Restoring Public Trust in Nuclear Energy and Non-Proliferation Policy - A perspective from Japan-

Global Nexus Initiative

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SUMMARY

- Loss of public trust has been the most significant impact of the Fukushima accident on Japan's nuclear energy policy. Regulatory capture, poor crisis management and lack of trusted information source were the three major sources of mistrust.
- Loss of public trust in energy policy itself remains strong. Lack of transparency, independent oversight, not enough public participation in decision making process are the three major causes.
- International mistrust and concern over Japan's nuclear fuel cycle programs have been increasing. Japan needs to enhance its transparency and more-rational fuel cycle programs to improve international public confidence.

Major conclusions of the Independent Diet Commission on the Fukushima Accident

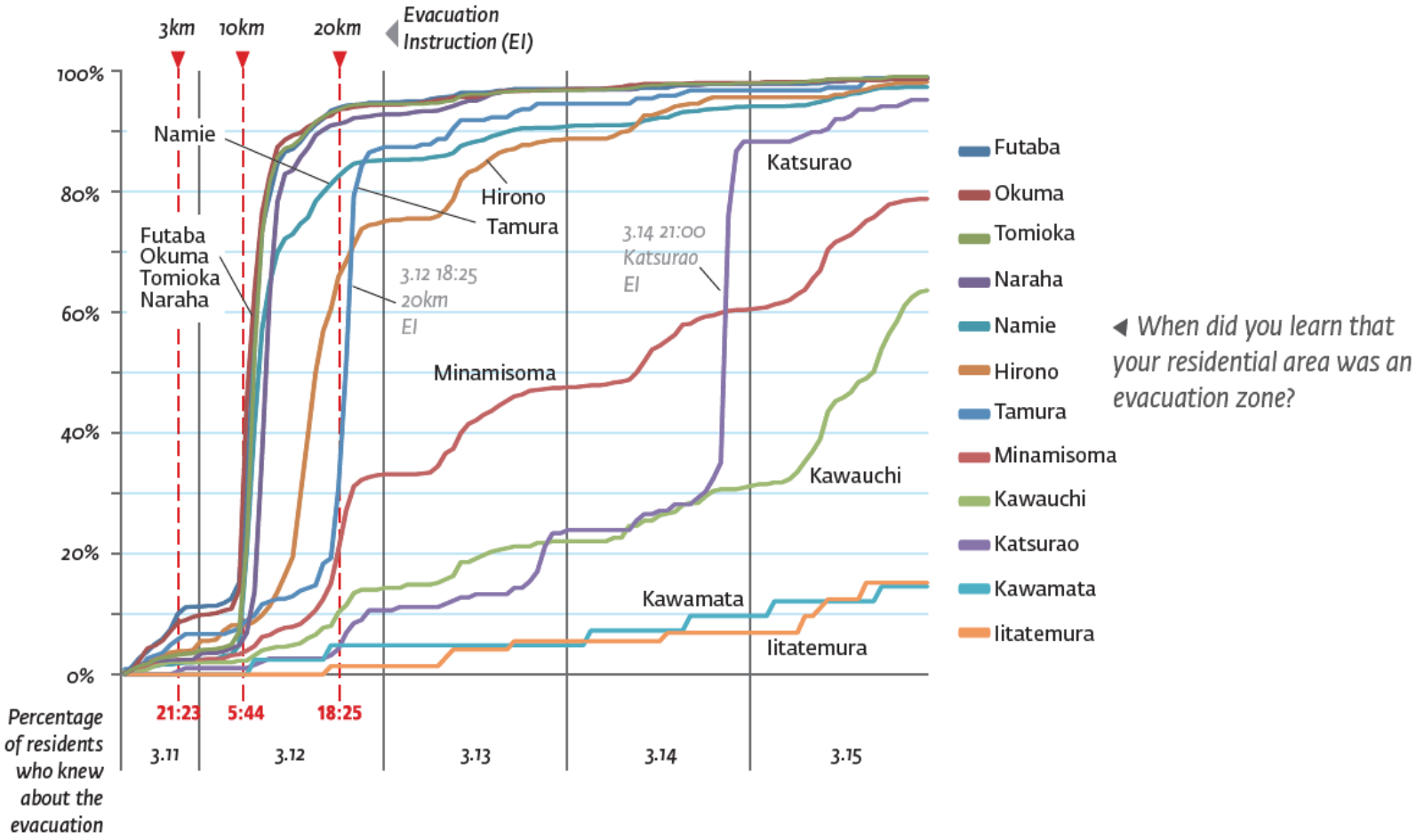
"The accident was preventable."

