
Resource Use, Society and Growth

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In Regional Cooperation & Development**

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- **Global Concerns**
 - **Global Energy Projections**
 - **Who is INPEX CORPORATION?**
 - **Sound Material-Cycle Society (Japan's efforts)**
 - **Conclusion**

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- Conventional style of society
 - Mass production, mass consumption and mass disposal of goods and materials.
 - It is the direct cause of the following issues:
 - Exhaustion of natural resources, especially fossil fuels,
 - Global warming caused by greenhouse gas,
 - Destruction of nature by extraction of resources.
 - Falling into a negative spiral of these issues raises serious concerns about our future.
 - Increasing demands for limited natural resources (fossil fuels) make us realize the importance of stable energy supply.

Global Energy Projections (1)

- World primary energy demand
 - Projected to increase by 1.5% per year between 2007 and 2030, reaching 16.8 billion tones of oil equivalent (toe).
 - Fossil fuels remain dominant, accounting for almost 80% of world demand.
 - China is the main driver of demand growth, accounting for 39% of the global increase.

Figure 1.1 • World primary energy demand by fuel in the Reference Scenario

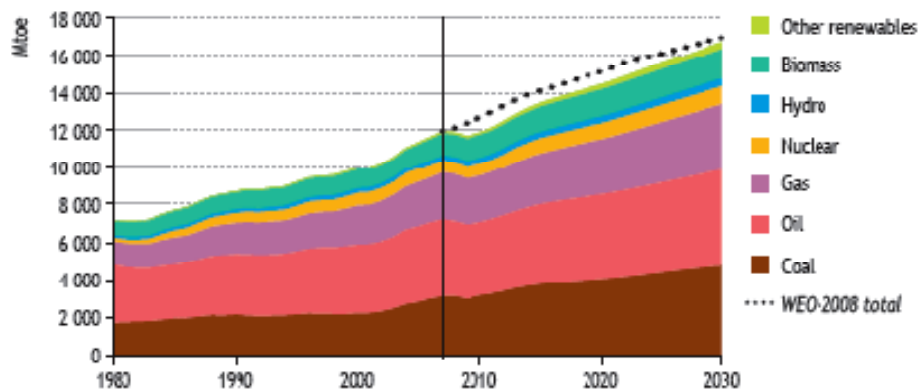
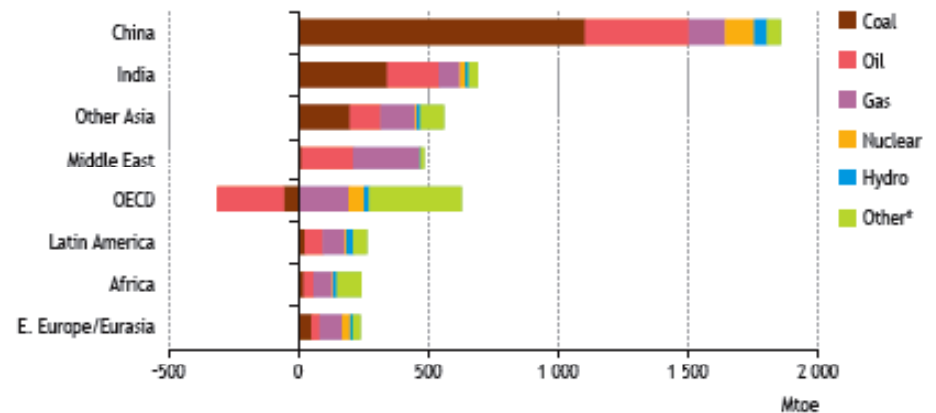


Figure 1.2 • Incremental primary energy demand by fuel and region in the Reference Scenario, 2007-2030

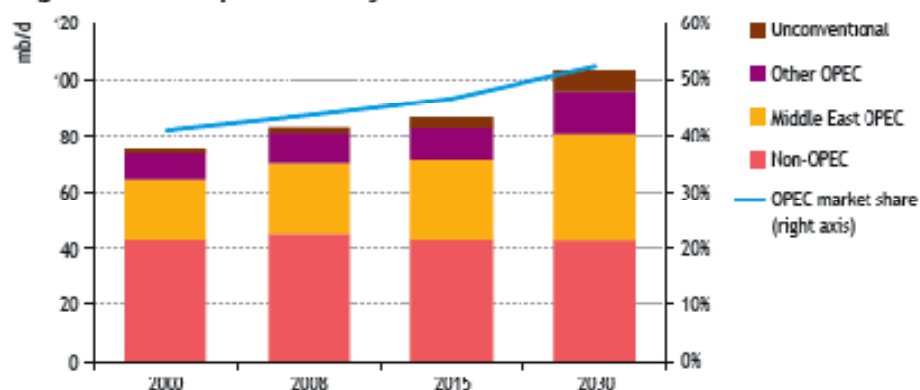


* Includes biomass and waste, wind, geothermal, solar, and tide and wave.

