

Biomass Industrial Cities

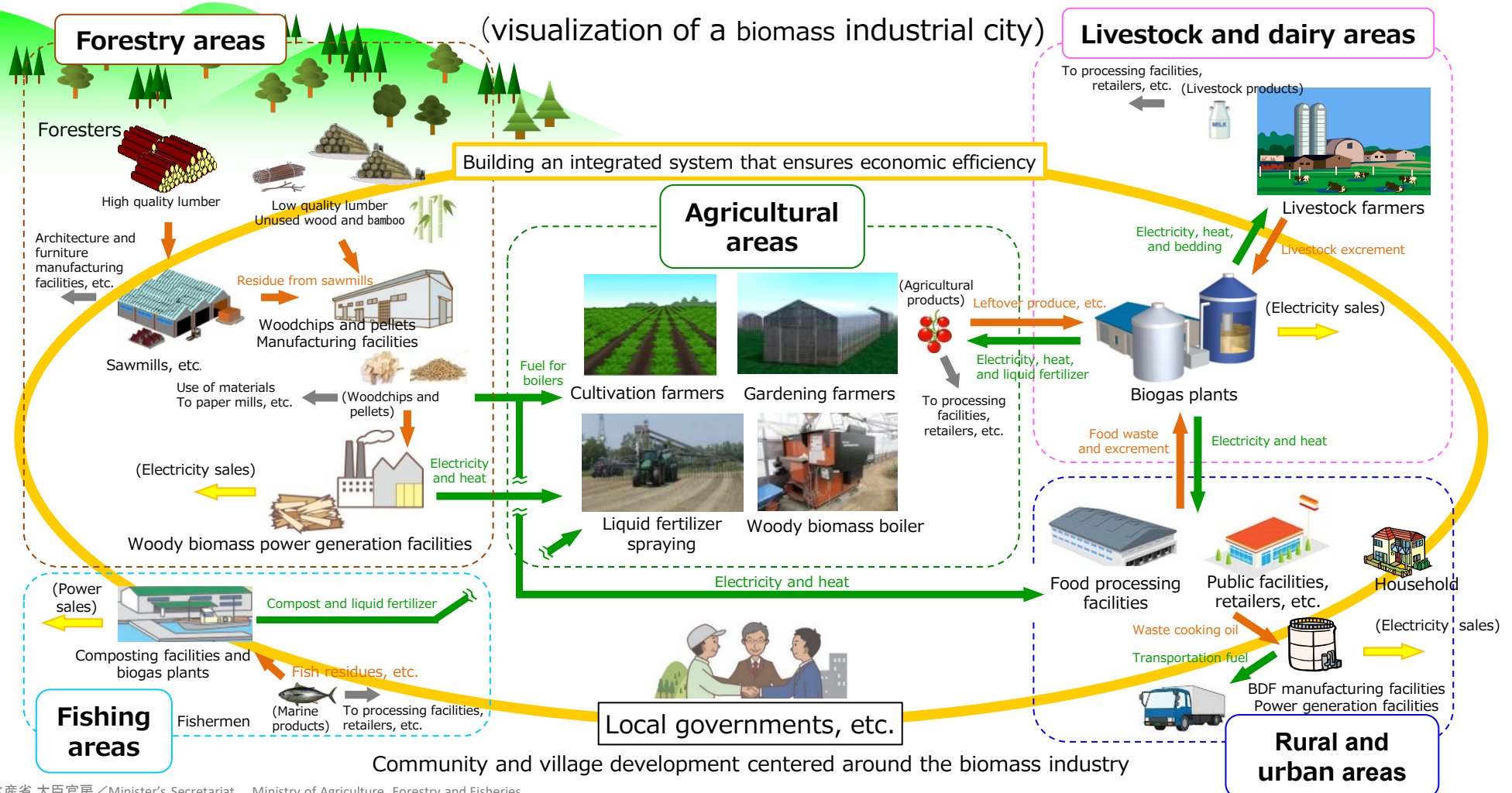
February 2022

**Environment and Biomass Policy Division,
Minister's Secretariat
Ministry of Agriculture, Forestry and Fisheries**

1. About Biomass Industrial Cities

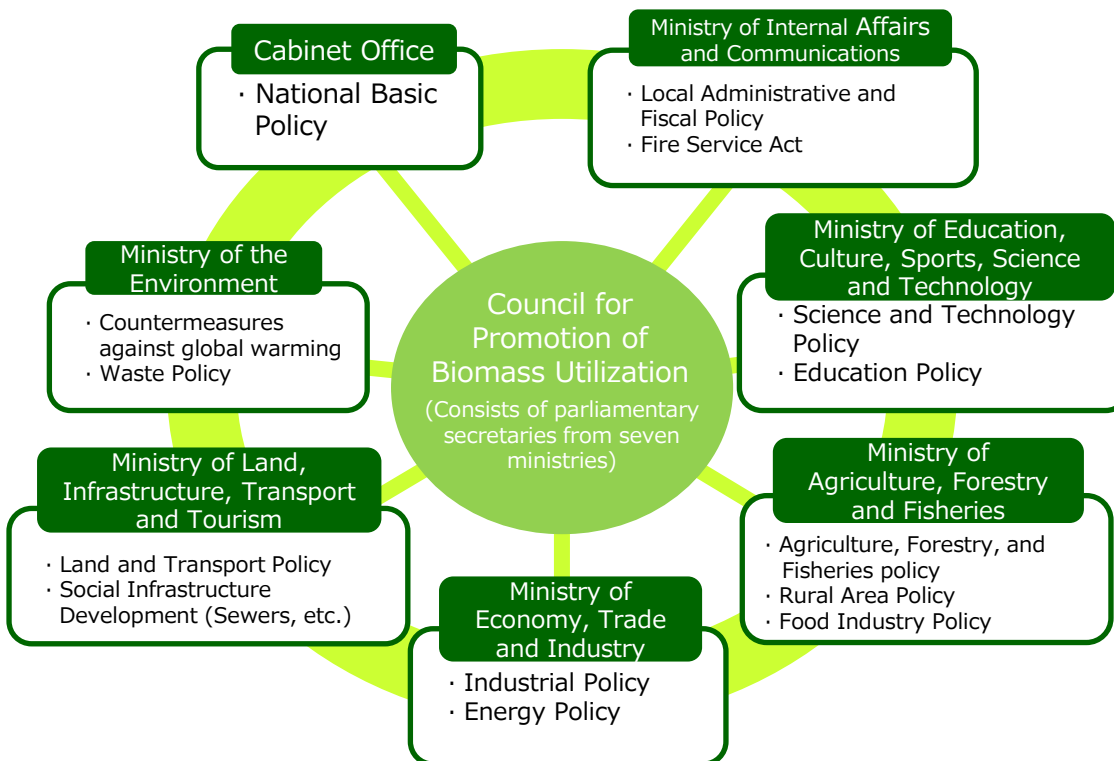
- A biomass industrial city is an area that aims to build an integrated system with ensured economic efficiency and environment-friendly and create disaster-resistant towns and villages centered around the biomass industry that make use of local characteristics. They are selected jointly by seven related ministries.

* Seven related ministries: The Cabinet Office, the Ministry of Internal Affairs and Communications, the Ministry of Education, Culture, Sports, Science and Technology, the Ministry of Agriculture, Forestry and Fisheries, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism, and Ministry of the Environment



1. About Biomass Industrial Cities

- In accordance with the Basic Act on Promotion of Biomass Utilization (Act No. 52 of June 12, 2009), the Council for Promotion of Biomass Utilization parliamentary secretaries from seven relevant ministries (Cabinet Office; Ministry of Internal Affairs and Communications; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Agriculture, Forestry and Fisheries; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism; and Ministry of the Environment) to promote measures that contribute to the utilization of biomass.
- In order to achieve the goals of the Biomass Utilization Promotion Plan, the Biomass Commercialization Strategy was formulated in September 2012 as a guideline for promoting commercialization by selecting and concentrating technologies and biomass (decided by the Council for Promotion of Biomass Utilization).
- The comprehensive support strategy for the biomass commercialization strategy stipulates the construction of biomass industrial cities to create a green industry utilizing local biomass and construct regional recycling energy systems.



Members of the Council for Promotion of Biomass Utilization

State Minister of Agriculture, Forestry and Fisheries

Parliamentary Vice-Minister of Cabinet Office