- Crisis management system was poor.
- Regulatory system was not functioning well ("Regulatory Capture")

> *"The Commission found that the actual relationship lacked independence and transparency, and was far from being a 'safety culture.' In fact, it was a typical example of 'regulatory capture,' in which the oversight of the industry by regulators effectively ceases."*

The official report of The Fukushima Nuclear Accident Independent Investigation Commission,2012.
http://warp.da.ndl.go.jp/info:ndljp/pid/3856371/naiic.go.jp/wp-content/uploads/2012/09/NAIIC_report_hi_res10.pdf

Only less than 20% is informed about evacuation on the first day of the accident



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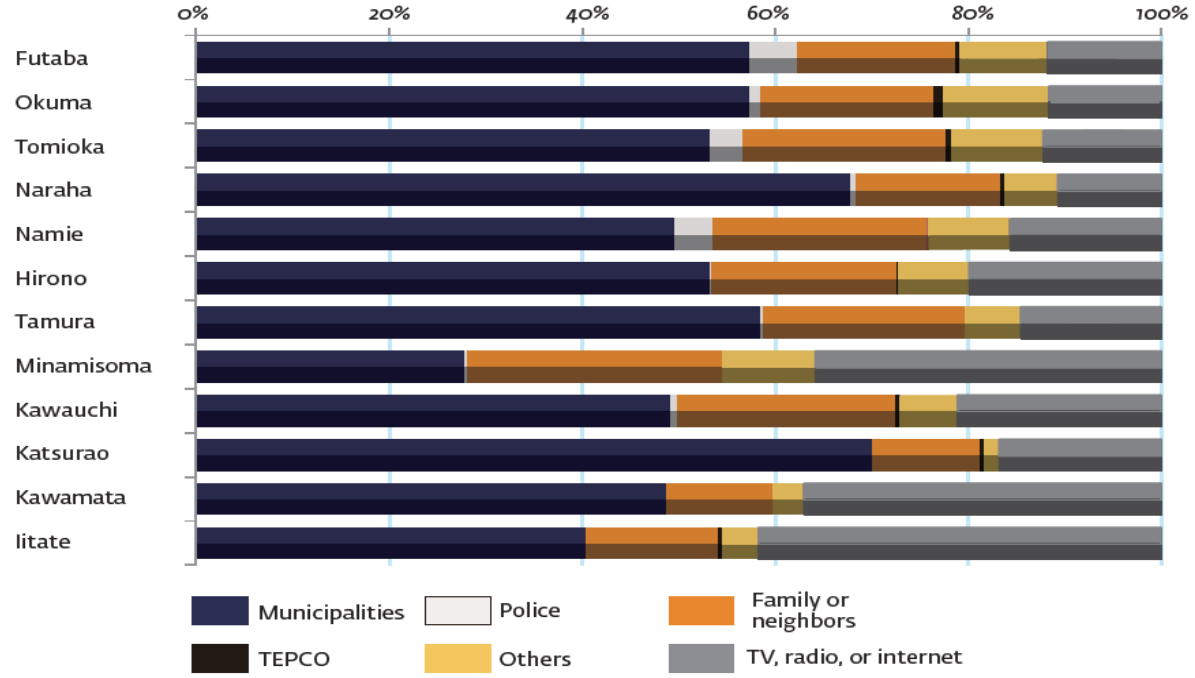
Lack of information from TEPCO and central government during the crisis

evacuation



◀ *Source of Information About the Evacuation Instruction*

actually happening. That is what I recall. Can you think what life is like when you are displaced and separated from your friends and people you know?"

(ii) Comment by a resident of Okuma:

"If there had been even a word about a nuclear power plant when the evacuation was