Global Energy Projections (2)

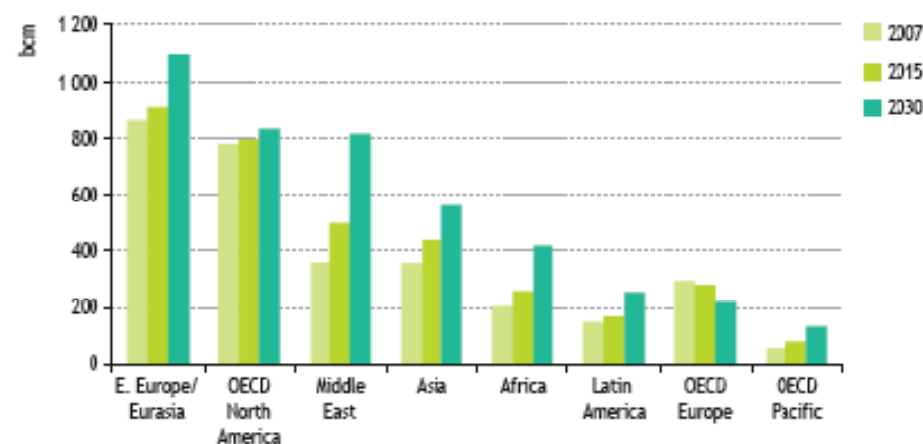
- Oil and natural gas production
 - OPEC's output of oil rises from 36.3 mb/d in 2008 to almost 54 mb/d in 2030, resulting in its share of world oil production jumps from 44% now to 52% in 2030.
 - The Middle East, Africa, Asia, Latin America and Russia also see significant growth in production, accounting for almost all of the increase in global natural gas production.

Figure 1.8 • Oil production by source in the Reference Scenario



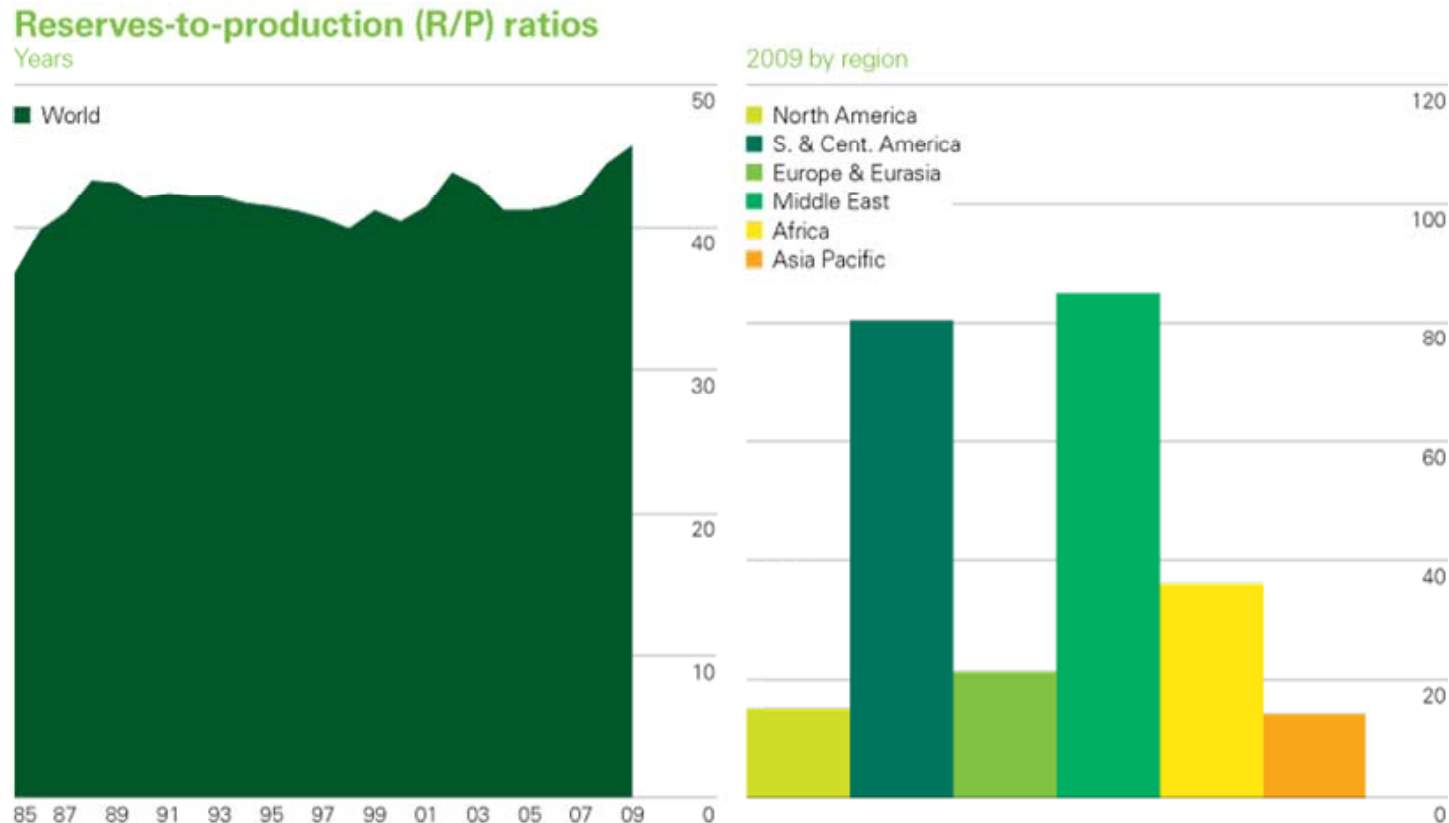
Note: Excludes processing gains. Conventional oil includes crude oil, natural gas liquids (NGLs), extra heavy oil from Venezuela and chemical additives.

Figure 12.1 • Natural gas production by region in the Reference Scenario



Global Energy Projections (3)

- Oil reserves-to-production (R/P) ratios
 - Keep showing +40 years in these two decades.

