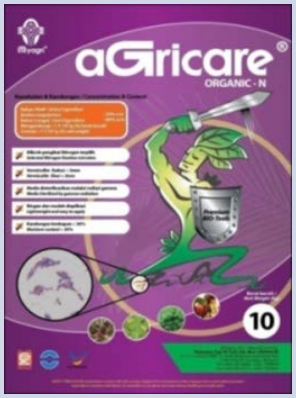
- **Adaptable under minimal water condition with Department of Agriculture in 2015**

PROJECT ACHIEVEMENTS (cont.)

3. BIOFERTILIZER COMMERCIALIZATION

aGricare® ORGANIC-N

- Use as an enrichment material in Myagri's Agricare Bio-Organic compost product.



Bioliquifert

- New biofertilizer product developed by Malaysian Nuclear Agency with multi-functions and multi-application suitable for plant growth and yield enhancement.

- Licensing of ***Bacillus megaterium*** developed by Malaysian Nuclear Agency for nitrogen fixation to Industrial Partner, Malaysian Agri Hi-Tech Sdn Bhd (Myagri) at RM100,000 which formulated a biofertilizer product called aGricare® ORGANIC-N.

SUMMARY

Malaysia will continue to actively participate in the FNCA activities.

THANK YOU

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