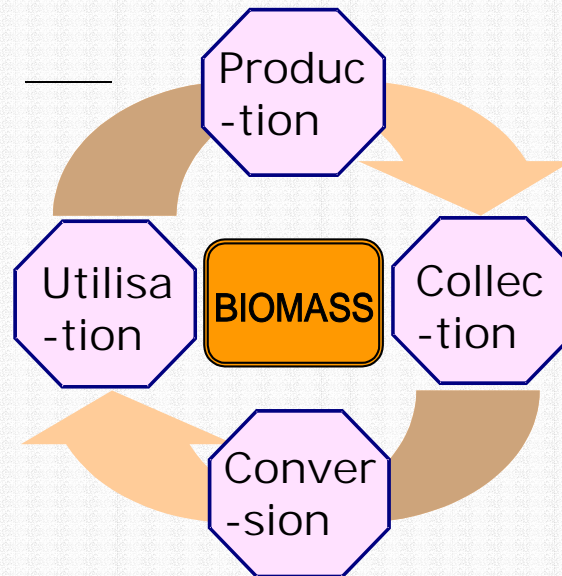


# Biomass-Nippon Strategy



Ministry of Agriculture, Forestry & Fisheries, Japan

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# **1. Backgrounds**

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- 1) Prevention of Global Warming**
- 2) Creation of a “Recycling-Oriented” Society**
- 3) Fostering of New Strategic Industries**
- 4) Activation of Agriculture, Forestry, and  
Fishery, Rural Communities**

## 2-1. Definition of biomass

**Biomass** = *Renewable, organism-derived organic resource, excluding fossil resources*

### Waste Biomass

- Paper waste
- Livestock waste
- Food waste
- Construction wood
- Black liquor
- Sewage sludge

### Unused Biomass

- Rice straw
- Rice husk
- Thinned wood
- Damaged wood

### Energy crops

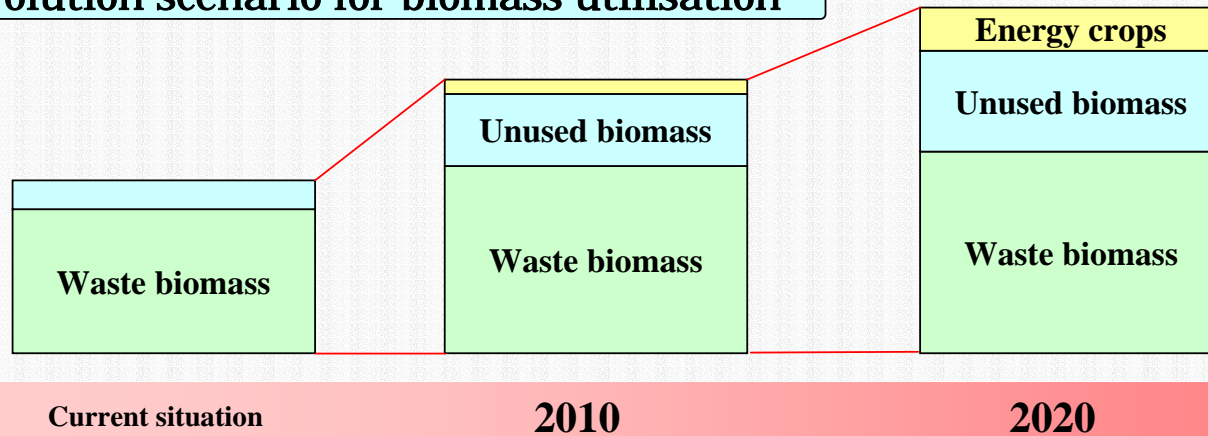
- Maize
- Oil seeds
- Sugarcane

## 2-2.Current status of biomass utilization

Biomass	mn tonnes / year	current status of utilisation
<b>Waste Biomass</b>		
livestock waste	91	80% used as fertiliser
food waste	22	less than 10% used as fertiliser
paper waste	14	-
black liquor	14	About 100% used as energy source
sewage sludge	76	40% used as landfill, 60% used as construction materials or feritliser
residues at lumber mills	6	90% used as energy or fertiliser
construction-derived wood residues	5	40% used as paper, cardboard, etc.
<b>Unused Biomass</b>		
forestry residues	4	-
rice straw, etc.	13	30% used as compost, feed, etc.