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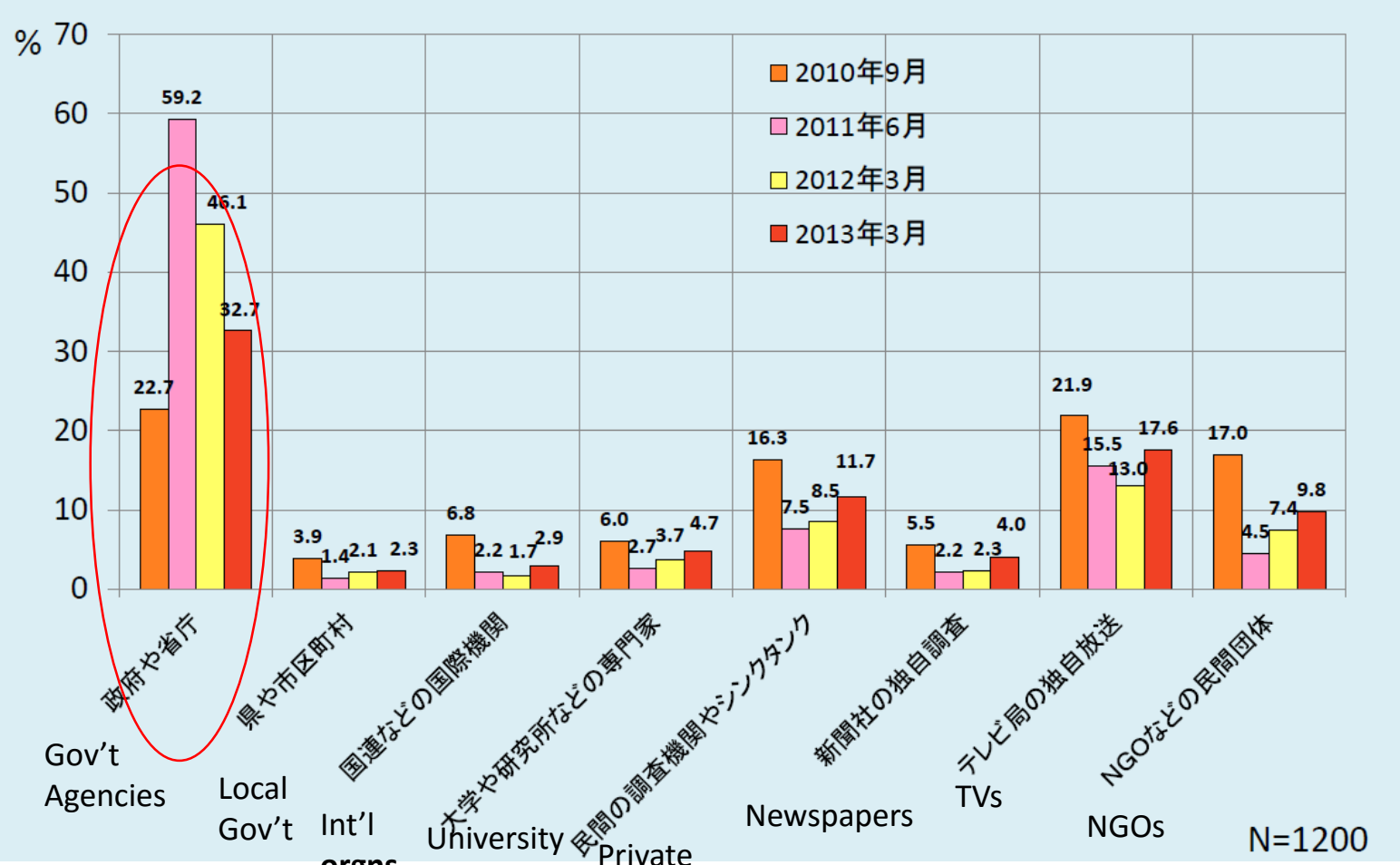