Parliamentary Vice-Minister of Internal Affairs and Communications

Parliamentary Vice-Minister of Education, Culture, Sports, Science and Technology

Parliamentary Vice-Minister of Economy, Trade and Industry

Parliamentary Vice Minister of Land, Infrastructure, Transport and Tourism

Parliamentary Vice-Minister for the Environment

2. Steps for selecting Biomass Industrial Cities

Call for Biomass Industry Development Project City Concept

- Creators: Municipalities (single, multiple, or consortium with companies, etc.)
- Concept: Future vision and goals to pursue; commercialization projects; ripple effects on areas; implementation structure, etc.



Proposals are submitted

Screening, hearings, and decisions on recommendations by the Biomass Industrial City Selection Committee

- Members: Experts in biomass, environment, energy, investment, and finance
- Evaluation perspectives: (1) Leadership, (2) Feasibility, (3) Ripple effects on the area, (4) Implementation structure



Selection of biomass industrial cities by seven ministries



Implementation and materialization of the Biomass Industry Development Project

- Cooperative support by related ministries (commercialization projects)
 - * In order to utilize the relevant ministries' measures, a separate screening and adoption process by them is required.

3. Biomass Industrial Cities In Japan (97 Municipalities)

Number of areas selected by fiscal year (*number of municipalities)

2013		2014	2015	2016	2017	2018	2019	2020	2021
Primary	Secondary								
26	8	6	11	6	11	5	7	4	3

<> indicate fiscal year of selection ((1): Primary selection, (2): Secondary selection)

Areas in [blue text](#) were selected in FY2021

Hokkaido Block (37 municipalities)

Hokkaido Prefecture:

Tokachi area (19 municipalities), Shimokawa Town, Betsukai Town <2013 (1)>, Kushiro City, Okoppe Town <2013 (2)>, Biratori Town <2015>, Shiriuchi Town, Otoineppu Village, Nishiokoppe Village, Shibecha Town <2016>, Takinoue Town, Nakashibetsu Town, Tsurui Village <2017>, Wakkanai City, Hamatombetsu Town, Horonobe Town <2018>, Yakumo Town <2019>, Yubetsu Town <2020>, [Omu Town \(2021\)](#)

