Outline of the Regional Circular and Ecological Sphere

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Environmental, Economic and Social Challenges Facing Japan

Environmental Challenges
- Drastic reduction in GHG emissions
- Effective use of resources
- Destruction of forests and Satochi/Satoyama, damage by unmanaged wildlife
- Conservation of biodiversity etc.

Economic Challenges
- Battered regional economies
- Global competition with emerging countries
- Response to technological innovation including AI and IoTs etc.

Social Challenges
- Decreasing birthrate and aging demographics / overall population decline
- Workstyle reform
- Preparations for large-scale disasters etc.

Integrated Improvements on Environment, Economy and Society (II2ES)!

Inseparably linked, ever-more complex
International Trends for Sustainable Society

- September 2015: Adoption of the “2030 Agenda for Sustainable Development”
  - Including SDGs addressing multiple issues in an integrated manner
- December 2015: Adoption of the “Paris Agreement”
  - To keep average temperature rise below 2 degrees, aims to reduce greenhouse gas emissions to practically zero in the second half of this century

17 goals of SDGs

Turning point

Adoption of the Paris Agreement

Prime Minister Abe making a speech at summit meeting of world leaders at COP21 where the Paris Agreement was adopted (from Prime Minister of Japan and His Cabinet website)

Time to start moving towards a new civilized society, with a major shift in our basic thinking (paradigm shift)
Basic Direction of the Fifth Basic Environment Plan

What Does a Future Society Look Like?

1. Creation of "Regional Circular and Ecological Sphere (Regional CES)"
   ※ Possible because of
   1) history of overcoming pollution, 2) excellent environmental technologies, 3) spirit of circulation “Mottainai” and tradition of living in harmony with nature
2. Establishment of “Japan as a global exemplary model”
3. Building a sustainable, circulation and symbiosis based society “Environmental and Life Centered Civilized Society”

Basic Approach

1. Utilizing the concepts of SDGs, realizing the Integrated Improvements on Environment, Economy and Society (II2ES)
   ○ Taking environmental policies as opportunities, create innovations across all perspectives
     → Simultaneous solutions for economic, regional and international challenges
     → “New avenues for growth” that ensure quality of life is maintained into the future
2. Maximize the sustainable use of regional resources for improvements in economic and social activities
   ○ Focus on maintenance and development of regions → Enriching regions through environment!
3. Partnerships with a wide range of stakeholders
   ○ Enriching and strengthening partnerships with a wide range of stakeholders
Regional Circular and Ecological Sphere (Regional CES)

Each region demonstrates its strengths by utilizing its unique characteristics → Makes use of regional resources and builds a self-reliant and decentralized society → Complements and supports according to unique characteristics of each region

A concept that aims to promote the utilization of regional resources, and ultimately realize low or practically zero carbon development

A concept to maximize the vitality of all regions, making full use of mountainous, agricultural and fishing villages as well as cities
What is the Basic Environment Plan?

- Plan stipulates outline of comprehensive long-term measures on environmental conservation based on Article 15 of the Basic Environment Act
- Plan is revised about every 6 years (Fourth Plan decided by Cabinet decision in April 2012)
- Following consultation with Minister of the Environment in February 2017 to revise the Plan, Central Environment Council discussed and reported its findings on 9 April 2018
- Based on the findings, a Cabinet decision was made on the Fifth Basic Environment Plan on 17 April 2018

Part 1 Environmental, Economic and Social Conditions and Direction of Development of Environmental Policies

- Current state and recognition of challenges (Challenges facing Japan inseparably linked, ever-more complex. International trends include SDGs and Paris Agreement)
- Basic concepts for the development of future environmental policies (innovation creation, simultaneous solutions for socio-economic challenges)

Part 2 Putting the Environmental Policy into Action

1. Set up six interdisciplinary cross-cutting “priority strategies” (economic, national land, community, life, technologies, international)
   - To develop priority strategies, focus on partnerships (links with all stakeholders)
   - Aiming to build a self-reliant and decentralized society in each region, creating a “Regional Circular and Ecological Sphere (Regional CES)” to complement and support regional resources
2. Steadily advance initiatives on environmental conservation including environmental risk management as “environmental policies to support priority strategies”

Part 3 Effective Implementation of the Basic Environment Plan

- Describe promotion of measures by government and other entities, review of the Plan and utilization of indicators, and revision of the Plan
- Mainly conduct interviews on good practices for “priority strategies” review

Part 4 System of Environmental Conservation Measures

- Describe system of environmental conservation measures
Development of Measures in the Fifth Basic Environment Plan

Set up six interdisciplinary cross-cutting priority strategies
→ Realizing the Integrated Improvements on Environment, Economy and Society (II2ES) under partnerships
→ Creating innovations across all perspectives including those concerning socio-economic systems, lifestyles, and technologies

### Six Priority Strategies

#### 1. Formulation of a Green Economic System for Realizing Sustainable Production and Consumption
- Promotion and expansion of ESG investment and green bond etc.
- Promotion of greening of the whole tax system
- Servicing and sharing economy
- Hydrogen production from renewable energy, hydrogen supply chain
- Utilization of urban mining etc.

#### 2. Improvement of Value of National Land as Stock
- Resilient society including climate change adaptation
- Eco-DRR
- Maintenance and conservation of forests including utilization of forest environmental tax
- Compact cities, small hubs + renewable energy/energy saving
- Measures to deal with marine litter including microplastics etc.

#### 3. Sustainable Community Development Using Local Resources
- “Human development”
- Expansion of green finance in local areas
- Improve balance making use of resources and energy
- Local revitalization centering on national parks
- Conservation, regeneration and use of forests, rural areas, rivers and oceans with cities involved
- Symbiosis and exchange among mountainous, agricultural and fishing villages, and cities etc.