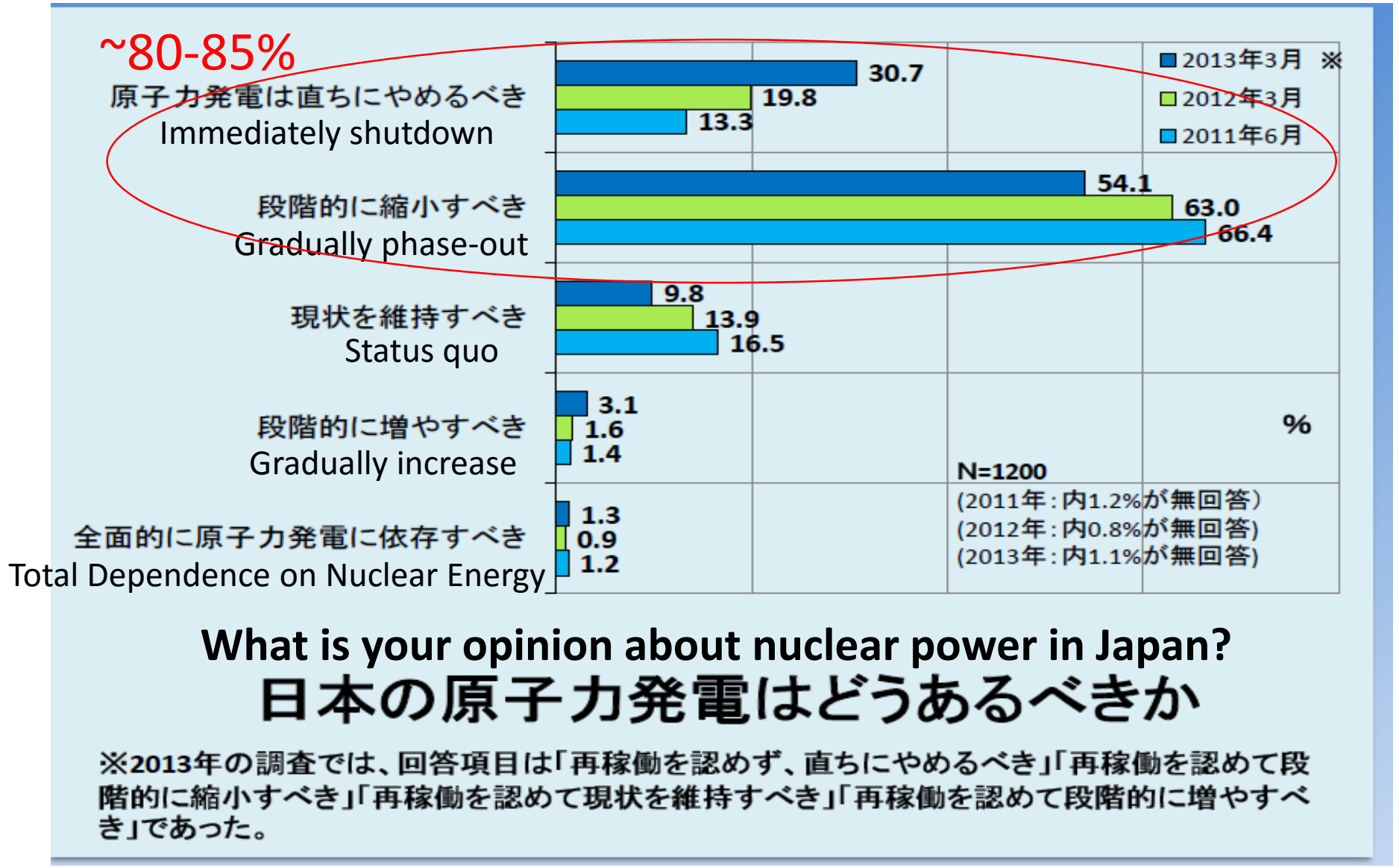
Gov’ts are most untrustworthy
- Which institutions are most untrustworthy?



