

Eco-Model City

~Initiatives of the Town of Shimokawa
in Hokkaido~

October 5, 2009

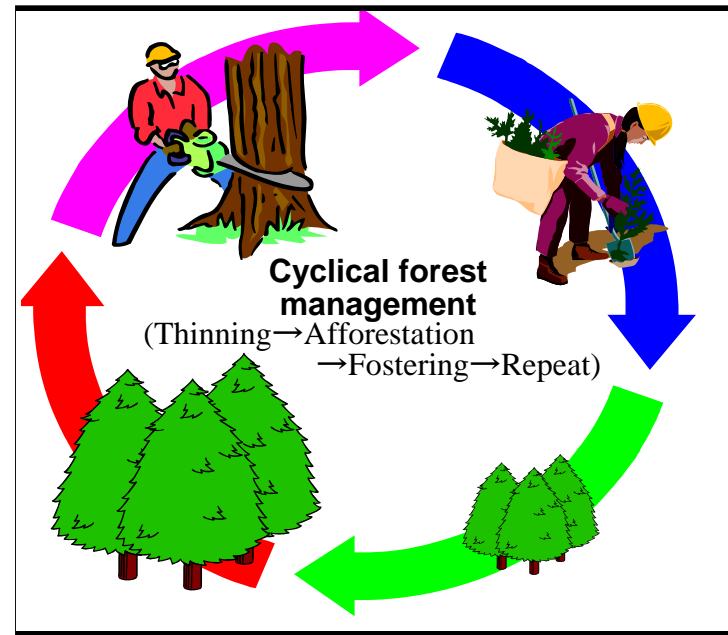
The International Conference on Promoting Low-Carbon Cities 2009

Shimokawa Profile



Area: 644.20 km²
Forested area: 582.77 km²
Population: 3,773
(as of August 31, 2009)

Temperature:
60°C differential between summer and winter temperatures
(temperatures exceed 30°C in summer and fall below -30°C in winter)
Total annual snowfall:
Approx. 10 m
Characteristics:
90% of the town's area is forested.



Basic philosophy behind cyclical forest management

Afforestation
(and optimal management)
of 50 ha per year × 60 years =
3,000 ha of man-made forest
Cyclical forest management creates a resource cycle while continuously developing and maintaining the forest, thereby creating employment opportunities and providing lumber products.

Spreading this approach to the regional economy and creating jobs

Eco-Model City
Significant amounts of CO₂ are absorbed through optimal forest management.
CO₂ emissions are dramatically reduced through the utilization of forest biomass.

