

An Asian Base for Green (Low Carbon) Revolution

Kitakyushu Asian Center for Low Carbon Society

Kitakyushu City, Japan

The origin of the industrial revolution
in Japan



1901: Yawata Steel Works (Japan's first state-run steel refinery) opens

An origin of the Green Revolution in Asia



The History of Kitakyushu City's Environmental Policy

Phase 1 (until 1980)

The age of pollution problems and their conquest (women's associations & cooperation among industrial, academic, bureaucratic & private sectors)

Phase 2 (from 1980)

The age of international cooperation (KITA, participation in two summit meetings & international awards)

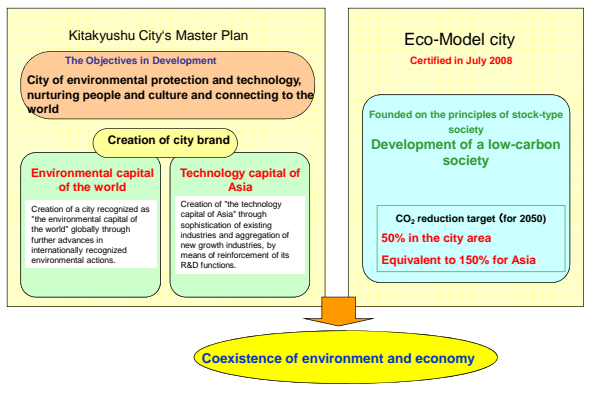
Phase 3 (from first half of 1990)

The age of recycling society activities (Eco-Town, PCB treatment, fee-for-service garbage collection & more exhaustive garbage sorting)

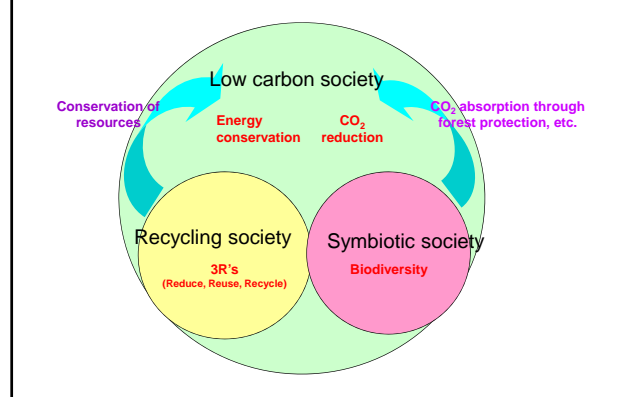
Phase 4 (from 2005)

The age of sustainability and low carbon society activities (Environmental capital, civic collaboration & Eco-model city)

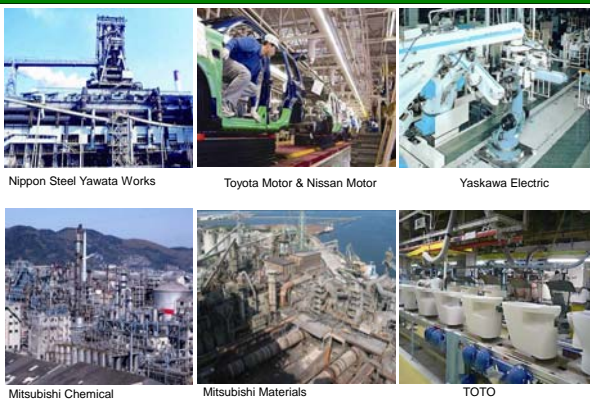
The Background of Kitakyushu Asian Center for Low Carbon Society



Approach from an Integrated Perspective



Regional Resources (The Leading Businesses in the Kitakyushu Region)



Regional Resources (Outstanding Manufacturing Technologies)

- The need for pollution control measures (period of rapid economic expansion)
- Pursuit of conservation in resources and energy (two oil crises)

High production efficiency & low environmental impact
Development of low-pollution production technologies by business enterprises in the city
(Energy & resources conservation technologies, cleaner production, etc.)