## 2-3. Goals

### Evolution scenario for biomass utilisation



### Goals - 2010

#### *Nation-wide perspective*

- **Waste biomass**: utilise more than **80%** in terms of carbon equivalent
- **Unused biomass**: utilise more than **25%** in terms of carbon equivalent
- Start the commercial use of **energy crops**

#### *Technology perspective*

- Energy conversion efficiency  
(20% in terms of electricity,  
80% in terms of heat)

#### *Regional perspective*

- Launch **500** Biomass towns

## 2-4. Action plans

### 1) General aspects

- ' Establish a Biomass Information Headquarters on site
- ' Support ambitious municipalities on biomass utilization and demonstrate them for other municipalities as model projects

### 2) Production, Collection, and Transportation

- ' Create an efficient collection/transportation system for biomass

### 3) Conversion of Biomass

- ' Develop conversion technologies
- ' Make products highly value added and diversification

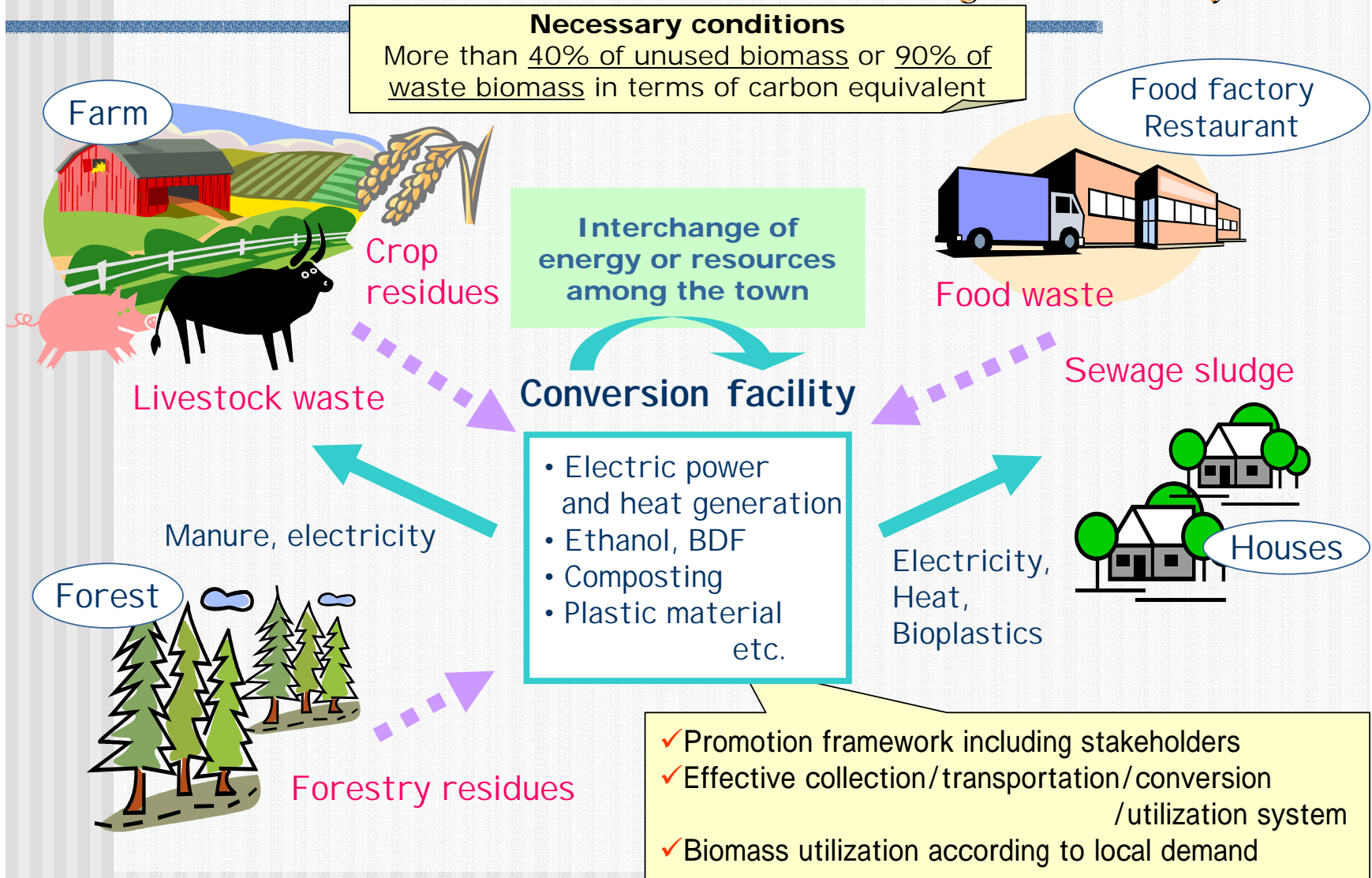
### 4) Use of Biomass

- ' Improve the environment for promotion of the use of bioplastics and biofuels, and the biomass power generation