Concentrated Introduction of Forest Biomass Energy



Wood biomass boiler



Wood biomass boiler at a seedling greenhouse



Cultivation of the fast-growing willow trees as an energy resource crop



Utilization of unused wood such as leftovers in forests

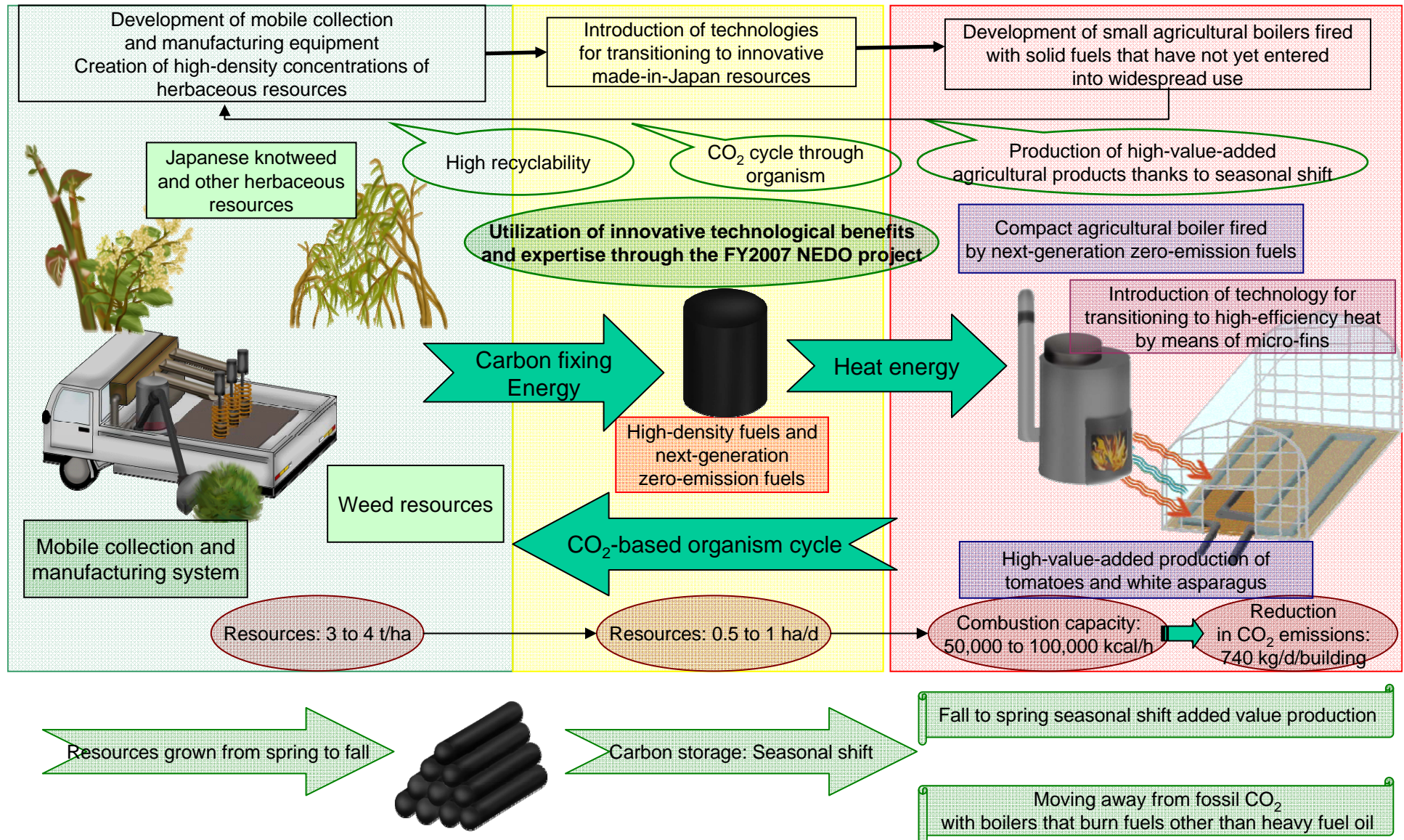


Manufacture of wood energy raw materials



District heat supply powered by a wood boiler

Working toward a New Approach to Regional Planning and a Low-carbon Society



Implementing a sustainable, low-carbon society with herbaceous biomass in a manner suitable for a small-scale city

Action for Utilizing Forest CO₂ Absorption Capacity

1997

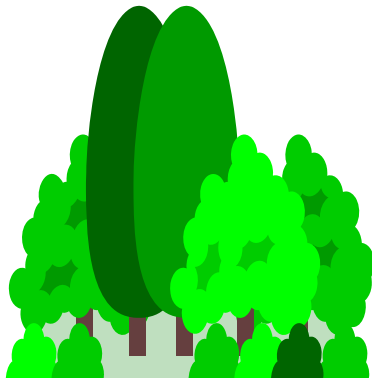
⇒Adoption of the Kyoto Protocol
3.9% forests
Market mechanism

2002

⇒Overseas sale of emissions rights corresponding to Shimokawa's forest CO₂ absorption capacity

2003 and subsequent years

⇒National study group of leading towns and villages
⇒Study group of 39 cities, towns, and villages in Hokkaido



2008

⇒Conference on Promoting Increase of CO₂ Removal via Forest Biomass (Ashoro, Shimokawa, Takinoue, and Bihoro)

Goal

To revitalize the region by building systems to reduce atmospheric CO₂ by taking advantage of the ability of forest biomass, a local resource, to absorb CO₂ and by facilitating the replacement of fossil fuels.

Committee on the Design of a System for Utilizing Forest Biomass CO₂ Absorption Capacity

【Chairman: Noriyuki Kobayashi (Nihon University)】

2008

⇒Advanced site survey
⇒System design
(1)Forest sink
(2)Reduction of emissions
⇒Business needs survey

2009

⇒Advanced site survey
⇒System design
(3)Other regional characteristics
⇒Carbon offset demonstration
⇒Verification and system review
⇒Vision for 4-town council

2010

⇒Demonstration and validation
⇒System review
⇒Development of a system for full-scale operation
⇒Establishment of an operational structure (4-town council)

Regional Partnerships for a Low-carbon Society

~Carbon Offset Demonstration~



2009

April 21

No. 1: Conclusion of basic agreement with “more Trees”

July 1

No. 1 registration: J-VER program forest management project

August 10

No. 2: Conclusion of a basic agreement with JCB Co., Ltd.

September 10

No. 3: Partnerships with All Nippon Airways(ANA) and “more Trees”



Project implementation

Compliance with government programs
(J-VER of Ministry of the Environment and Domestic Carbon Credit Program of Ministry of Economy, Trade and Industry)

Project management

Acquisition of credits

Partner businesses

Partnership agreements

Sponsorship funds

Certificate

Conference on Promoting Increase of CO₂ Removal via Forest Biomass
(Ashoro, Shimokawa, Takinoue, and Bihoro)

System support

Studies before implementation as a project

Committee on the Design of a System for Utilizing Forest Biomass CO₂ Absorption Capacity

【Key to future development】

- (1) Reducing costs associated with developing biomass energy facilities:
Obtaining assistance from the national government and other sources
- (2) Pursuing technological innovations in order to enable new biomass applications:
Strengthening partnerships among industry, academia, and government
- (3) Strengthening links among cities, businesses, and local communities