Hokuriku Block (4 cities)

Niigata Prefecture: Niigata City <2013 (1)>, Tokamachi City <2016>
Toyama Prefecture: Imizu City <2014>, Nanto City <2016>

Kinki Block (5 cities and towns)

Kyoto Prefecture: Nantan City <2015>, Kyotamba Town <2016>, Kyoto City <2017>
Hyogo Prefecture: Sumoto City <2014>, Yabu City <2018>

Chugoku/Shikoku Block (10 municipalities)

Tottori Prefecture: Hokuei Town <2018>
Shimane Prefecture: Okuizumo Town <2013 (2)>, Okinoshima Town <2014>, Inan Town <2015>
Okayama Prefecture: Maniwa City, Nishiawakura Village <2013 (2)>, Tsuyama City <2015>
Hiroshima Prefecture: Higashihiroshima City <2017>
Yamaguchi Prefecture: Ube City <2017>
Kagawa Prefecture: Mitoyo City <2013 (1)>

Tohoku Block (12 municipalities)

Aomori Prefecture: Hirakawa City <2016>, Nishimeya Village <2017>
Iwate Prefecture: Ichinoseki City <2016>, Karumai Town <2019>
Miyagi Prefecture: Higashimatsushima City <2013 (1)>, Minamisanriku Town <2013 (2)>, Osaki City <2015>, Kami Town <2016>, Shikama Town <2017>
Akita Prefecture: Ogata Village <2020>
Yamagata Prefecture: Mogami Town <2015>, Iide Town <2017>

Kanto Block (10 municipalities)

Ibaraki Prefecture: Ushiku City <2013 (1)>
Tochigi Prefecture: Moteji Town <2015>, Otawara City <2017>, Sakura City <2019>
Gunma Prefecture: Ueno Village <2017>
Yamanashi Prefecture: Kai City <2015>
Nagano Prefecture: Nakano City <2019>, [Nagano City <2021>](#)
Shizuoka Prefecture: Hamamatsu City <2013 (2)>, Kakegawa City <2016>

Tokai Block (5 cities and towns)

Aichi Prefecture: Obu City <2013 (1)>, Handa City <2016>
Mie Prefecture: Tsu City <2013 (2)>, Taki Town, Minamiise Town <2020>

Kyushu Block (14 cities and towns)

Fukuoka Prefecture: Miyama City <2014>, Munakata City <2015>, Itoshima City <2016>, Asakura City <2019>
Saga Prefecture: Saga City <2014>, Genkai Town <2019>
Oita Prefecture: Saiki City <2014>, Usuki City <2015>, Kunisaki City <2016>, Taketa City <2019>
Miyazaki Prefecture: Kobayashi City <2015>, [Kawaminami Town <2021>](#)
Kagoshima Prefecture: Satsumasendai City, Nagashima Town <2016>