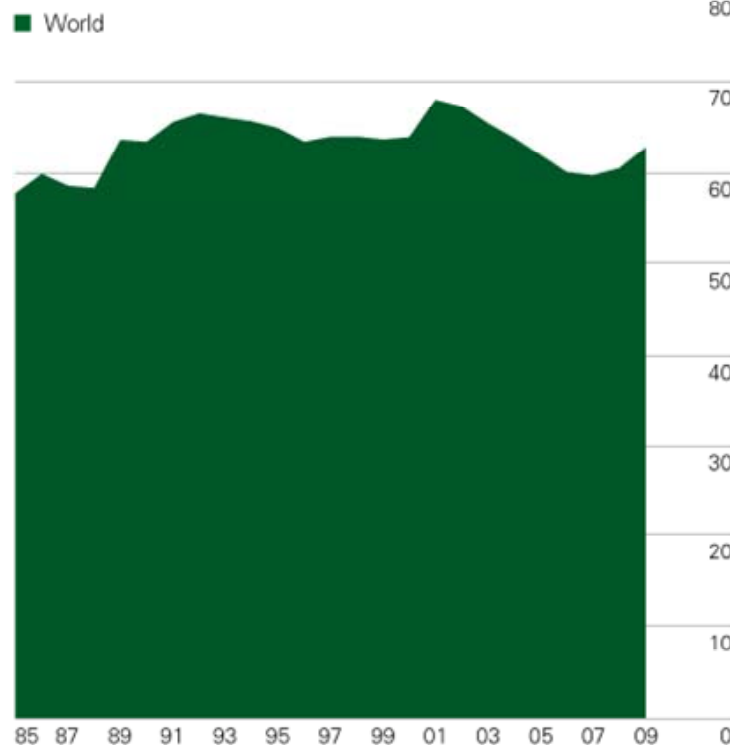


Global proved oil reserves rose by 0.7 billion barrels to 1,333.1 billion barrels, with an R/P ratio of 45.7 years. Increases in Indonesia and Saudi Arabia more than offset declines in Norway, Mexico and Vietnam. The 2008 figure has been revised higher by 74.4 billion barrels, largely due to an increase in Venezuelan official reserves.

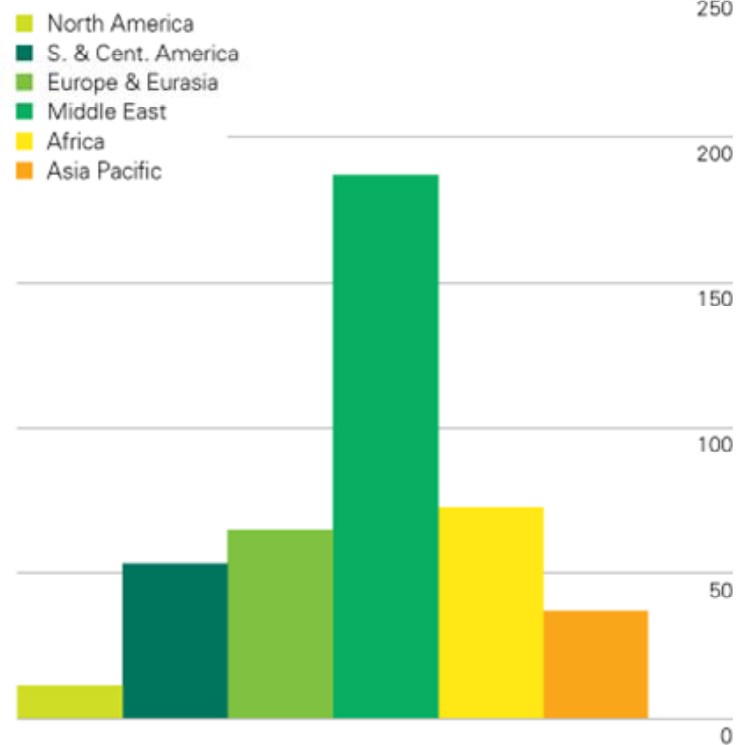
Global Energy Projections (4)

- Natural gas reserves-to-production (R/P) ratios
 - Keep showing +60 years in these two decades.

