

Nuclear Regulation Authority
Third Medium-Term Goals

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Nuclear Regulation Authority, Japan

Foreword

The Nuclear Regulation Authority (hereinafter referred to as “NRA”) was organized to establish a true safety culture based on the lessons from and reflection on the accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Station (hereinafter referred to as “TEPCO’s Fukushima Daiichi NPS”).

The NRA has formulated the NRA’s Core Value and Principles, the Statement on Nuclear Safety Culture, and the Code of Conduct on Nuclear Security Culture ("Core Value and Principles etc.") as management policy. The NRA periodically establishes medium-term goals describing the practical courses of organizational action to realize the Core Value and Principles etc.

Promptly following its establishment in September 2012, the NRA formulated new regulatory requirements, measures to take at TEPCO's Fukushima Daiichi NPS, and the NRA Guide for Emergency Preparedness and Response. In addition to developing frameworks for nuclear regulation and nuclear disaster prevention based on the lessons of TEPCO's Fukushima Daiichi NPS accident, it has established operational frameworks through integration of the Japan Nuclear Energy Safety Organization (JNES) and the establishment of the Nuclear Disaster Management Bureau, Cabinet Office. In addition, in September 2014 it established the Nuclear Regulation Authority Management Regulations, full-fledged application of which began in FY2015 as the fundamentals of organization management.

During the first medium-term goal period (April 2015 to March 2020), the NRA successfully initiated conformity reviews under the new regulatory requirements. In addition to this effort, the NRA undertook reforms of the regulatory framework including a comprehensive revision of the nuclear regulatory inspection system and introduction of new regulations related to security measures for specified radioisotopes, taking into account international peer reviews such as Integrated Regulatory Review Service (IRRS) and the International Physical Protection Advisory Service (IPPAS), which evaluated Japan’s regulatory activities.

During the second medium-term goal period from April 2020 through March 2025, together with steadily establishing the new nuclear power regulatory inspection system, including responses to individual topics, the NRA developed backend standards related to matters such as medium depth disposal and adopted regulations on Discharge of ALPS¹ Treated Water into the sea and a system for approval of Long-Term Facility Management Plans in accordance with revision of the operation periods for Commercial Power Reactors. It also improved the regulatory system based on reports from the IRRS and IPPAS and other recommendations.

¹ Advanced Liquid Processing System

During the third medium-term goal period beginning in April 2025, there is a need to grow into a sustainable organization to ensure the continuation of progress on and continual improvement of the steady nuclear regulatory measures carried out through now and to enable responses to various issues in light of changing social conditions from a medium- to long-term perspective.

Against this background, the third medium-term goals are formulated based on the following awareness of the issues.

- Reflecting this background of its establishment, the NRA must not waver from the approach of pursuing safety it has maintained for the 12 years since its establishment.
- To continue to pursue safety, while continuing to improve regulations the NRA will further encourage the autonomous efforts of nuclear power operators to improve safety, based on the recognition that operators bear primary responsibility for safety.
- At the same time, over the coming decade or so the NRA will need to adopt to environmental changes such as the following.
- Based on trends in use of nuclear power in Japan, existing workload of such as reviews and inspections can be expected to be maintained at a certain volume. At the same time, there is expected to be a need to meet new regulatory demands resulting from expansion of work related to rebuilding of nuclear power plants and safeguards measures, although these will depend on the initiatives of operators.
- As Japan as a whole transitions to a depopulating society, hiring and training personnel with the required abilities and improving their individual abilities are pressing issues related to the above measures. In addition, 14 years have passed since the accident at TEPCO's Fukushima Daiichi NPS, and the personnel who experienced the accident response are retiring. There is a need to address the topic of passing along to the next generation the awareness and mission of those who experienced the accident.
- Based on the above, to ensure that the organization can implement appropriate regulations in a sustainable manner over the medium to long term it will be essential to improve regulatory systems and their operation to make them more effective and efficient to enable regulatory resources to be concentrated on the most important areas related to safety, in addition to efficiency improvements and labor saving in individual operations. At the same time, it is essential to make unceasing efforts to provide attractive workplace environments for Nuclear Regulation Authority personnel so that they can continue to work over the long term with an individual sense of mission.