4. Commercialization projects in selected Biomass Industrial Cities

Applications/ Raw materials		Woody biomass (including agricultural residue, etc.)	Livestock excrement	Food waste	Sewage sludge
Power generation	FIT scheme	Shimokawa Town, Takinoue Town, Nakashibetsu Town, Tsurui Village, Ichinoseki City, Higashimatsushima City, Mogami Town, Otawara City, Ueno Village, Kai City, Hamamatsu City, Kakegawa City, <u>Nagano City</u> , Imizu City, <u>Tsu City</u> , <u>Taki Town</u> , <u>Kyoto City</u> , <u>Tsuyama City</u> , <u>Maniwa City</u> , <u>Saiki City</u> , <u>Usuki City</u>	Tokachi area, Otoineppu Village, Shimokawa Town, Okoppe Town, Nishiokoppe Village, Betsukai Town, Shibecha Town, Nakashibetsu Town, Tsurui Village, Wakkanai City, Hamatombetsu Town, Horonobe Town, Yakumo Town, Yubetsu Town, <u>Oumu Town</u> , Hiramawa City, Ichinoseki City, Shikama Town, Iide Town, Karumai Town, Otawara City, Tokamachi City, <u>Handa City</u> , <u>Nantan City</u> , <u>Kyotamba Town</u> , <u>Yabu City</u> , <u>Itoshima City</u> , <u>Kunisaki City</u> , <u>Nagashima Town</u> , <u>Genkai Town</u>	Otoineppu Village, Nishiokoppe Village, Shibecha Town, Nakashibetsu Town, Tsurui Village, Wakkanai City, Hamatombetsu Town, Hiramawa City, Higashimatsushima City, Shikama Town, Iide Town, Otawara City, Hamamatsu City, <u>Nagano City</u> , Tokamachi City, <u>Handa City</u> , <u>Obu City</u> , <u>Taki Town</u> , <u>Nantan City</u> , <u>Kyoto City</u> , <u>Sumoto City</u> , <u>Yabu City</u> , <u>Ube City</u> , <u>Itoshima City</u> , <u>Saiki City</u> , <u>Usuki City</u> , <u>Kunisaki City</u> , <u>Nagashima Town</u> , <u>Asakura City</u>	Otoineppu Village, Okoppe Town, Hiramawa City, Shikama Town, Iide Town, Hamamatsu City, Tokamachi City, <u>Nantan City</u> , <u>Sumoto City</u> , <u>Saiki City</u> , <u>Kunisaki City</u> , <u>Genkai Town</u>
	Others (including those not decided)	Tokachi area, Kushiro City, Okoppe Town, Tokamachi City, <u>Yabu City</u> , <u>Okinoshima Town</u> , <u>Kobayashi City</u>	Kushiro City, <u>Osaki City</u> , <u>Kami Town</u> , <u>Mogami Town</u> , <u>Hokuei Town</u> , <u>Munakata City</u> , <u>Kobayashi City</u> , <u>Nagashima Town</u> , <u>Kawaminami Town</u>	Okoppe Town, Takinoue Town, <u>Osaki City</u> , <u>Kami Town</u> , <u>Minamisanriku Town</u> , <u>Mogami Town</u> , <u>Ogata Village</u> , <u>Niigata City</u> , <u>Nanto City</u> , <u>Tsu City</u> , <u>Minamiise Town</u> , <u>Munakata City</u> , <u>Miyama City</u> , <u>Saga City</u> , <u>Kobayashi City</u>	<u>Kami Town</u> , <u>Minamisanriku Town</u> , <u>Mogami Town</u> , <u>Niigata City</u> , <u>Minamiise Town</u> , <u>Yabu City</u> , <u>Hokuei Town</u> , <u>Munakata City</u> , <u>Miyama City</u>
Heat utilization		Tokachi area, Kushiro City, Shiruichi Town, Shimokawa Town, Biratori Town, Nishiokoppe Village, Shibecha Town, Takinoue Town, Nakashibetsu Town, Tsurui Village, Hiramawa City, Nishimeya Village, Ichinoseki City, Higashimatsushima City, <u>Osaki City</u> , <u>Kami Town</u> , <u>Minamisanriku Town</u> , <u>Mogami Town</u> , <u>Iide Town</u> , <u>Ogata Village</u> , <u>Ushiku City</u> , <u>Ueno Village</u> , <u>Motegi Town</u> , <u>Otawara City</u> , <u>Kai City</u> , <u>Hamamatsu City</u> , <u>Kakegawa City</u> , <u>Nakano City</u> , <u>Nagano City</u> , <u>Niigata City</u> , <u>Tokamachi City</u> , <u>Nanto City</u> , <u>Tsu City</u> , <u>Taki Town</u> , <u>Nantan City</u> , <u>Kyotamba Town</u> , <u>Kyoto City</u> , <u>Sumoto City</u> , <u>Yabu City</u> , <u>Hokuei Town</u> , <u>Okuizumo Town</u> , <u>Iinan Town</u> , <u>Okinoshima Town</u> , <u>Tsuyama City</u> , <u>Nishiawakura Village</u> , <u>Higashihiroshima City</u> , <u>Mitoyo City</u> , <u>Miyama City</u> , <u>Itoshima City</u> , <u>Saga City</u> , <u>Saiki City</u> , <u>Usuki City</u> , <u>Kunisaki City</u> , <u>Kobayashi City</u> , <u>Asakura City</u> , <u>Kawaminami Town</u>	Tokachi area, Kushiro City, Shimokawa Town, Otoineppu Village, Nishiokoppe Village, Shibecha Town, Okoppe Town, Betsukai Town, Nakashibetsu Town, Tsurui Village, Wakkanai City, Hamatombetsu Town, Hiramawa City, Ichinoseki City, <u>Kami Town</u> , <u>Shikama Town</u> , <u>Iide Town</u> , <u>Karumai Town</u> , <u>Ohtawara City</u> , <u>Tokamachi City</u> , <u>Handa City</u> , <u>Kyotamba