Reserves-to-production (R/P) ratios
Years



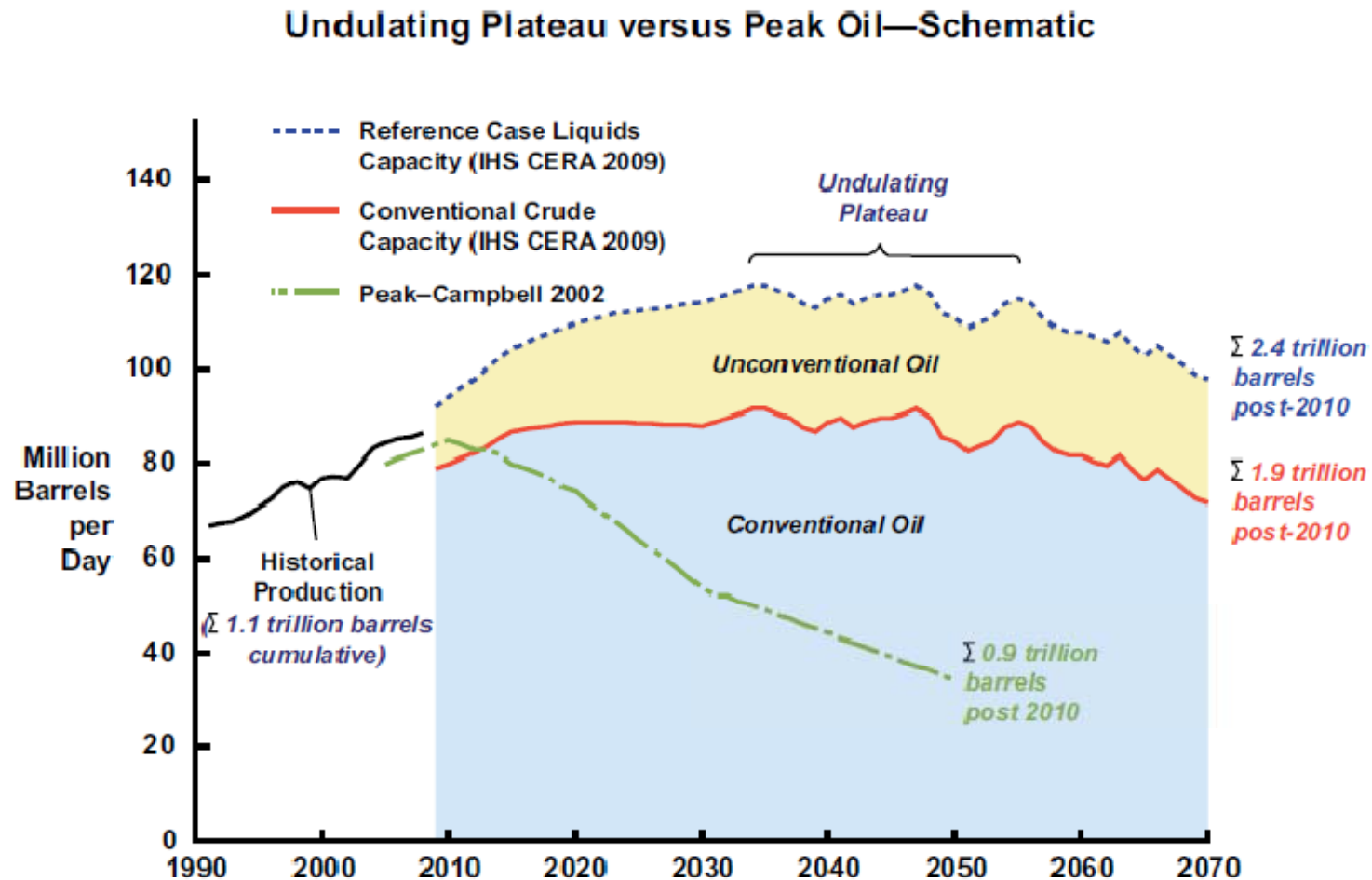
2009 by region



World proved reserves of natural gas grew by 2.21 trillion cubic metres in 2009, driven by increases in Russia, Venezuela and Saudi Arabia. The global R/P ratio increased to 62.8 years.

Global Energy Projections (5)

- When should oil production peak out?
 - Possibly around 2035, then decline gradually.