Based on the above understanding of the issues, the medium-term goals for the third period have been formulated through repeated discussions in the NRA while also hearing an opinion

of the NRA Secretariat personnel (hereinafter, this includes personnel of the Nuclear Safety Human Resource Development Center) and providing opportunities for dialogue with the chairperson, commissioners and staff of the NRA.

By aiming to achieve the medium-term goals for the third period, the NRA will continue strict and appropriate nuclear regulation, develop a more sustainable organization, and continue to perform its mission into the future.

1. Medium-term goal period

The five-year period from April 1, 2025 through March 31, 2030.

2. Organizational Goal

To protect the general public and the environment through rigorous and reliable regulations of nuclear activities

3. Outcome Goals and Implementation Goals

To realize Organizational Goal, the NRA set Outcome Goal and Implementation Goals in each of the following five areas divided from the duties and affairs of the NRA under the Act for Establishment of the Nuclear Regulation Authority.

- I. Ensuring Independence, Impartiality and Transparency, and Improving the Organizational Structure / System
- II. Implementation of Strict and Appropriate Nuclear Regulations and Reinforcement of the Technology Base
- III. Promotion of Nuclear Security Measures and Steadfast Implementation of Safeguards
- IV. Ensuring the Safety of Decommissioning of TEPCO's Fukushima Daiichi NPS and Investigating the Causes of the Accident
- V. Implementation of Effective Radiation Protection Measures and Emergency Responses

As goals to be achieved during Medium-term goal period to realize the Organizational Goal and implement management policies, Outcome Goals are described in under ((1), (2), etc.) below for each item, to indicate the status of actions by the NRA and the status aimed for as a result of the measures, for each item.

Implementation Goals indicate courses of action and details of initiatives to be implemented to realize Outcome Goals.

I. Ensuring Independence, Impartiality and Transparency, and Improving the Organizational Structure / System

- (1) The NRA carries out operations in accordance with its Guiding Principles for activities and other relevant policies, while promoting a deeper understanding among all staff of the Core Value and Principles, the Statement on Nuclear Safety Culture and the Code of Conduct on Nuclear Security Culture, through measures such as sharing lessons from the accident at TEPCO's Fukushima Daiichi NPS.

(Implementation Goals)

- Through measures such as training by persons with experience in responding to the

accident and communication across various organizational levels, the NRA will ensure that the lessons of the accident are passed to the next generation of personnel the lessons of the accident as not merely as knowledge, but as a sense of urgency.

- To ensure that the NRA's Core Value and Principles are thoroughly embedded and firmly established in the work styles and behaviors of its personnel, the NRA will implement initiatives aimed at fostering and sustaining a robust Nuclear Safety Culture and Nuclear Security Culture. These efforts will include measures such as holding regular study sessions and communication forums, continuously enhancing and revising reference documents and related materials to support understanding, and promoting autonomy at all organizational levels.
- The NRA will maintain and operate an internal environment that enables flexible communication of matters such as the efforts and thoughts of the individual sections and personnel that make up the organization.
- The NRA will implement periodic evaluation of the Nuclear Safety Culture and Nuclear Security Culture, through appropriate evaluation methods.

(2) Through operation management based on the Nuclear Regulation Authority Management System, the NRA steadily fulfills its role as an administrative agency in accordance with laws and regulations, and continually makes improvements to matters such as the maintenance or abolition of operations, utilizing knowledge from within the organization. (Implementation Goals)

- The NRA will operate the Nuclear Regulation Authority Management System steadily together with the policy evaluation process based on the Government Policy Evaluations Act, while increasing the efficacy of operation process management and formulation, evaluation and improvement of operation plans, and deepening understanding of the Management System across the organization.
- Based on the evaluation of the Management System's operations through the management review, the NRA will continually improve the Management System by creating mechanisms to evaluate progress toward medium-term goals, identify operations that involve considerable waste or processes with insufficient results and then improve or abolish them, and collect observations from personnel and properly reflect them in operational improvements.
- The NRA steadily implements operations required by laws and regulations, such as the management of official documents, information disclosure, protection of personal information, accounting procedures, evaluation of the performance of national research and development agencies, and the administration of national qualification examinations. In addition, the NRA continually improves operational processes by reviewing internal rules and manuals and enhancing internal support

for matters such as the use of information systems.