#### 4. Realization of a Healthy and Prosperous Life
- Switching to a sustainable consumption behavior (ethical consumption, COOL CHOICE etc.)
- Reduction of wasted food, appropriate treatment of waste
- Dissemination of low carbon and healthy housing
- Workstyle reform by teleworking + reduce CO2 and resources
- Promotion of rural migration and dual-residence lifestyle + management of forests, rural areas, rivers and oceans
- Conservation of a good living environment etc.

#### 5. Development and Dissemination of Technologies Supporting Sustainability
- Fukushima Innovation Coast concept → driving towards decarbonization (hydrogen production from renewable energy and floating offshore wind power etc.)
- “Logistics revolution” using unmanned autos and drones
- Production of chemical products from biomass (cellulose nanofiber etc.)
- Optimization of production using AI etc. etc.

#### 6. Demonstration of Japan’s Leadership through International Contributions and Building Strategic Partnerships
- Exporting environmental infrastructure
- Adaptation support through Adaptation Platform
- Greenhouse gas observation satellite "IBUKI" (GOSAT) series
- Support for building “sustainable societies” in other countries as an “advanced nation to solve modern challenges” etc.

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Minister for the Environment Nakagawa attending Japan-China Energy Conservation and Environment Forum

Linking forests, rural areas, rivers, and oceans (from MOEJ website)


Forest reserve for landslide prevention (from MOEJ website)

Offshore wind power generation facility (from Annual Report on the Environment 2016)
Environmental Policies to Support Priority Strategies

- **Climate Change Measures**
  Based on the Paris Agreement, implement measures listed in the National Climate Change Action Plan, promotion of low carbonization of electric power sector including thermal power generation (coal-fired power etc.) for long-term drastic reductions, implement measures listed in the National Plan for Adaptation to the Impacts of Climate Change

- **Establishment of Sound Material-cycle Society**
  Implement measures listed in the Fundamental Plan for Establishing a Sound Material-cycle Society

- **Securing Biodiversity and Living in Harmony with Nature**
  Implement measures listed in the National Biodiversity Strategy of Japan 2012-2020

- **Environmental Risk Management**
  Environmental conservation of water, air and soil, chemical substance management, environmental health measures

- **Various Basic Measures**
  Environmental Impact Assessment (EIA), environmental research & technology development, environmental education & learning, environmental information etc.

- **Reconstruction After the Great East Japan Earthquake/Responses to Future Large-scale Disasters**
  Development of interim storage facilities, development of specified reconstruction and revitalization bases in ARD, health management and response to health concerns of residents regarding radiation exposure, reconstruction of disaster area through resource circulation, disaster waste treatment, environmental conservation measures in disaster areas etc.
Regional revitalization through decarbonization

**Renewable Energy Resource Utilization**

- Supplying energy utilizing renewable energy by collaboration between local government, private sectors and financial institution activate regional economic circular and job creation.

**Renewable energy heat utilization**

- Utilizing renewable energy heat existing close to the area (solar, geothermal, snow&ice, spring, seawater, river, sewage)

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**Job creation for 40 employees in renewable energy business (Miyama-city)**

Miyama-city in Fukuoka prefecture, the city initiative to establish local new power company “Miyama Smart Energy Corporation”. The company supply the electricity for household. It achieved approx 3,000 contracts in FY2017, sales of over 16 million dollars, and job creation for 40 persons.

1$=112JPY

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**Utilizing canal water heat (Toho Gas)**

Toho gas co. have structured first “Community Energy Management System” in middle area of Japan. It is named Smart Town “Minato Asukuru” in Minato ward in Nagoya city. The system is mainly gas cogeneration, and also combine canal water heat. Aiming to reduce energy consumption by 40% and reduce CO2 emissions by 60%.

Energy Supply Plan

Source: Toho gas corporation
Regional revitalization thorough nature resources

■ Nature tourism resources utilization
- Aiming to achieve 10 million foreign tourist to national park in Japan by 2020, implementation of “VISIT! NATIONAL PARK” project.
- Promoting for revitalization of eco-tourism and springs (Onsen) utilizing nature resources.

“Tenku Café Terrae” collaborating with private sector (Ise Shima national park)

“Tenku Café Terrace” operated by private sector is opened in August 2018 in Ise Shima national park. MOEJ constructed a rest area in the park, and provide a part of the area to private sector.

Image of “Tenku Café Terrace” in Ise Shima national park

■ Woody biomass utilization
- Utilization of woody biomass energy and heat realizes low-carban society, resource saving and coexisting with nature, and contributes local job creation.

Installation of woody biomass power plant (capacity)

61箇所（計64万kW）が稼動中。うち39か所（計30万kW）が間伐材等の未利用木材が主な熱量源。

Source: Japan Woody Bioenergy Association

■ Revitalization of local industries utilizing nature resources
- Branding local agriculture, forestry and fisheries and local itself utilizing blessing nature (ecosystem)

Source: Toyooka-city, Hyogo pref.
Regional CES
Regional revitalization through local resource circulation

■ Resource recycling efforts in the region
- It is necessary for circulating resources to circulate on an appropriate scale according to each region and each resource, considering reduction of environmental burden to the extent technically and economically possible.

■ Making from urban mines! Everyone's medal project
- Project to produce medals by utilizing urban mines at the Tokyo Olympics and Paralympic Games in 2020. (Organized by the Tokyo 2020 Organizing Committee)
- The small household appliance recycling system will become a legacy to settle as a recycling-oriented society in Japan.

Producing eggs by feeding food waste (Yamaguchi Prefecture)
Food waste is collected, transported and fed as food from food retailers. We use that feed at a nearby chicken farm and we return the eggs we have obtained to retail stores.