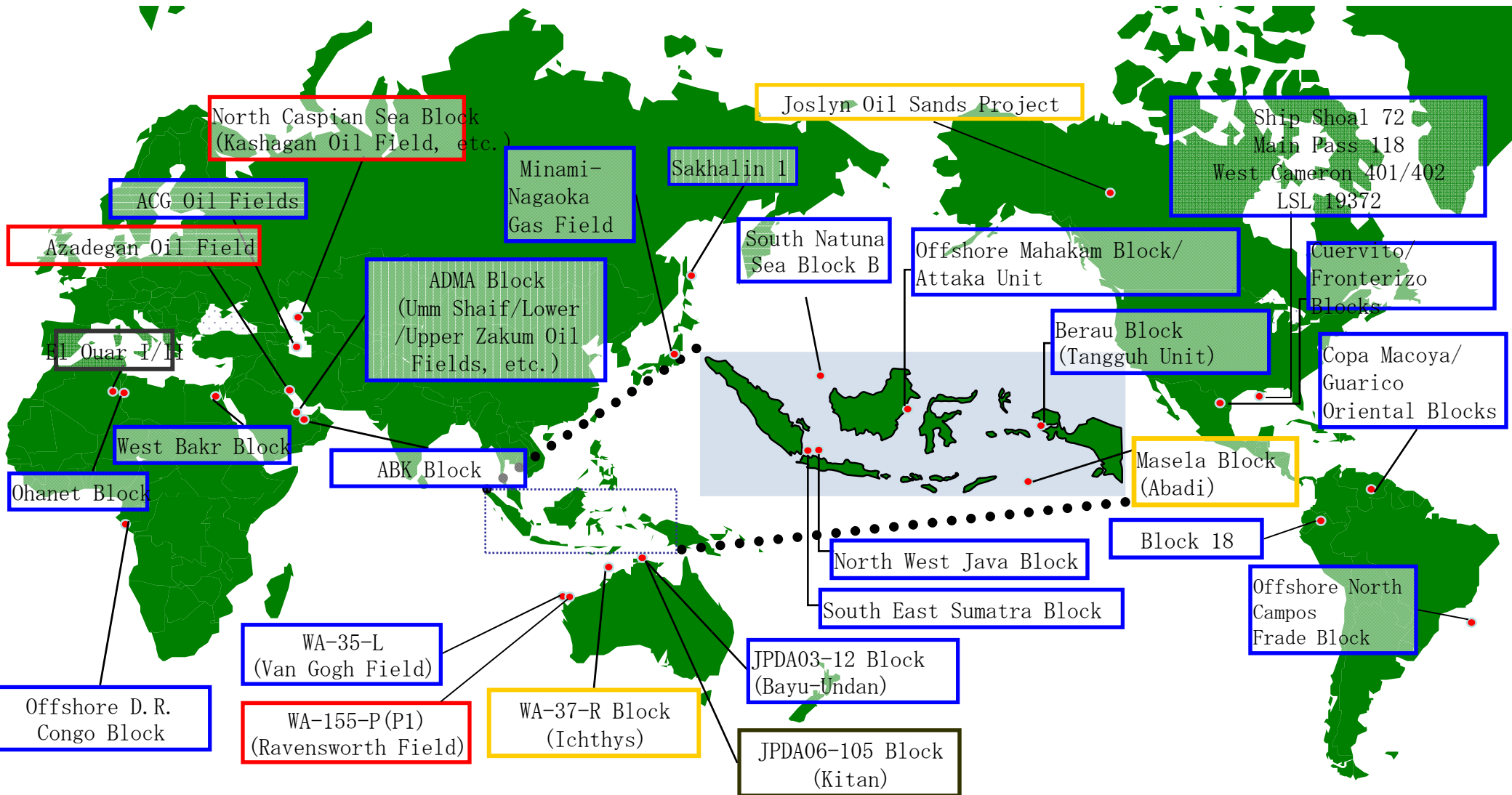


Introducing INPEX



- Our mission
 - Stable and efficient supply of energy to our customers.
 - Contribution to our communities to be more livable and prosperous.
- Our target
 - Expand activities to increase daily production to 0.8-1.0 mboe in the late 2010s.
 - Establish a natural gas supply chain.
 - Provide diversified energies, including unconventional hydrocarbon resources and renewables.

Major Assets around the World

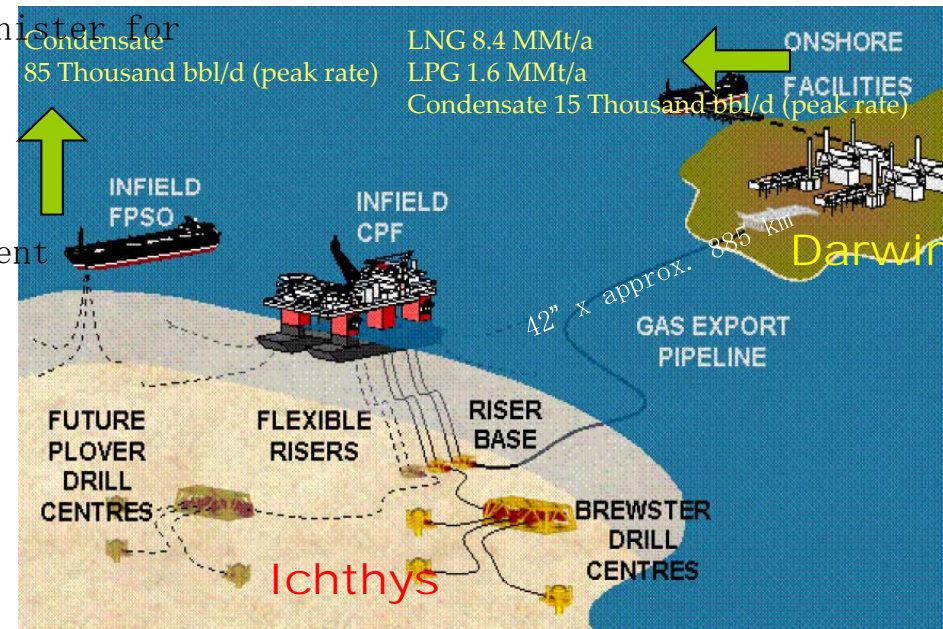
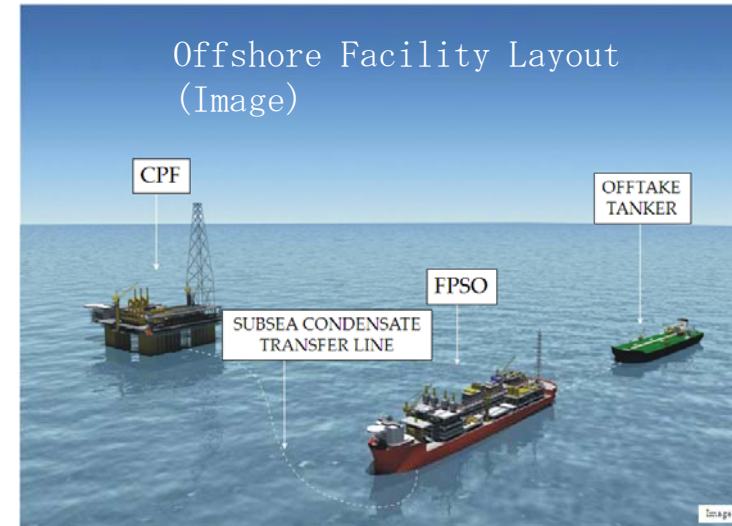


In Production
 In Development
 Preparation for Development (Discovered)
 Undeveloped (Discovered)

Ichthys Project



- FEED work in progress
 - Onshore (natural gas liquefaction plant)
 - Offshore (Offshore facilities & pipeline)
- Application for production license
 - Submitted Preliminary Field Development Plan to the authority in March 2010.
- Environmental Assessment
 - Draft EIS (Environmental Impact Statement) was submitted to Northern Territory and Commonwealth governments in April 2010.
 - Approval for publication of the draft EIS for public review and comment was obtained on May 7, 2010, from Commonwealth Minister for Environmental Protection, Heritage and the Arts.
- Gas Marketing Activities
 - Targeted marketing to Japanese buyers
 - Negotiation is ongoing for obtaining LNG purchase commitment as early as possible.



- Production volume (expected):
 - Approx. 8.4 MM t/a of LNG
 - Approx. 1.6 MM t/a of LPG
 - Approx. 100,000 bbl/d of condensate (Peak Rate)
- FID target: 2011 4Q
- Production start target: 2016 4Q

Development Concept

Abadi Project



The Plan Of Development (POD) was approved by the Indonesian Government.