- Operations will be conducted appropriately through means such as appropriate development of governing laws and regulations and use of legal and regulatory consultation with qualified legal professionals.
- Litigation (administration of litigation and complaints) will be responded to appropriately in cooperation with related institutions and agencies.

(3) The NRA should strictly maintain independence and impartiality by making decisions based on scientific and technical knowledge.

(Implementation Goals)

- The NRA makes decisions based on the latest scientific and technical insights and information obtained from the field.
- The NRA thoroughly complies with procedures and rules intended to ensure independence and impartiality in its relations with parties subject to regulation and administrative organizations responsible for promoting the use of nuclear power. These include the Code of Conduct related to Ethics for the NRA Chairman and Commissioners and the Requirements for Ensuring Transparency and Neutrality in Seeking the Views of Outside Experts.

(4) The NRA thoroughly discloses information related to nuclear regulations including decision-making processes, to ensure transparency.

(Implementation Goals)

- In conformity with regulations intended to ensure transparency, such as the NRA Operations Transparency Policy, thoroughly disclosing through the website and other means timely and appropriate regulatory information, such as the NRA's decision-making processes and summaries of meetings with those subject to regulations and administrative organizations promoting use of nuclear power. In doing so, communication of information in English will be enhanced.

(5) The NRA works to foster society's understanding of and trust in the NRA through strategically implementing interactive communication, such as proactive and clear information sharing and direct dialogue.

(Implementation Goals)

- Understandable and approachable content will be prepared to facilitate understanding of matters such as the backgrounds of the NRA deliberations and decisions based on scientific evidence.
- Information on the website will be organized and made easier to search, and means of communication will be improved in line with the properties of individual tools

such as social media².

- The NRA will communicate information actively and strategically by continuing to provide understandable explanations of regulatory judgments based on demands from local governments and creating additional systems for dialogue conscious of interaction.

- (6) In addition to being receptive to issues identified by external parties and comments from stakeholders, the NRA actively and appropriately exchanges opinions with operators and scientific associations to support the continual improvement of its organizational operations and regulatory practices.

(Implementation Goals)

- Efforts will be made to improve regulatory systems and operations based on insights from international review by the IRRS, the IPPAS, or other bodies and exchange of opinions with international advisors.
- Dialogue and exchange of opinions with operators and the industry, including exchange of opinions with CEOs³ and CNOs,⁴ will be conducted continually to foster shared understandings to improve safety.
- Through active exchange of opinions with academic societies and others and active participation in activities of academic societies and associations, efforts will be made to obtain information that can be reflected in Nuclear Regulation Authority research activities or contribute to improving regulations.
- Efforts will be made to investigate issues related to nuclear regulations from a long-term perspective based on information from outside the NRA and changes of social and economic conditions.

- (7) The NRA maintains a structure capable of achieving its organizational goals by continually securing human resources who can address policy challenges and implement regulations, based on plans developed through the creation of new medium- and long-term human resource strategies.

(Implementation Goals)

- In light of considerations such as the conditions in which the NRA operates, new human resource strategies will be prepared reflecting matters such as the properties of each job and the status of each section, from a medium- to long-term perspective.
- Efforts will be made to train human resources from among students in fields related to nuclear regulation, to increase numbers of people seeking careers in nuclear regulation.

² Social Networking Service

³ Chief Executive Officer

⁴ Chief Nuclear Officer

- New graduates and experienced professionals will be hired systematically in line with medium- to long-term human resource strategies.
- Staff members will be assigned to sections as necessary to realize organizational goals, while considering career paths in which they can demonstrate their abilities to the fullest over the medium to long term, including broadening their perspectives through dispatch or secondment to international agencies.
- The qualification systems and training courses will be operated and improved necessary to enhance expert knowledge of each field such as nuclear power and radiation, practical administrative competence and global competencies. Also, related learning environments will be improved. In this way, the NRA staff will be trained, and their competence will be managed. In addition, the knowledge necessary to carry out the NRA's work will be continuously managed, and its transfer will be promoted.
- Appropriate staff guidance and oversight will be conducted to ensure that they maintain high senses of ethics, discipline, and dedication as the NRA Secretariat personnel.

(8) The NRA enhances its workplace environments to enable personnel with diverse experiences, attributes, and backgrounds to perform at their best. This will be achieved through measures such as offering flexible work styles suited to individual circumstances, allowing employees to work efficiently in accordance with the nature of their duties.

