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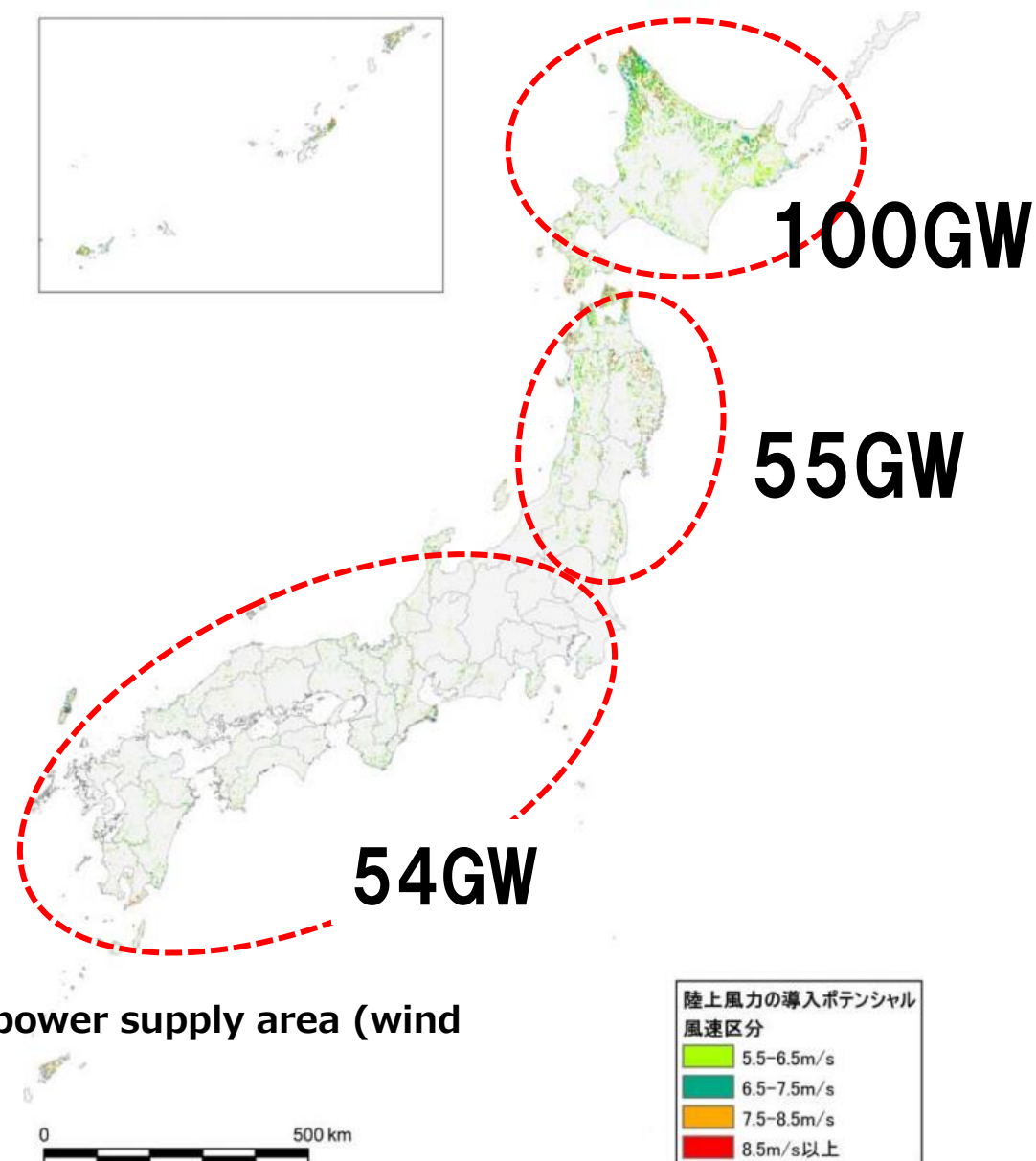


2-B: Expansion of wind power and biomass

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Wind Power Resources in Japan

- The wind installation potential will reach **210 GW** for on-shore and **1170 GW** for off-shore.
- **Two-thirds** of on-shore wind potential exists in Hokkaido-Tohoku area.