Source: Prof. Hirotada Hirose, “Changes of Public Opinion about Nuclear Power,” Presented at Japan Atomic Energy Commission, July 17, 2013
http://www.aec.go.jp/jicst/NC/iinkai/teirei/siryo2013/siryo27/siryo2.pdf



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Public Opinion Poll (2015/04/07)

- Re-startup of existing reactors
  - YES 27.9% (Strongly Support : 3.5%)
  - No 70.8% (Absolutely No : 26.0%)
- Severe accident will happen again
  - Yes 22.0%
  - Probably 51.8%
  - Probably not 24.1%
  - No 1.3%
- Safety of Nuclear Power Plants
  - Absolutely Safe 2.2%
  - Probably Safe 16.2%
  - Not so safe 52.3%
  - Absolutely Dangerous 29.0%
  - By Prof. Hirotada Hirose and his group

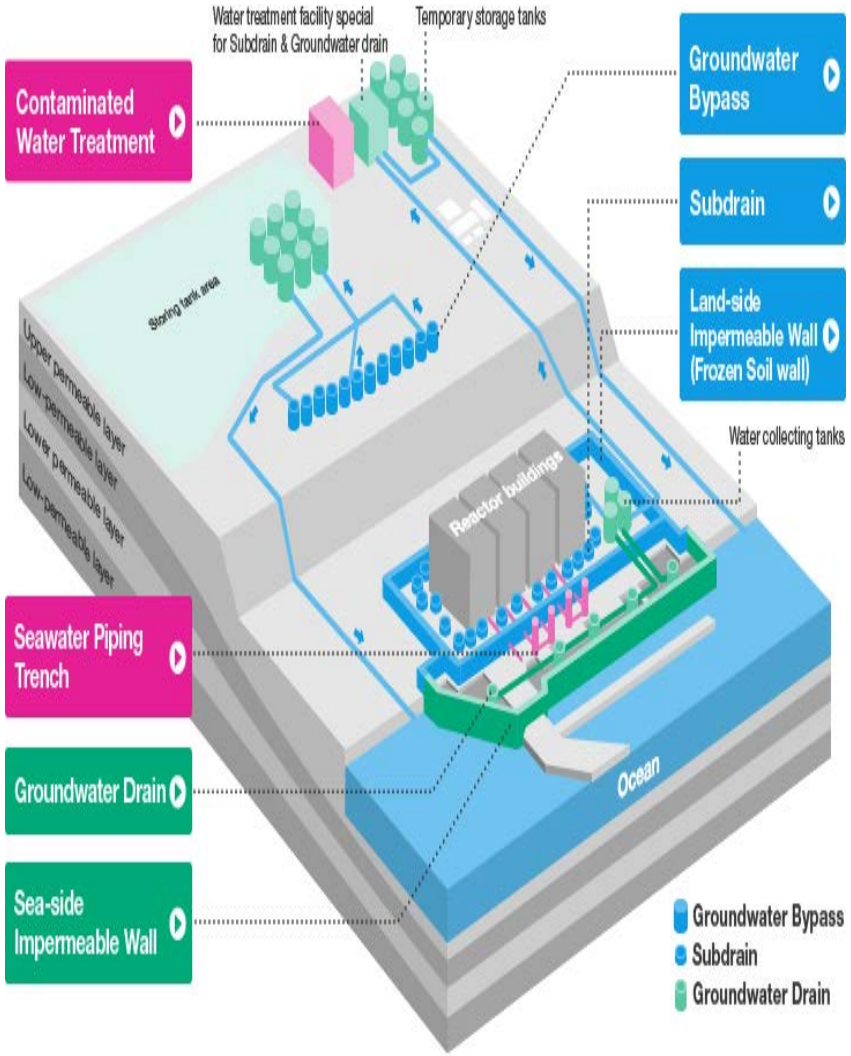
Source: “70.8% was against re-startup of existing reactors,” Reuter, 2015/04/07
http://jp.reuters.com/article/energy-t-idJPKBN0MY0JX20150407

Energy Basic Plan (2014/04/11)
- On Communication with the Public -

- Promotion of improved access to objective information published by the independent third organization.
- Enhanced mutual communication among stakeholders
  - For example, CLIS (Commission of Local Information on Safety) as a model in improving mutual communication with the regional stakeholders

http://www.enecho.meti.go.jp/category/others/basic_plan/pdf/140411.pdf

~700,000 tons of Contaminated water management



http://www.tepco.co.jp/en/decommision/planaction/waterprocessing-e.html
http://www.tepco.co.jp/en/nu/fukushima-np/roadmap/images/d151224_01-e.pdf

Mid to Long term Measures for Fukushima Daiichi Site(JAEC, 2012/11/27)

- The government is also obliged to strive to maintain transparency of operations throughout the work so that the domestic and international communities correctly understand that the medium- and long-term measures are carried out in this manner.
- The government should establish an independent (third party) organization with overseas experts as members to assess and audit the medium- and long-term measures based on the above criteria, with the authority to make recommendations to the government on improvements as required.

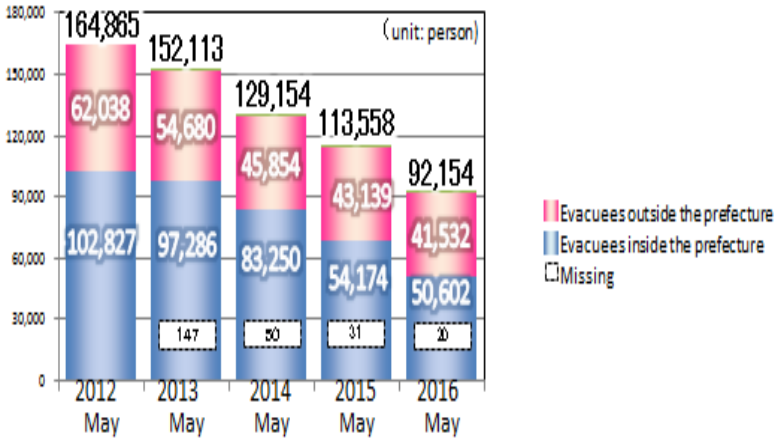
http://www.aec.go.jp/jicst/NC/about/kettei/121127-1_e.pdf