(Implementation Goals)

- While promoting use of remote working, shortened working hours for childcare, flextime, and other programs to enable personnel to choose flexible work styles in light of their life stages such as childcare and long-term care, efforts will be made to ensure that operations are conducted effectively and efficiently while using these.
- Efforts will be made in areas such as employee consultation, harassment prevention, and fostering mutual understanding, to create favorable working environments where personnel with diverse experiences, attributes, and other properties can succeed while demonstrating their individual abilities to the fullest.
- To make work more comfortable for personnel, measures will be taken such as adoption of free address and group address offices, expansion of work space in light of the nature of work, and preparing the necessary fixtures, and efforts will be made to develop office environments in which these can be maintained and improved even when relocating offices.

(9) The NRA develops a work environment that enables efficient operations regardless of

location such as by improving the searchability of large information repositories and automating routine tasks such as meeting summarization.

(Implementation Goals)

- Through sharing computer systems used in operations and providing devices suited to diverse work styles, information systems will be managed to enable more efficient work not just now but in the future as well.
- Enhancement of cybersecurity measures in response to increasingly diverse systems will continue and be applied without omission.
- To further promote efficient use of information, digital management of administrative documents will be promoted through means such as promoting their digitalization and digital application procedures.
- Aiming to improve business efficiency, in addition to promoting use of RPA⁵ and AI⁶ based on established rules effective use of communication tools will be promoted, including potentially developing environments where personnel can work in any location.

(10) The NRA strategically requests budgets and executes them appropriately to enable the achievement of organizational goals.

(Implementation Goals)

- Budgets will be requested based on optimal resource allocation to enable the NRA to implement measures effectively.
- Budgets will be executed effectively and efficiently in accordance with accounting laws and regulations and related rules.

(11) The NRA contributes to the enhancement of global nuclear safety by actively participating in the activities of international organizations and promoting multilateral and bilateral cooperation through sharing knowledge and experience with other countries.

(Implementation Goals)

- Contributing to the enhancement of international nuclear safety, nuclear security, radiation protection, and the steady implementation of safeguards, while actively sharing information about Japan's initiatives, dispatching staff, and participating in discussions and activities within the frameworks of international organizations and conventions.
- Promoting multilateral and bilateral cooperation to build and maintain international relationships and ensuring smooth information sharing.

⁵ Robotic Process Automation

⁶ Artificial Intelligence

II. Implementation of Strict and Appropriate Nuclear Regulations and Reinforcement of the Technological Base

- (1) To prevent serious safety incidents, the NRA strictly and appropriately enforces regulations under the Nuclear Reactor Regulation Act and the Radioisotope Regulation Act.

(Implementation Goals)

- The NRA strictly and appropriately conducts statutory reviews and inspections taking into account actual conditions on the basis of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors and the Act on the Regulation of Radioisotopes, etc.
- The NRA strictly and appropriately responds to facility related incidents, such as root cause analysis and evaluation of measures to prevent recurrences.
- The NRA takes appropriate measures to ensure the safety of uncontrolled nuclear and radioactive materials such as responding to orphan sources.

- (2) The NRA continually enhances regulations to incorporate well-considered findings from review and inspection experiences, safety research outcomes, and the latest domestic and international developments.

(Implementation Goals)

- Information on domestic and international incidents and technical failures at nuclear facilities and the latest scientific and technical knowledge will be collected and discussed through activities such as holding the Technical Information Committees, and regulation improvements will be made in a smooth and timely manner, including the application of appropriate back fitting based on the safety significance of the issues.
- Based on study and analysis of experiences and issues from regulatory activities and domestic and international regulatory systems, regulations will be improved through means such as clarification of regulatory requirements and improving existing inspection systems.
- Methods of using risk information in review and inspection will be studied and prepared, and use of risk information will be promoted starting in fields where it is feasible.
- Meetings of the Advisory committee on Reactor Safety and the Advisory Committee on Nuclear Fuel Safety will be held from time to time, to obtain recommendations on subjects of study and review.

- (3) The NRA advances improvements to institutional frameworks and operational processes

to enable more effective and efficient regulatory activities, based on the importance of safety by utilizing risk information and other measures.