Aggregation of technologies contributing to carbon level reduction

Assistance of universities & research institutes in the city

For development of a low-carbon society
R&D in Innovative Technologies

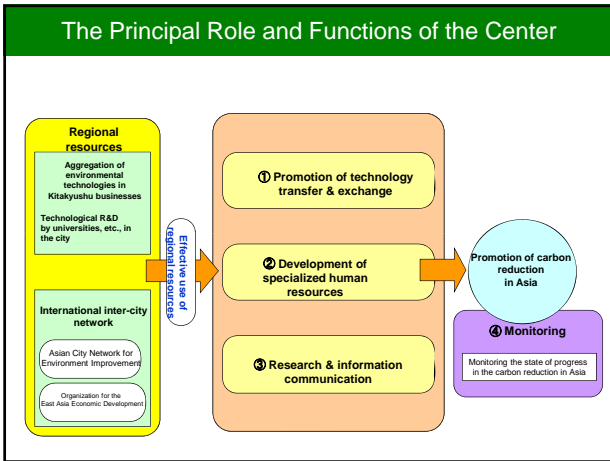


What the Kitakyushu Asian Center Aspires to Achieve

Promote aggressive transfer of environmental and social technologies,

push for reform in social mechanisms and create new values and culture

and become a center for "Low Carbon Revolution in Asia"



- ### Basic Direction of Technology Transfer
- ① Development of inter-business exchange based on inter-city exchange
 - ② Extension from soft power (consulting) to hardware (equipment)
 - ③ Introduction of technology suited to the partner enterprise in the target area
 - ④ Improved added value through packaging element technologies
 - ⑤ Establishment of the Asian standard technology
 - ⑥ Reform in social mechanisms through transfer of social technologies

Example of technologies contributing to carbon level reduction (1)

Advanced coal application technology Electric Power Development Co., Ltd. (J-POWER)

Development and application of "multi-purpose coal gas production technology" for high-efficiency power generation through coal gasification combined with fuel cells.

CO₂ emission reduction by more than 30% projected.

Coal Energy Application for Gas, Liquid and Electricity (EAGLE)

Example of technologies contributing to carbon level reduction (2)

Energy conservation for plant infrastructure facilities Yaskawa Electric Corporation

Utilizing JETRO's projects, a demonstration project promoting energy conservation with invertors was started in September 2008 at a model plant in Dalian, China.

Presently, Yaskawa Electric invertors are used for energy conservation in dust collector fans and the wind/hydropower machinery for wastewater tanks at the model plant in Dalian City.

Example of technologies contributing to carbon level reduction (3)

Pilot plant for water recycling (Water Plaza)

Water Plaza
Computer generated images

Water Plaza is:
A water recycling pilot plant combining membrane filtration of waste water and seawater desalination (capacity: 1,400m³/day)
 • Development & demonstration of world-class technology
 • Showroom function for communicating information
 • Application in field training of overseas trainees
 Water output from sewage water 1,600m³/day
 Output from seawater 400m³/day

Startup in FY2010 (schedule)

Example of social system technology application (1)

Kitakyushu Eco-Town Project (Zero Emission)

Kitakyushu Eco-Town

Wakamatsu-ku, Yahatanishi-ku, Yahatahigashi-ku, Kitakyushu City Hall, JR Kokura Station, Kitakyushu City Hall, Hiagari Water Treatment Center, Kokura manabe-ku, Moji-ku, Kitakyushu Airport

Wastewater release point, Seawater collection point, Sea

100 m

【Office equipment recycling】 【Household appliance recycling】 【Motor vehicle recycling】

Example of social system technology application (2)

Yahata-Higashida Smart Community Plan

Realization of optimized energy use per region, through coordination between new and mainstay energy sources and introduction of a control system for both energy supply and demand.

Hydrogen as by-product, Natural gas co-generation system, Large-scale storage batteries, Wind power hypothetical introduction, Water power station 1.5 millionkw, Smart building, Fuel cells, Smart School, Data Center, Smart condominium building, Photovoltaic power generation, Rent-a-cycle Station, Internet, Power line network, Smart Community Center <PFI facility installed>

Various Asian cities: Reduced pollution & improved quality of life, together with CO2 reduction

Kitakyushu City: Stimulation of the region through overseas environmental business operation chiefly by Kitakyushu businesses

Development of WIN-WIN relations

Transfer of environmental & social technologies

Kitakyushu Asian Center for Low Carbon Society

Businesses: Low-carbon technologies, Low-carbon products, etc.

Citizens NPOs: Eco-consciousness, Low-carbon living, etc.

Universities Research institutes: Carbon reduction technologies, Low-carbon systems, etc.

Governments: Policy development, System development, etc.

Initiative Network Cities: Chelyabinsk, Hanoi, Yangon, Kitakyushu City, Bangkok, Ho Chi, Cebu, Medan, Greater wood-lator efficiency, Greater production efficiency, Kitchen garbage composting, Water supply project, Steel slag processing, Sewage, Advanced coal use