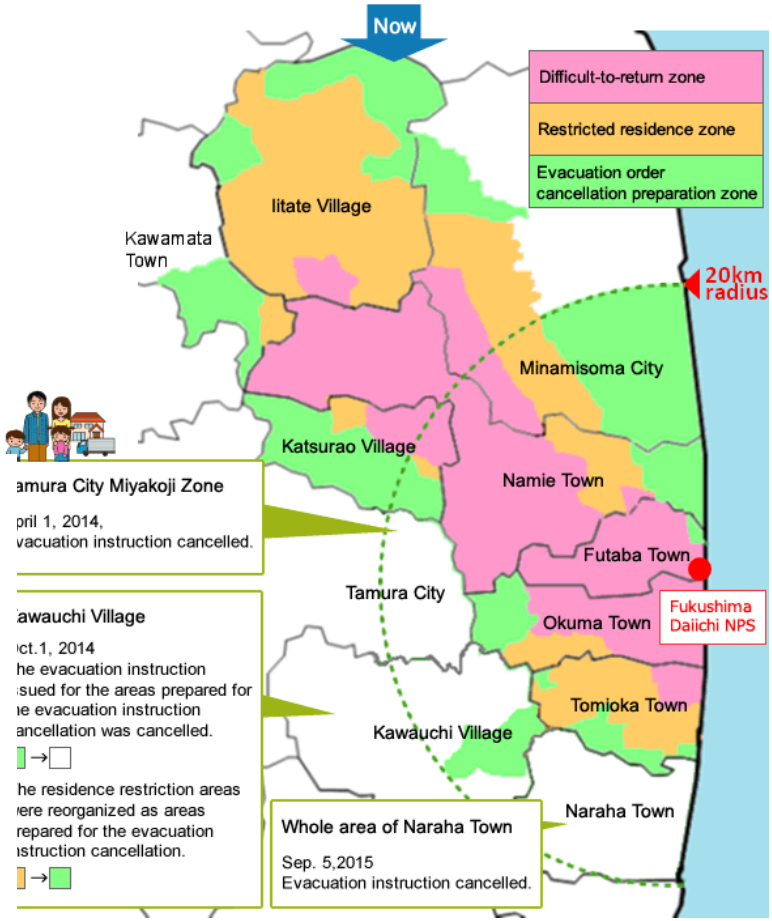
Shift in evacuation area (as of June 2016)

- Released Area: Tamura(13/04/01), Kawauchi(13/04/01), Naraha(15/09/05),

  Katsurao (16/06/12)

- Lack of sufficient communication with local community





http://www.pref.fukushima.lg.jp/site/portal-english/en03-08.html

How to restore public trust?

- Increased transparency and fairness in public decision making process
  - "Transparency" is more than information disclosure– free and open access and traceability are important conditions
- Improved public participation process in decision making process
  - Ignoring public comments does not help
  - Institutionalization of public participation
- Independent and unbiased information source and oversight institution
  - "Pro-" "Anti-" information sources are not trustworthy
  - So-called "Third party" institution is necessary– Science Council of Japan may be one candidate