(Implementation Goals)

- Continual improvements will be made for regulatory systems and activities suited to higher severity levels, through actively applying a graded approach using risk information and knowledge from regulatory implementation.
- Continual improvements to achieve regulations that properly reflect consideration of safety importance, including study of positioning of the safety improvement evaluation system in the nuclear power regulatory system as a whole, will be considered, together with measures reflecting the ability of operators to make autonomous improvements based on inspections and other considerations.
- Review and inspection applying a graded approach reflecting facility status, such as decommissioning, will be studied.
- Training will be implemented to promote employee understanding of risk informed regulation.

- (4) The NRA promotes the necessary study and development of regulations to adapt to new regulatory needs, such as those concerning replacement reactors and geological disposal, based on factors such as the status of operators' initiatives and the latest domestic and international knowledge.

(Implementation Goals)

- In response to new regulatory needs such as those related to replace nuclear reactors, the states of operators' initiatives and new trends in Japan and overseas will be ascertained appropriately and study and preparation of regulatory requirements etc. will be advanced.
- Necessary responses related to regulation of geological disposal, such as promoting safety research, will be taken to the Cabinet decision on the Basic Policy on Final Disposal of Designated Radioactive Waste and other matters.
- To be prepared for applications for long-term facility management plans assuming more than 60 years of operation, the latest information will be gathered in Japan and overseas and revisions to regulatory requirements and other matters will be considered as needed.
- Domestic and international surveys will be conducted of trends in development of emerging technologies such as AI and AMT,⁷ and necessary studies will be conducted on matters including consideration of whether and how to incorporate them into regulations.

⁷ Advanced Manufacturing Technology

- The NRA considers future regulatory responses to trends related to regulations for preventing radiation hazards, such as R&D in nuclear fusion and the use of radioisotopes in the medical field, taking into account the status of discussion within relevant ministries.
- (5) The NRA acquires and provides knowledge as needed to address regulatory issues, by promoting safety research and related activities while striving to maintain and improve its technological foundations. To that end, the NRA enhances support from external technical support organizations (TSOs), universities, and others, improves the research environment, and strengthens research frameworks through cooperation with these and other organizations.

(Implementation Goals)

- Safety research will be conducted steadily based on the Basic Policy on Safety Research in the NRA (regulatory issues). Also, joint international research will be used proactively.
- Investigations to contribute to future safety research will be conducted while paying close attention to matters such as new technological development trends.
- Knowledge to contribute to regulatory improvements, obtained through safety research and support for safety review, will be summarized and proposed to related internal sections.
- Together with strengthening the technological foundations of the external TSOs, the JAEA⁸ and QST⁹, and other institutions, such as universities, that can be expected to provide external support, mutual communication and further enhancement of cooperation, including exchange of human resources, will be sought.
- Research information will be exchanged with the industry and common research topics related to nuclear safety will be addressed.

III. Promotion of Nuclear Security Measures and Steadfast Implementation of Safeguards

- (1) To prevent serious incidents in Japan from a security perspective, the NRA improves regulatory systems and their implementation related to the security of nuclear material and specified radioisotopes, based on domestic and international technologies and knowledge, and strengthens cooperation with relevant institutions.

(Implementation Goals)

- The NRA strictly and appropriately implements reviews and inspections related to the physical protection of nuclear materials and specified radioisotopes taking into

⁸ Japan Atomic Energy Agency

⁹ National Institutes for Quantum Science and Technology

account actual conditions.

- The NRA improves the effectiveness of regulations for the physical protection of nuclear materials and specified radioisotopes, taking into account IAEA international standards, recommendations and suggestions from the IPPAS mission, insights gained from domestic and international trends and regulatory practices.
- The NRA makes continuous efforts to improve operation support systems, and to enhance and strengthen personnel in the NRA and regional office involved in physical protection of nuclear material and specified radioisotope security.
- Threats such as sabotage will be studied in cooperation with related agencies, in response to changes in terrorism conditions and other matters in recent years, and the findings will be reflected in regulations on physical protection of nuclear material.
- While strengthening cooperation with other public agencies regarding physical protection of nuclear material, drills will be conducted for various threats and scenarios and incident response abilities will be improved.

(2) To contribute to the peaceful use of nuclear energy, the NRA strengthens the domestic safeguards system to accommodate the anticipated significant increase in safeguards activities and demonstrates, both domestically and internationally, that nuclear materials in Japan are not diverted for use in nuclear weapons.