Town</u> , <u>Kunisaki City</u> , <u>Nagashima Town</u>	Otoineppu Village, Okoppe Town, Nishiokoppe Village, Shibecha Town, Takinoue Town, Nakashibetsu Town, Tsurui Village, Wakkanai City, Hamatombetsu Town, Hiramawa City, Higashimatsushima City, <u>Kami Town</u> , <u>Iide Town</u> , <u>Minamisanriku Town</u> , <u>Shikama Town</u> , <u>Mogami Town</u> , <u>Otawara City</u> , <u>Nagano City</u> , <u>Niigata City</u> , <u>Tokamachi City</u> , <u>Nanto City</u> , <u>Handa City</u> , <u>Tsu City</u> , <u>Taki Town</u> , <u>Minamiise Town</u> , <u>Okinoshima Town</u> , <u>Ube City</u> , <u>Usuki City</u> , <u>Kunisaki City</u>	Otoineppu Village, Hiramawa City, <u>Kami Town</u> , <u>Shikama Town</u> , <u>Mogami Town</u> , <u>Iide Town</u> , <u>Niigata City</u> , <u>Tokamachi City</u> , <u>Minamiise Town</u> , <u>Kunisaki City</u>
Fertilizer, feed, etc.		<u>Ogata Village</u> , <u>Motegi Town</u> , <u>Imizu City</u> , <u>Kyoto City</u> , <u>Sumoto City</u> , <u>Iinan Town</u> , <u>Tsuyama City</u> , <u>Higashihiroshima City</u> , <u>Mitoyo City</u> , <u>Munakata City</u>	Tokachi area, Kushiro City, Otoineppu Village, Shimokawa Town, Okoppe Town, Nishiokoppe Village, Shibecha Town, Betsukai Town, Nakashibetsu Town, Tsurui Village, Yakumo Town, Yubetsu Town, <u>Oumu Town</u> , Hiramawa City, Ichinoseki City, <u>Kami Town</u> , <u>Osaki City</u> , <u>Shikama Town</u> , <u>Mogami Town</u> , <u>Hiramawa City</u> , <u>Motegi Town</u> , <u>Otawara City</u> , <u>Kai City</u> , <u>Kakegawa City</u> , <u>Tokamachi City</u> , <u>Handa City</u> , <u>Nantan City</u> , <u>Kyotamba Town</u> , <u>Iinan Town</u> , <u>Itoshima City</u> , <u>Munakata City</u> , <u>Saga City</u> , <u>Kobayashi City</u> , <u>Nagashima Town</u> , <u>Kawaminami Town</u>	Okoppe Town, Otoineppu Village, Nishiokoppe Village, Shibecha Town, Hiramawa City, Higashimatsushima City, <u>Osaki City</u> , <u>Kami Town</u> , <u>Minamisanriku Town</u> , <u>Shikama Town</u> , <u>Mogami Town</u> , <u>Motegi Town</u> , <u>Kai City</u> , <u>Hamamatsu City</u> , <u>Niigata City</u> , <u>Tokamachi City</u> , <u>Nanto City</u> , <u>Handa City</u> , <u>Obu City</u> , <u>Nantan City</u> , <u>Taki Town</u> , <u>Mitoyo City</u> , <u>Okinoshima Town</u> , <u>Higashihiroshima City</u> , <u>Ube City</u> , <u>Munakata City</u> , <u>Miyama City</u> , <u>Itoshima City</u> , <u>Saga City</u> , <u>Usuki City</u> , <u>Kunisaki City</u> , <u>Kobayashi City</u> , <u>Nagashima Town</u>	Otoineppu Village, Hiramawa City, <u>Minamisanriku Town</u> , <u>Kami Town</u> , <u>Shikama Town</u> , <u>Mogami Town</u> , <u>Tokamachi City</u> , <u>Nantan City</u> , <u>Kyoto City</u> , <u>Munakata City</u> , <u>Miyama City</u> , <u>Kunisaki City</u>
Fuel		Shimokawa Town, Nishiokoppe Village, Shibecha Town, Takinoue Town, Nakashibetsu Town, Tsurui Village, Horonobe Town, Biratori Town, Nishimeya Village, Ichinoseki City, <u>Osaki City</u> , <u>Kami Town</u> , <u>Minamisanriku Town</u> , <u>Iide Town</u> , <u>Ogata Village</u> , <u>Otawara City</u> , <u>Ueno Village</u> , <u>Ushiku City</u> , <u>Kakegawa City</u> , <u>Niigata City</u> , <u>Tokamachi City</u> , <u>Tsu City</u> , <u>Kyotamba Town</u> , <u>Kyoto City</u> , <u>Hokuei Town</u> , <u>Okinoshima Town</u> , <u>Higashihiroshima City</u> , <u>Itoshima City</u> , <u>Saga City</u> , <u>Usuki City</u> , <u>Kunisaki City</u> , <u>Kobayashi City</u> , <u>Taketa City</u>	<u>Karumai Town</u> , <u>Nantan City</u>	Tokachi area, Shimokawa Town, Hiramawa City, <u>Osaki City</u> , <u>Karumai Town</u> , <u>Ushiku City</u> , <u>Motegi Town</u> , <u>Kai City</u> , <u>Niigata City</u> , <u>Imizu City</u> , <u>Tokamachi City</u> , <u>Obu City</u> , <u>Minamiise Town</u> , <u>Nantan City</u> , <u>Kyoto City</u> , <u>Sumoto City</u> , <u>Iinan Town</u> , <u>Maniwa City</u> , <u>Mitoyo City</u> , <u>Munakata City</u> , <u>Miyama City</u> , <u>Usuki City</u> , <u>Kobayashi City</u>	Wakkanai City, <u>Tsu City</u> , <u>Nantan City</u> , <u>Kyoto City</u>
Others (Material utilization, etc.)		<u>Motegi Town</u> , <u>Otawara City</u> , <u>Kyoto City</u> , <u>Sumoto City</u> , <u>Okinoshima Town</u> , <u>Tsuyama City</u> , <u>Maniwa City</u> , <u>Mitoyo City</u> , <u>Itoshima City</u> , <u>Satsumasendai City</u>		<u>Handa City</u>	<u>Hamamatsu City</u> , <u>Niigata City</u>