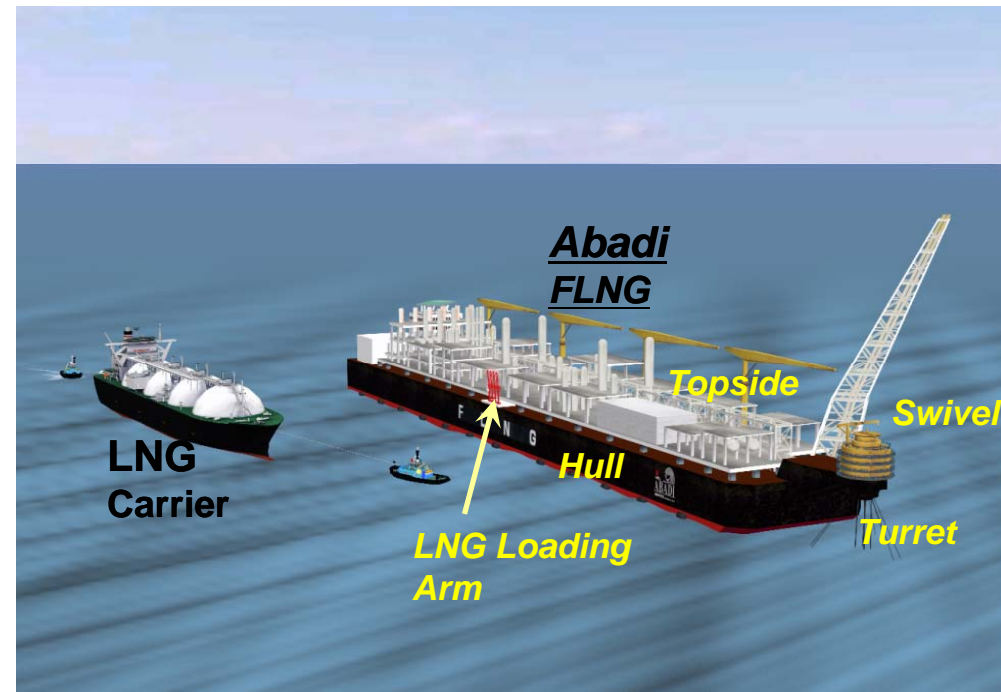
Working on the preparation for FEED

Started AMDAL/IESIA (International Environmental & Social Impact Assessment)

Transfer a 10% participating interest to an Indonesian company (PT EMP Energi Indonesia)*

*In November 2009, INPEX signed an agreement with PT EMP Energi Indonesia to transfer a 10% participating interest. The transaction is subject to certain conditions precedent.

A third-party evaluation on the POD being conducted by the Indonesian Government.



Development Concept as approved in the POD**

- Floating LNG
- Initial development focusing on the North block
- LNG production of 4.5MMt/a
- Condensate production of 13,000 bbl/d
- Production start-up : targeted 2016

** Approved POD may be adjusted according to the progress of the third-party evaluation on the POD

Natural Gas Supply Chain



Exploration
& Production

Liquefaction

Shipping &
Re-gasification

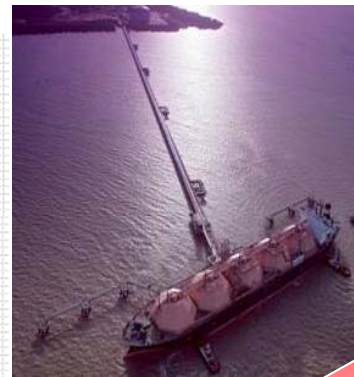
Distribution



(DST in Masela Block)



(Bontang LNG Plant)



(Shipping Berth of Darwin)



(Naoetsu LNG Receiving Terminal : Under construction)



(Shizuoka Line)

- Early commercialization of discovered oil & gas fields overseas
- Active exploration and production overseas

- Steady progress of large-scale LNG projects (Ichthys and Abadi)

- Diversifying source of feed gas for expansion of domestic natural gas business
- Construction of our own LNG receiving terminal

- Optimal utilization of domestic gas and overseas LNG
- Connect domestic pipeline network with overseas sources

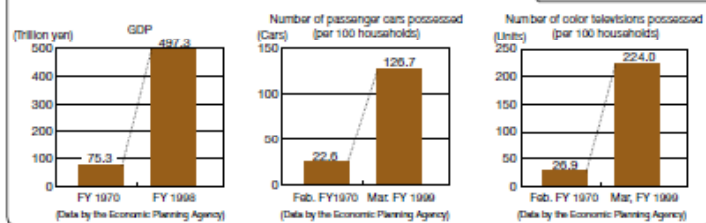
- CCS projects
 - In order to address global environmental concerns, we continue to pursue carbon capture and storage (CCS) projects.
- Renewables
 - Investment in the DB Masdar Clean Tech Fund
 - The Fund is to invest in emerging companies in the areas of clean energy, such as solar and wind power generation, storage cells, waste disposal, improved energy efficiency and innovative materials, etc.
 - Investment in ELIY Power Company <http://www.eliypower.co.jp/english/index.html>
 - The company have developed high-capacity lithium-ion batteries which enable storage of solar, wind, and other form of natural energy and contribute to conservation of the global environment through more effective use of natural energy.

Sound Material-Cycle Society (1)

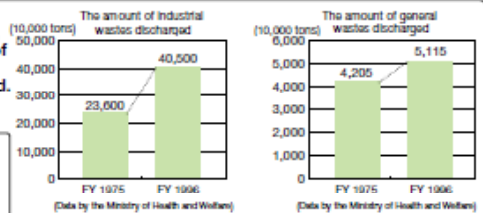
• Japan's efforts toward a recycling-based society (2000)

The Year 2000 Is the First Year of The challenge to establish the Recycling-based Society.