(Implementation Goals)

- To maintain the Broader conclusions for safeguards continuously and ensure that nuclear materials in Japan are not diverted to nuclear weapons, verification activities such as daily safeguards inspections and consultations with the IAEA will be implemented steadily.
- In light of the anticipated significant increase in safeguards activities and technical discussions with the IAEA giving the completion of JNFL's Rokkasho Reprocessing Plant and a MOX¹⁰ Fabrication Plant in Japan, the organizational structure will be reinforced to reliable response to these safeguards activities.
- To ensure the steady implementation of safeguards activities in Japan, appropriate instruction and supervision will be provided for the designated organization responsible for inspections, analysis, and information processing. In addition, collaboration with the designated organization will be strengthened, and the consideration will be given to strengthening Japan's safeguards framework including a review of the designated organization system.

(3) The NRA will address matters such as the interactions among the 3S elements—nuclear safety, safeguards, and nuclear security—through appropriate implementation and

¹⁰ Mixed OXide

continuous improvement of the 3S interface.

(Implementation Goals)

- Continuous improvements will be made by steadily applying rules on information sharing and coordination on nuclear safety, safeguards, and nuclear security in the NRA Secretariat.
- Ways to achieve further cooperation with nuclear safety, safeguards, and nuclear security will be considered from perspectives of security-by-design and NMAC¹¹.

IV. Ensuring the Safety of Decommissioning of TEPCO's Fukushima Daiichi NPS and Investigating the Causes of the Accident

(1) To prevent serious incidents from safety and security perspectives, the NRA strictly and appropriately implements regulations related to the decommissioning of TEPCO's Fukushima Daiichi NPS. In addition, the NRA continuously improves regulatory methods, identifies risks at the plant, and provides guidance to Tokyo Electric Power to ensure the site can be decommissioned steadily and safely.

(Implementation Goals)

- Reviews and inspection of the implementation plans for TEPCO's Fukushima Daiichi NPS will be implemented strictly and appropriately.
- Based on the results of conducting review and inspection, review and inspection systems will be improved further by reflecting the graded approach in accordance with changes in the site and its risks.
- Through the Oversight and Review Meeting for the Specified Nuclear Facility and other activities, the progress of decommissioning work and state of risk reduction will be overseen and the state of achievement of the targets shown on the medium-term risk-reduction targets map will be followed regularly, and Tokyo Electric Power will be provided with instructions as needed in cases such as when there are concerns of remaining high risks.

(2) The NRA conducts studies and analyses of the accident at TEPCO's Fukushima Daiichi NPS. The NRA then provides the knowledge obtained both domestically and internationally and reflects it in regulations as necessary.

(Implementation Goals)

- The NRA will continue study and analysis of the accident at TEPCO's Fukushima Daiichi NPS, using domestic and foreign external experts, and knowledge obtained from the study and analysis will be reflected in regulations as necessary.
- The knowledge obtained from study and analysis of the accident will be

¹¹ Nuclear Material Accounting and Control

communicated not just domestically but internationally as well, through means such as participation in international conferences.

- (3) The NRA steadily implements environmental radiation monitoring in Fukushima Prefecture and its surrounding areas and disseminates information domestically and internationally in an easy-to-understand manner.

(Implementation Goals)

- Environmental radiation monitoring on both land and sea area of Fukushima Prefecture and its neighborhood will be implemented steadily based on comprehensive radiation monitoring plans, including scientific evaluation of monitoring data, together with building an optimal monitoring system considering results of current radiation monitoring.
- The status of monitoring in Fukushima Prefecture and its neighborhood will be disseminated domestically and internationally in cooperation with the IAEA and related ministries.

V. Implementation of Effective Radiation Protection Measures and Emergency Responses

- (1) The NRA supports the Radiation Council to ensure that deliberations on adopting the latest knowledge from the International Commission on Radiological Protection (ICRP) and other bodies progress smoothly, and promotes the incorporation of the consultation results into related laws.

(Implementation Goals)

- To ensure uniformity in technical standards for prevention of radiation hazards, the Radiation Council formulates and updates reports and technical guidelines based on new knowledge from domestic and international sources, which include ICRP 2007 report and IAEA documents, under proper meeting management, as review of the concept of radiation protection against naturally occurring radioactive materials (NORMs) and effective dose coefficients of internal and external exposure.