* The colors of the area and municipality names are the same as the colors of the regional blocks on the previous page, and underlines indicate municipalities that were selected in FY2021

5. Main activities in selected regions

[FY2013 primary selection]

Area Name	Main activities
Tokachi area of Hokkaido Prefecture	Biogas power generation and heat utilization (livestock excrement, etc.), woody biomass power generation and heat utilization (pruned branches, etc.), BDF (waste cooking oil)
Shimokawa Town, Hokkaido Prefecture	Woody biomass power generation, heat utilization (forest residue, etc.), pellet fuel, BDF※ (willow and pampas grass)
Betsukai Town, Hokkaido Prefecture	Biogas power generation and heat utilization (livestock excrement, fishery waste, etc.)
Higashimatsushima City, Miyagi Prefecture	Biogas power generation and heat utilization (food waste, etc.), woody biomass power generation (wood thinned from forests, etc.)
Ushiku City, Ibaraki Prefecture	BDF (waste cooking oil), compost (food waste), pellet fuel (pruned branches, etc.)
Niigata City, Niigata Prefecture	Biogas power generation and heat utilization (sewage sludge, food waste, etc.), pellet fuel (wood thinned from forests, etc.), BDF (waste cooking oil)
Obu City, Aichi Prefecture	Biogas power generation and heat utilization (food waste, human excrement, etc.)
Mitoyo City, Kagawa Prefecture	Compost fueling (food waste, etc.), materials (bamboo)

※BDF: Bio Diesel Fuel

[FY2013 Secondary Selection]

Area Name	Main activities
Kushiro City, Hokkaido Prefecture	Biogas power generation and heat utilization (livestock excrement, food and fishery waste), Woody biomass power generation, pellet fuel (forest residue remaining wood, etc.), BDF (waste cooking oil)
Okoppe Town, Hokkaido Prefecture	Biogas power generation (livestock excrement, food and fishery waste), woody biomass power generation (forest residue)
Minamisanriku Town, Miyagi Prefecture	Biogas power generation and heat utilization (food waste, sewage sludge), pellet fuel (forest residue, etc.)
Hamamatsu City, Shizuoka Prefecture	Woody biomass power generation and heat utilization (wood thinned from thinning, etc.), biogas power generation (food waste, sewage sludge)
Tsu City, Mie Prefecture	Woody biomass power generation and heat utilization (forest residue, etc.), Biogas power generation, heat utilization, fuel conversion (organic sludge and food waste), fuel conversion (wood thinned from forests, sewage sludge, etc.)
Okuizumo Town, Shimane Prefecture	Pellet fuel, charcoal (forest residue, etc.)
Maniwa City, Okayama Prefecture	Woody biomass power generation (forest residue, etc.), BDF (waste cooking oil), composting (food waste, etc.)
Nishiawakura Village, Okayama Prefecture	Heat utilization of woody biomass (forest residue, etc.)

5. Major activities at selected regions

[FY2014 Selections]

Area Name	Main activities
Imizu City, Toyama Prefecture	Composting (bark, pruning branches, etc.), mixing fuel (waste cooking oil), heat utilization, fertilizer, and materials (rice husk), Woody biomass power generation (wood from thinning, etc.)
Sumoto City, Hyogo Prefecture	BDF (waste cooking oil), biogas power generation (sewage sludge, food waste, waste onions, etc.), fuel and materials (bamboo), Fuel and power generation (BTL) (combustible waste, wood and agricultural residues), materials (microalgae)
Okinoshima Town, Shimane Prefecture	Materials (wood thinned, etc.), pellet fuel (wood thinned, etc.), wood biomass power generation (wood thinned, etc.) Biogas heat utilization (food waste, thinned wood, etc.)
Miyama City, Fukuoka Prefecture	Biogas power generation and heat utilization (food waste, human waste sludge, etc.), recycling (disposable diapers), BDF (waste cooking oil), Composting (waste seaweed), heat utilization of wood biomass (pruned branches, etc.)
Saga City, Saga Prefecture	Agricultural use of carbon dioxide (recovery of exhaust gas from food waste, waste, etc.), conversion of chips and pellets to fuel, heat utilization (forest residue, etc.), biogas power generation (food waste, Sewage sludge, etc.), materialization (microalgae)
Saiki City, Oita Prefecture	Woody biomass power generation and heat utilization (forest residue, etc.), biogas power generation (sewage sludge, food waste, etc.)

5. Major activities at selected regions

[FY2015 Selections]

Area Name	Main activities
Biratori Town, Hokkaido Prefecture	Heat Utilization (thinned wood, etc.)
Osaki City, Miyagi Prefecture	Heat utilization (thinned wood), biogas power generation (livestock excrement, etc.), BDF (waste cooking oil), pellet fuel (reed)
Mogami Town, Yamagata Prefecture	Woody biomass power generation and heat utilization (wood thinned from thinning), biogas power generation (livestock excrement, food waste, etc.), solid fuel (rice husk)
Motegi Town, Tochigi Prefecture	Pellets (wood thinned, compost), Heat utilization (wood pellets) and materials, BDF (waste cooking oil)
Kai City, Yamanashi Prefecture	Wood biomass power generation and heat utilization (wood thinned from thinning), liquefaction, composting (food waste)
Kyotango City, Kyoto Prefecture	Biogas power generation (food waste), fuel and compost (sewage sludge), materials (thinned wood, bamboo)
Nantan City, Kyoto Prefecture	Heat utilization (thinning wood, pruning branches), BDF (waste cooking oil), biogas power generation and heat utilization (food waste, sewage sludge, livestock excrement), Feed (microalgae)
Iinan Town, Shimane Prefecture	Composting (livestock excrement, thinned wood), heat utilization (thinned wood, bamboo), biogas power generation and heat utilization (kitchen garbage, sewage sludge)
Tsuyama City, Okayama Prefecture	Woody biomass power generation (wood chips), powderization, material conversion (sawmill residue, thinned wood)
Munakata City, Fukuoka Prefecture	Biogas power generation (sewage sludge, food waste), composting (digestion sludge, food waste, pruning branches), BDF(waste cooking oil)
Usuki City, Oita Prefecture	Woody biomass power generation and heat utilization (wood thinned from thinning), biogas power generation (food waste)
Kobayashi City, Miyazaki Prefecture	Biogas power generation (livestock excrement, food waste), carbonization (compost), wood biomass power generation and heat utilization (wood thinned, wood residue)