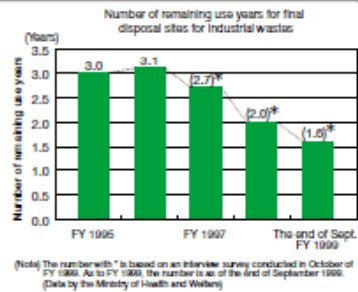
We have lived a prosperous life in the 20th century, which was supported by the system of mass production, mass consumption, and mass disposal.



In exchange for such prosperity, huge amounts of wastes have been discharged.



Waste disposal sites will soon be full.



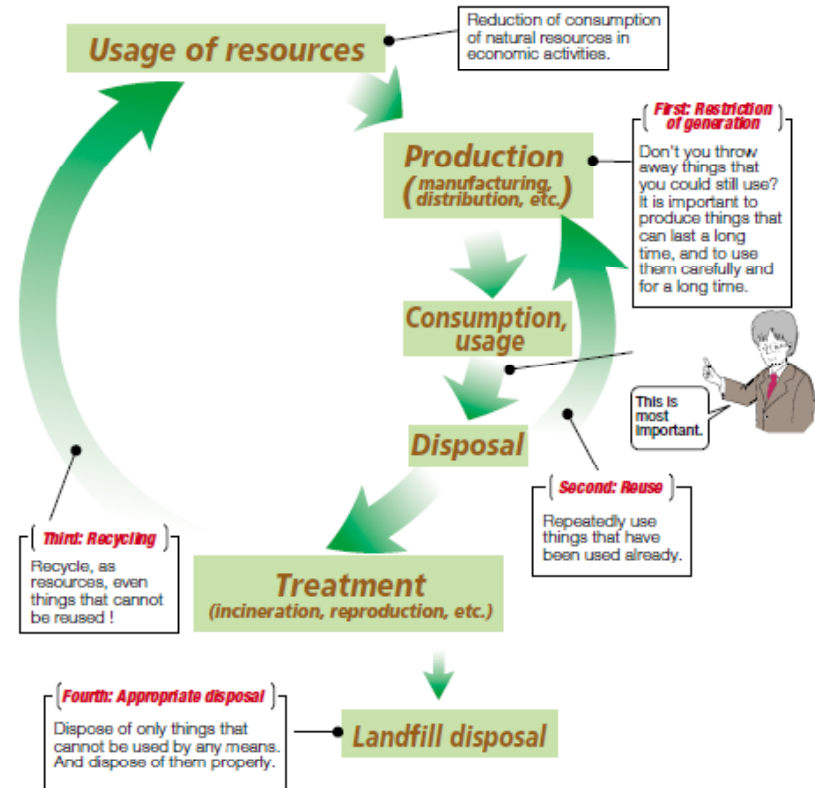
Japan will be filled with wastes unless something is done.

Therefore, we have to tackle, right now...
Changing from a One-Way Society to the Recycling-based Society.

The Recycling-based Society

What is needed now is to urgently review our lifestyles and economic activities and pursue a society in which consumption of natural resources is restricted, with a reduced environmental burden. Let's start the following right now.

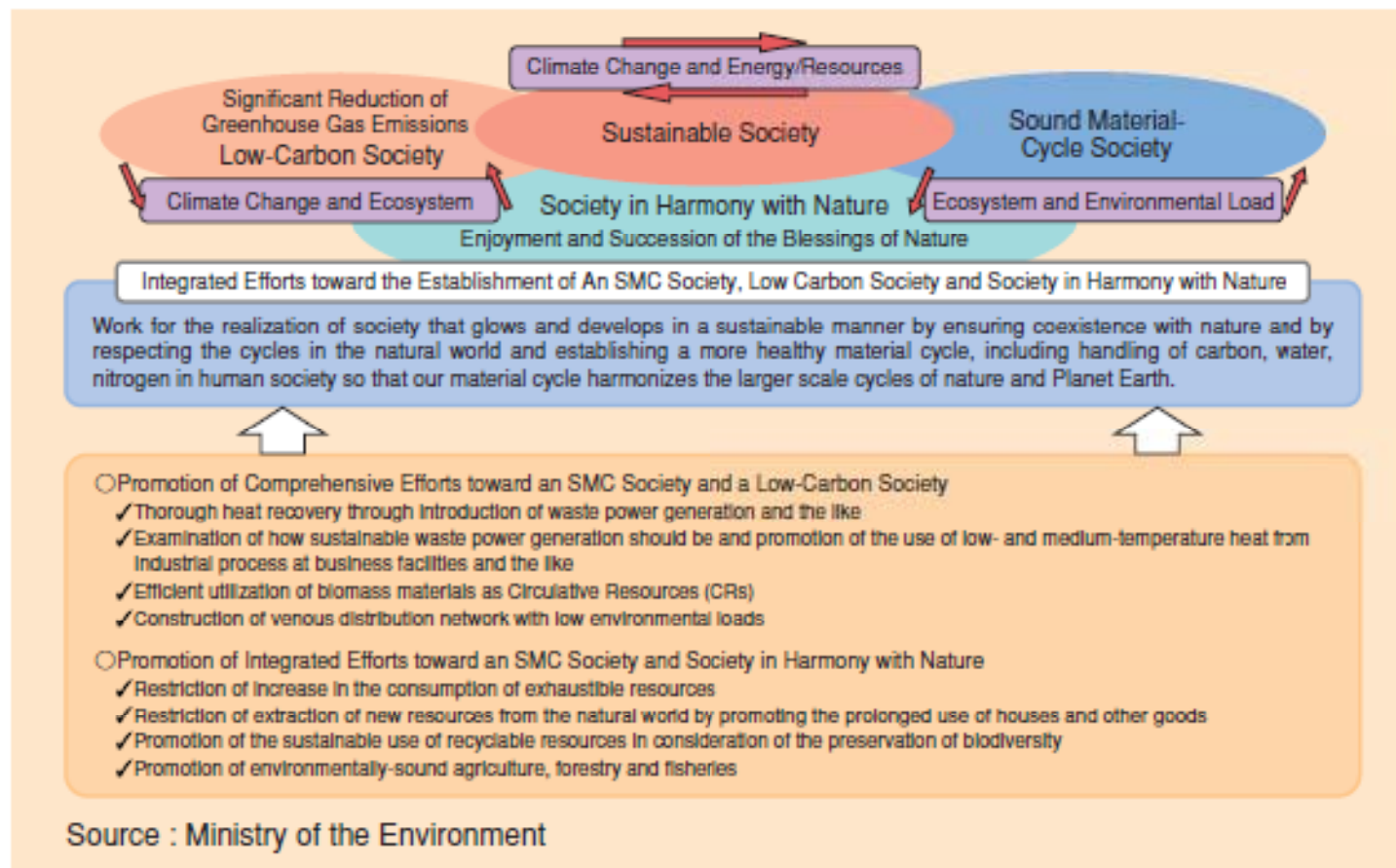
- ① Above all, try not to produce wastes, as much as possible.
- ② Use produced wastes as resources, as much as possible.
- ③ Properly dispose of wastes that cannot be used by any means.