- (2) The NRA responds swiftly and appropriately to any accidents or problems arising at nuclear facilities and other related sites. To that end, the NRA maintains the adaptability of its crisis management system and continually works to maintain and improve its emergency response capabilities. In addition, the NRA promotes the strengthening of crisis management systems among nuclear power operators and undertakes efforts to enhance the nuclear emergency medical system.

(Implementation Goals)

- Swift, appropriate initial responses will be implemented reliably in events such as an

accident or problem at a nuclear power facility etc., a large-scale natural disaster in the area where such a facility is located, or detection of abnormalities in monitoring of nuclear-powered warships.

- The abilities of emergency response personnel will be maintained and improved through various educational programs and drills in anticipation of a wide range of nuclear power accidents, such as accidents combined with earthquakes or other disasters, severe incidents, simultaneous disasters at multiple facilities, and accidents during transport.
- Response procedures, guidelines, etc. will be improved continually based on drills and real-world experience, and the results will be reflected in related manuals and other documentation.
- The NRA makes efforts to coordinate with relevant public agencies in response to accidents involving radioisotopes and secure related human resources.
- Information systems used in responding to emergencies will be maintained and managed to provide environments in which information can be collected and shared swiftly and appropriately in activities such as responding to emergencies.
- The NRA will secure the human resources of thyroid exposure monitoring personnel, the member of nuclear disaster medical assistance teams, the medical high professionals who conduct the evaluation of radiation dose, and etc., in response to various medical needs during nuclear disasters.
- Appropriate advice and instruction will be provided to nuclear power operators to implement drills intended to build their disaster prevention systems and improve their abilities to respond to emergencies.

(3) The NRA conducts continuous improvement of the NRA Guide for Emergency Preparedness and Response.

(Implementation Goals)

- Based on reflection from nuclear emergency drills, the latest scientific knowledge, and etc., the issues of the emergency monitoring and radiation protection measures will be identified for sufficient operation in a nuclear emergency. And the NRA will make the operation of the radiation protection measures in the NRA Guide for Emergency Preparedness and Response detailed for continuous improvement of the Guide and the related documents.
- To implement radiation protection measures in a timely manner in an emergency, review of the emergency action level will be considered based on the properties of the facility. Review of cooling notifications also will be considered, so that they can be made appropriately in light of facility risks.
- Based on the experience of the accident at TEPCO's Fukushima Daiichi NPS, the NRA

will continue the deliberation of estimation methods, necessary information and practical measures for estimation of radiation dose of residents in a nuclear disaster.

- (4) The NRA develops a more robust and agile radiation monitoring system and provides information on radiation levels in the vicinity of nuclear facilities and nationwide to the public in an easy-to-understand manner.

(Implementation Goals)

- In cooperation with related prefectures, environmental radiation monitoring systems in normal times and emergencies will be maintained in the vicinities of nuclear facilities and information on measurement results will be disseminated in an easy-to-understand manner.
- By promoting development of Advanced Monitoring Systems, innovative technologies and knowledge will be utilized actively to build a more robust and agile radiation monitoring system.
- Consolidation of environmental radiation monitoring systems managed by related prefectures separately into the Environmental Radiation Monitoring Platform will be promoted and their efficiency improved, to maintain an environment to provide information on radiation status.
- Through maintaining rules and guidelines on radiation measurement and analysis and conducting human resource development by drills and training on emergency monitoring, monitoring systems will be strengthened in normal times and emergencies.
- Monitoring of levels of radiation and radioactive substances in the environment of 47 prefectures will be conducted, to be prepared to respond to nuclear events occurring overseas. Information will be disseminated appropriately in normal times and when events occur.
- At ports used by nuclear-powered warships, monitoring systems will be maintained, and monitoring will be implemented in normal times (including when nuclear-powered warships stop at port) and emergencies. Information on measurement results will be disseminated.

4. Conclusion

The NRA systematically carries out operations based on these medium-term goals to fulfill its role as an organization that protects the general public and the environment. At the end of the third medium-term goal period, the NRA evaluates the status of goal achievement and initiates new efforts to incorporate the results into the next set of medium-term goals.