5. Major activities in selected areas

[FY2016 Selections]

Area Name	Main activities
Shiruiuchi Town, Hokkaido Prefecture	Heat utilization of woody biomass (unused wood, forest residue, etc.), food (lower part of Chinese chive)
Otoineppu Village, Hokkaido Prefecture	Biogas power generation and heat utilization (buckwheat stems and leaves, idle weeds, kitchen waste, etc.), composting (livestock excrement), feed and bedding (pasture, riverbed weeds)
Nishi-Okoppe Village, Hokkaido Prefecture	Biogas power generation and heat utilization (livestock excrement, food waste, etc.), wood chip production, woody biomass heat utilization (thinned wood)
Shibecha Town, Hokkaido Prefecture	Biogas power generation and heat utilization (livestock excrement, etc.), wood biomass heat utilization (forest residue, etc.)
Hirakawa City, Aomori Prefecture	Biogas power generation (food waste, village wastewater sludge, etc.), waste heat utilization of biogas and woody biomass power generation facilities (greenhouse, land-based aquaculture facilities), BDF production (waste cooking oil)
Ichinoseki City, Iwate Prefecture	Biogas power generation (livestock excrement), woody biomass power generation and heat utilization (forest residue and thinned wood), woody biomass heat utilization (wood chips), wood chip production (private forests)
Kami Town, Miyagi Prefecture	Biogas power generation (livestock excrement, kitchen garbage, combined septic tank sludge), wood chips, firewood, and pellets (forest residue, pruned branches, etc.), wood biomass heat utilization (firewood)
Tokamachi City, Niigata Prefecture	Solid fuel and heat utilization (wood from thinning forests, disposable diapers, mushroom waste beds, rice husks, etc.), biogas power generation and heat utilization (kitchen garbage, waste mushroom beds, sewage sludge), BDF production (waste cooking oil)
Nanto City, Toyama Prefecture	Solid fuels (thinned wood, rice husk, etc.), composting (rice husk, industrial food waste), biogas (kitchen waste, bark), Biomass Tour
Kakegawa City, Shizuoka Prefecture	Wood chip production (thinning wood and forest remaining wood), wood biomass power generation and heat utilization (wood chip), composting (chicken manure), recycled pulp production (disposable diapers)
Handa City, Aichi Prefecture	Use of biogas power generation, waste heat, and exhaust gas in plant factories (kitchen garbage food waste, livestock excrement), composting, and reduction of odor through solid-liquid separation (livestock excrement)
Kyotamba Town, Kyoto Prefecture	Thermal use of wood biomass (wood from thinning, forest residue, etc.), biogas power generation and heat utilization (livestock excrement), composting (livestock excrement)
Itoshima City, Fukuoka Prefecture	Biogas power generation (livestock excrement), solid fuels (low-quality lumber, bamboo)
Kunisaki City, Oita Prefecture	Biogas power generation (livestock excrement, human excrement, household kitchen waste, etc.), wood pellets production (wood thinned, bamboo, etc.)
Satsumasendai City, Kagoshima Prefecture	Materials utilization (cellulose Nanofibers, bioplastics, supplements, composting, etc.) (bamboo)
Nagashima Town, Kagoshima Prefecture	Biogas power generation and effective use of liquid fertilizer (livestock excrement, fishery residues, agricultural residues, shochu residues, kitchen garbage)

5. Major activities at selected regions

[FY2017 Selections]