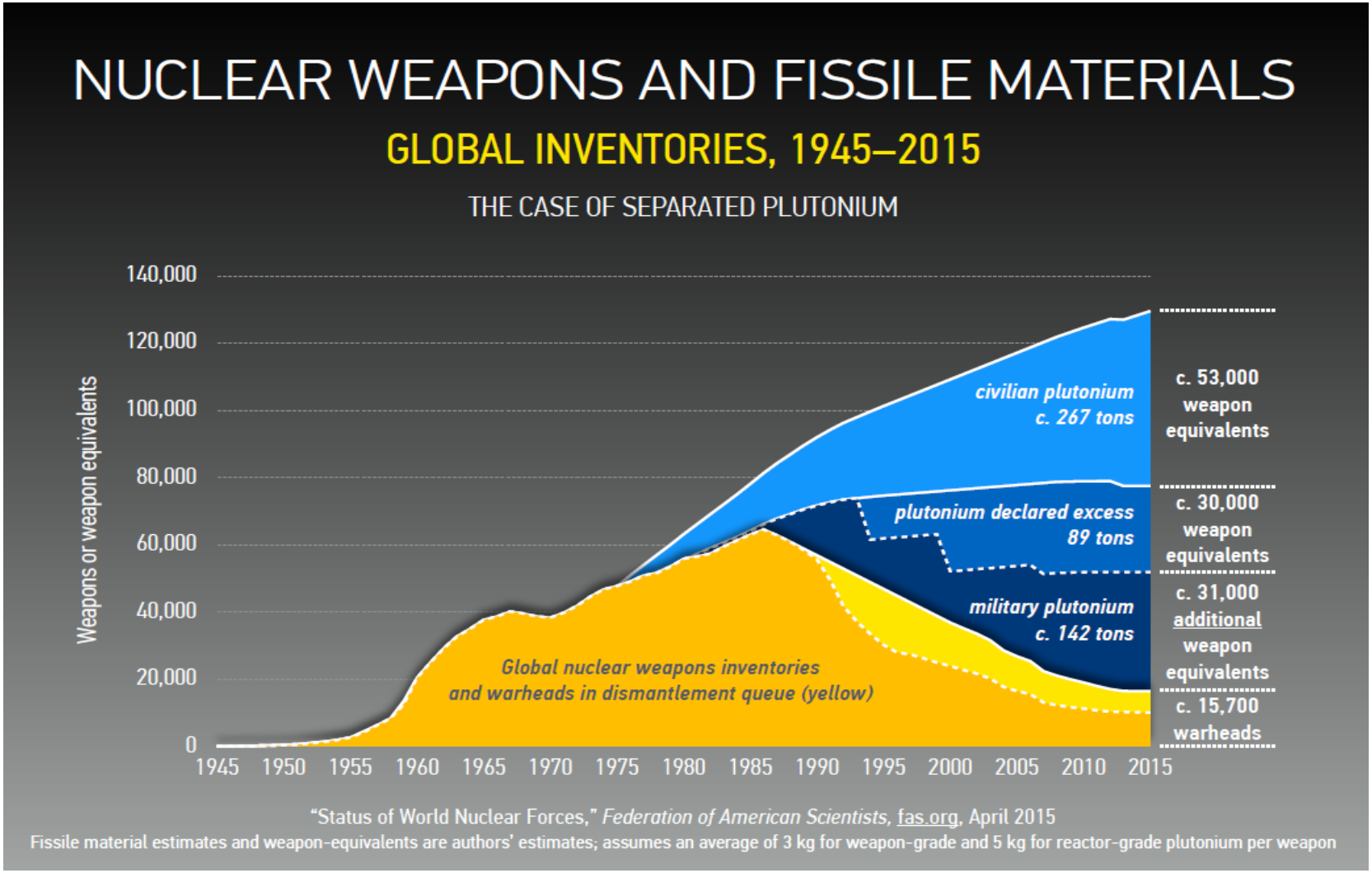
Lack of independent oversight is a major source of mistrust in Japan

- Accident investigation and its follow up
- Decommissioning and decontamination process for Fukushima and evacuated zones
- Final disposal of HLW and spent fuel management
- MONJU and other nuclear R&D programs
- Plutonium stockpile management and no-surplus policy….