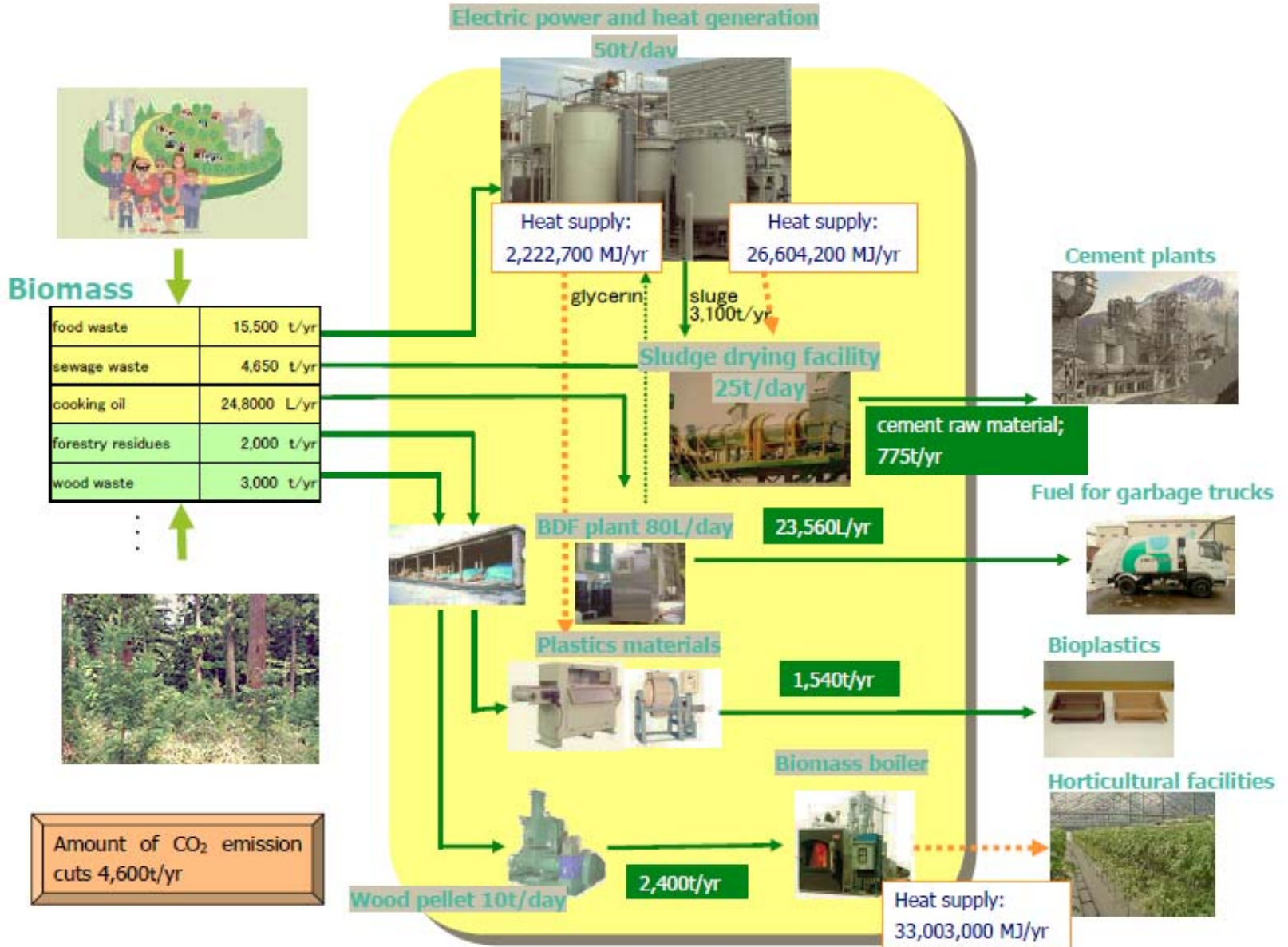
## 2-5. Biomass Town

*Goal to  
launching 500 towns by 2010*





# Biomass Town ~ JOETSU City



### 3. FY 2005 Biomass related budget

(Ministry of agriculture, Forestry & Fisheries)

(US\$ million, 1\$ = Y120)

<b>Research and Development</b>	<b>17</b>
<b>Community based measures</b>	
<b>- Planning, Technical assistance/extension</b>	<b>15</b>
<b>- Biomass conversion facilities</b>	<b>199</b>
<b>TOTAL</b>	<b>231</b>

## 4. Summary and Conclusion

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- 1) **Cabinet decision - Inter-ministerial initiative**
- 2) **4 main reasons to establish the strategy including a creation of “Recycling-Oriented” Society.**
- 3) **Goals, and action plans for each ministry are identified.**
- 4) **Future challenge:**
  - How to use biomass toward the vitalization of rural areas.
  - How to develop biomass-technologies to use more efficiently and economically.
  - How to make the partnership of Asia for biomass utilization.