"The Basic Law for Establishing the Recycling-based Society" was enacted in May 2000, in order to change Japan, in the 21st century, to the Recycling-based Society.

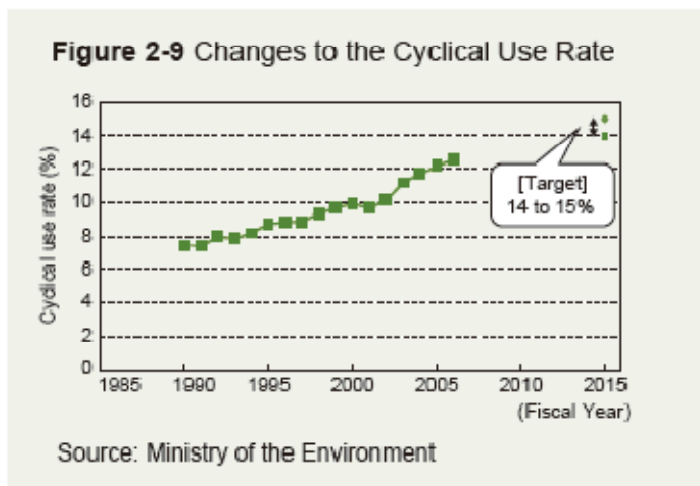
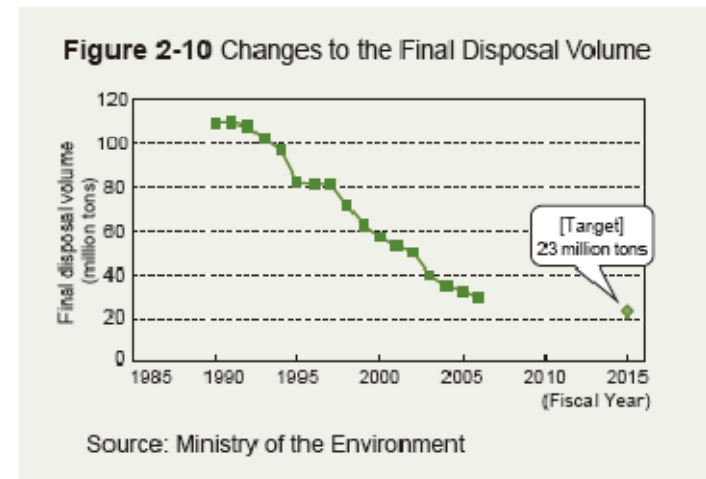
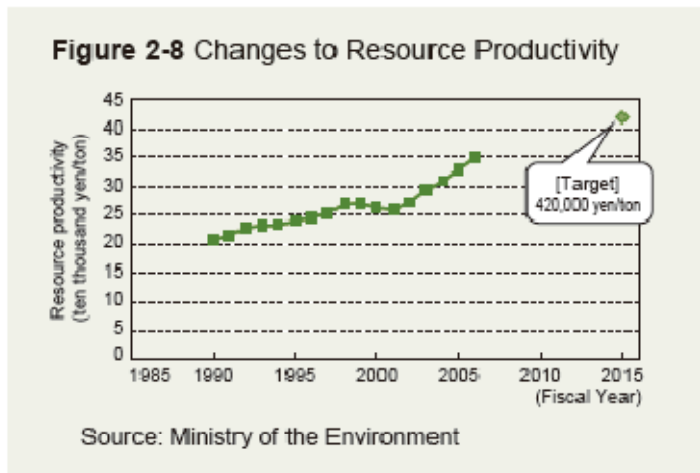
Sound Material-Cycle Society (2)

- Integration with efforts toward a low-carbon society and a society in harmony with nature (2008)
 - To establish a sound material-cycle society based on lower resource consumption and lower environmental burdens.



Sound Material-Cycle Society (3)

- Target setting for the material flow index
 - Three indices concerning “Entrance,” “Circulation” and “Exit” of the material flow.



(1) Entrance...Resource Productivity

GDP divided by the input of natural resources and others

(2) Circulation...Cyclical Use Rate

The amount of recycling utilization divided by the amount of circulative utilization + input amount of natural resources and others

(3) Exit...Final Disposal Volume

the amount of land filling of waste

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- **Two points to realize a sustainable society with economic growth**
 - Stable supply of energy
 - Efficient use of natural resources