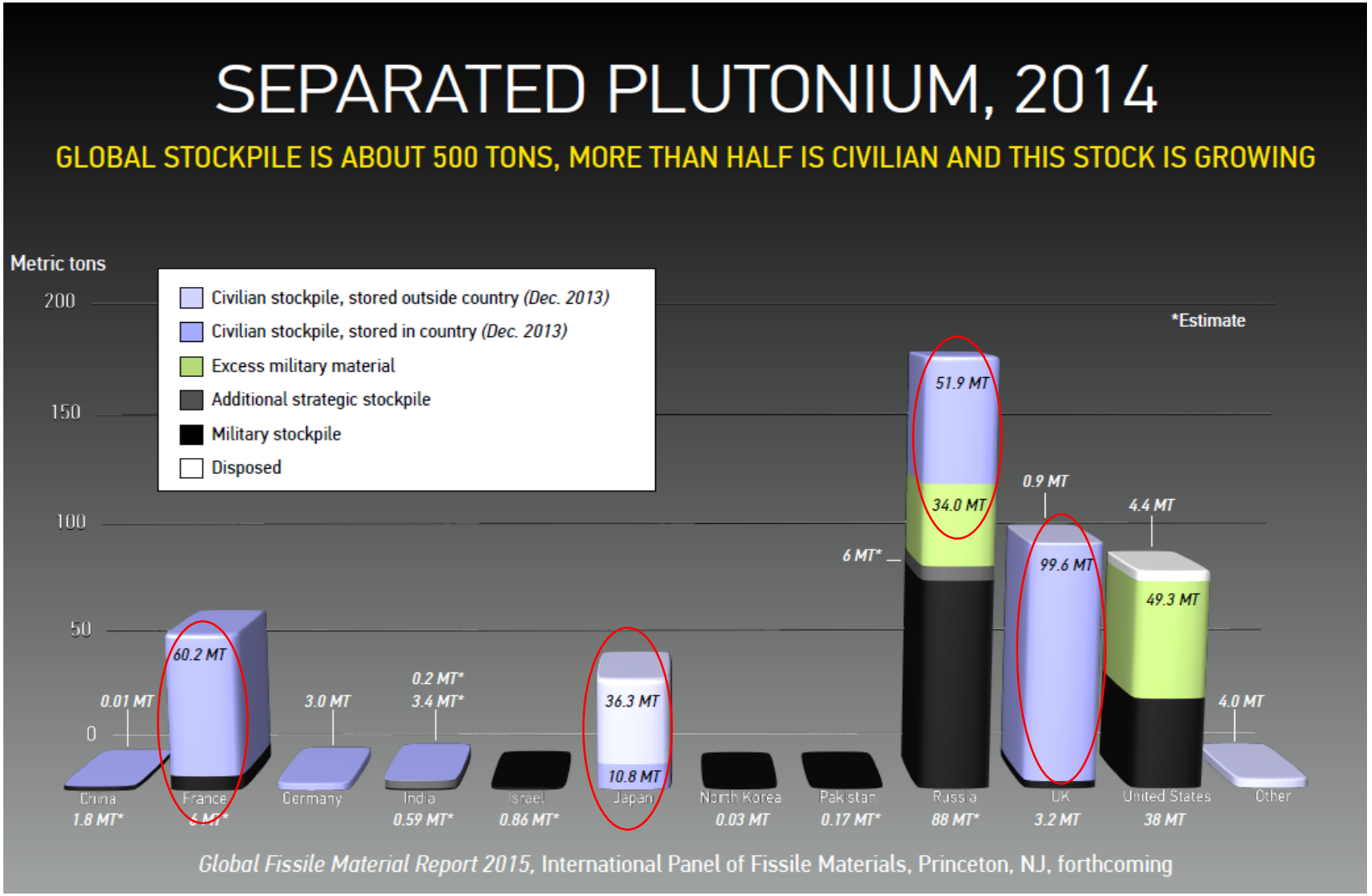
Increasing international concern over Japan's plutonium stockpile and its fuel cycle programs

- "There is no question that plutonium recycling in Japan has been expensive that is a challenging future for Japan. If Japan were to change course, they would find the United States to be supportive….Upcoming renewal of 2018 of a bilateral nuclear agreement with Japan has the potential to become a very controversial issue…If Japan keeps recycling plutonium, what is to stop other countries from thinking the exact same thing?"

  - John Wolfsthal, senior director for arms control and non-proliferation at the National Security Council, from Kyodo Press, "U.S. would back a rethink of Japan's plutonium recycling program: White House," The Japan Times, May 21, 2016. http://www.japantimes.co.jp/news/2016/05/21/national/politics-diplomacy/u-s-back-rethink-japans-plutonium-recycling-program-white-house/#.V1PF1PRAqD_.twitter



Source; Zia Mian, Alex Glazer, "Global Fissile Material Report 2015: Nuclear Weapon and Fissile Material Production," presented at NPT ReviewConference, May 8, 2015. http://fissilematerials.org/library/ipfm15.pdf



FRANCE JAPAN Russia US UK

Source; Zia Mian, Alex Glazer, "Global Fissile Material Report 2015: Nuclear Weapon and Fissile Material Production," presented at NPT ReviewConference, May 8, 2015. http://fissilematerials.org/library/ipfm15.pdf

Possible Options for regional nuclear cooperation

(1)Multilateral Approaches

- "LEU Fuel Bank" : Countries without own enrichment facility has a priority in access to the LEU fuel stockpile. Enhanced fuel assurance can reduce need for development its own enrichment capacity.
- Multilateral enrichment corporation("URENCO" approach): Treaty of Almelo establish multilateral commission to oversight the enrichment activities

(2)Mutual Inspection and Trust Building Scheme

- Modelled after ABACC (Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials), mutual inspection scheme for nuclear fuel cycle activities
- Transparency in HEU/Pu activities; Japan's "no-surplus policy" can be strengthened and applied to other countries

(3)International Plutonium Disposition Program

- Establish an international program to reduce plutonium stockpile. This program can involve countries in other regions, such as UK and France, as partner countries to deal with growing stockpile of separated plutonium.