Area Name	Main activities
Takinoue Town, Hokkaido Prefecture	Direct combustion and heat utilization (wood biomass), biogas power generation and heat utilization (wood biomass, food waste)
Nakashibetsu Town, Hokkaido Prefecture	Biogas power generation and heat utilization (livestock excrement and food waste), liquid fertilizer and bedding (livestock excrement), carbonization, power generation and heat utilization (woody biomass), pellet production (mushroom waste bed (sawdust))
Tsurui Village, Hokkaido Prefecture	Biogas power generation and heat utilization (livestock excrement, woody biomass), liquid fertilizer and bedding (livestock manure)
Nishimeya Village, Aomori Prefecture	Wood boiler heat supply system (forest residue, firewood, etc.) for residential complexes, introduction of firewood boilers to public facilities, manufacture of wood biomass fuel (firewood, etc.), hands-on tourism industry, promotion of environmental education business
Shikama Town, Miyagi Prefecture	The first stage of biogas power generation (chicken excrement cattle excrement), industrial and business waste (food residue), the second stage of biogas power generation (kitchen garbage, sewage treatment sludge, etc.) agricultural leftovers), heat supply systems to public facilities in the region, and cooperation between biogas and agriculture (heat utilization at plant factories)
Iide Town, Yamagata Prefecture	Biogas power generation (livestock excrement, etc.), wood biomass fuel production and heat supply system (public facilities, housing)
Otawara City, Tochigi Prefecture	Direct combustion power generation (timber from thinning, forest residue, unused timber, general waste, etc.), heat utilization (timber from thinning, forest residue, unused wood, general waste, etc.), biogas power generation and heat utilization (livestock excrement), composting and liquid manure (livestock excrement), Advanced utilization of local timber (wood thinned from thinning, forest residue, etc.: CLT production, etc.)
Ueno Village, Gunma Prefecture	Wood pellet production (thinned wood), biogas power generation and heat utilization (wood pellets), heat utilization (waste heat at power plants)
Kyoto City, Kyoto Prefecture	Biogas (kitchen garbage, sewage sludge), solid fuels (forest residue, pruned branches, etc.), liquid fuels (kitchen garbage, paper waste), BDF (waste cooking oil)
Higashi-Hiroshima City, Hiroshima Prefecture	Production of wood chips, pellets (forest residue, felled wood), and boiler heat utilization of pellets
Ube City, Yamaguchi Prefecture	Biogas power generation and effective use of liquid fertilizer (food waste, etc.), solid fuel (bamboo), fermentation (ethanol from paper waste), recycled pulp (disposable diapers)

5. Major activities at selected regions

[FY2018 Selections]

Area Name	Main activities
Wakkanai City, Hokkaido Prefecture	Biogas power generation, heat utilization, liquid fertilization, bedding (livestock manure, marine product processing residues), Solid fuel (sewage sludge)
Hamatonbetsu Town, Hokkaido Prefecture	Biogas power generation, heat utilization, liquid fertilization, feedstock conversion (livestock manure, dairy processed sludge, Fish processing residue)
Horonobe Town, Hokkaido Prefecture	Biogas power generation, heat utilization, liquid fertilizer, livestock manure, solid fuel (pruning branches, Disposable diapers)
Yabu City, Hyogo Prefecture	The first stage of biogas power generation (livestock manure, food waste, etc.), the second stage of biogas power generation (general industrial waste, sewage sludge, agricultural residue, etc.), Woody biogas power generation (timber from thinning forests, leftover forests, etc.)
Hokuei Town, Tottori Prefecture	Wood chip manufacturing (branches, pruning branches, forest residue), wood chip boiler heat utilization, wood biomass power generation and heat utilization (branches, Wood scraps), biogas power generation and liquid fertilizer utilization (livestock excretion, sewage sludge)

[FY2019 Selections]

Area Name	Main activities
Yakumo Town, Hokkaido Prefecture	Biogas power generation (livestock manure)
Karumai Town, Iwate Prefecture	Composting of livestock excrement, power generation of chicken manure, heat utilization, conversion of combustible waste into solid fuel, production of biogas (livestock manure, etc.)
Sakura City, Tochigi Prefecture	Cultivation of Erianthus on abandoned farmland, pelleting Erianthus, utilization of rice husks, and biogas power generation
Nakano City, Nagano Prefecture	Biogas power generation (used mushroom medium), wood biomass heat utilization
Asakura City, Fukuoka Prefecture	Biogas power generation (food waste), urban demand generation for woody biomass, composting (cutting grass, etc.)
Genkai Town, Saga Prefecture	Biogas power generation (livestock manure, sewage sludge, human waste and septic tank sludge), and recycling of residue
Taketa City, Oita Prefecture	Use of wood biomass as fuel and use of bamboo

5. Major activities at selected regions

[FY2020 Selections]

Area Name	Main activities
Yubetsu Town, Hokkaido Prefecture	Biogas power generation, liquid fertilizer, bedding (livestock excrement)
Ogata Village, Akita Prefecture	Heat utilization, composting (rice husk), biogas power generation (rice straw, food waste, etc.)
Taki Town, Mie Prefecture	Woody biomass power generation (thinned wood, pruned branches, etc.), cultivation and research of microalgae using waste heat and CO2 Biogas power generation, liquid fertilization (food waste)
Minamiise Town, Mie Prefecture	Biogas power generation, heat utilization (sewage sludge, food waste, resource crops), solid fuels (food waste, plant waste, paper waste, rice husks, pests, resource crops), Cultivation of resource crops on abandoned arable land

Area Name	Main activities
Omu Town, Hokkaido Prefecture	Biogas power generation, liquid fertilizer, bedding (livestock excrement)
Nagano City, Nagano Prefecture	Woody biomass power generation, heat utilization (forest residue, pruned branches, etc.), solid fuel and feed conversion (mushroom waste culture medium, etc.), biogas power generation, heat utilization and liquid fertilization (food waste, etc.)
Kawaminami Town, Miyazaki Prefecture	Thermal use of wood biomass (wood from thinning, forest residue, pruned branches, etc.), biogas power generation, liquid fertilizer (pig manure, Food Waste)