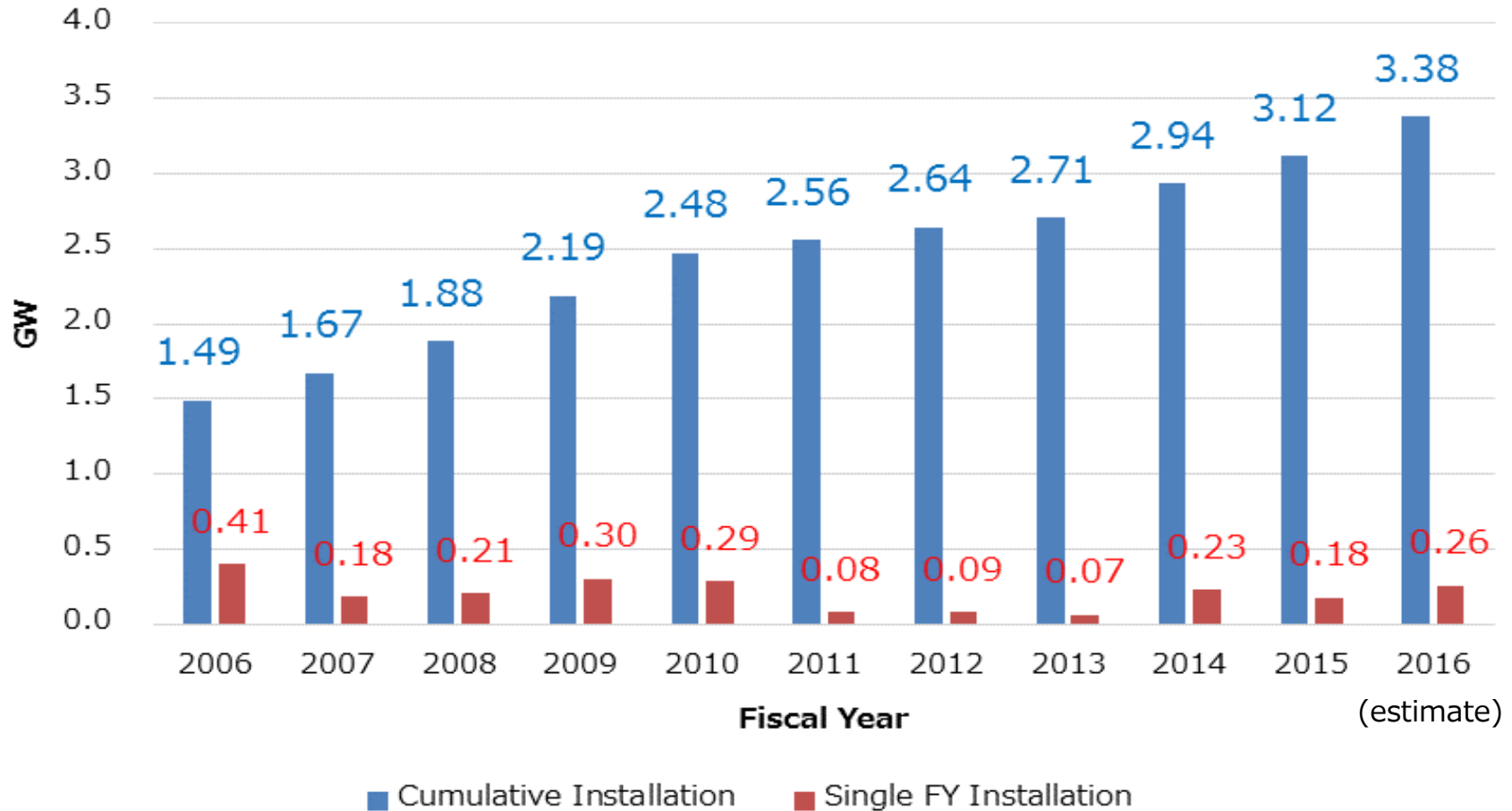


On-shore wind potential by power supply area (wind speed 6.0 m/s ~)

Trends of Wind Installation in Japan

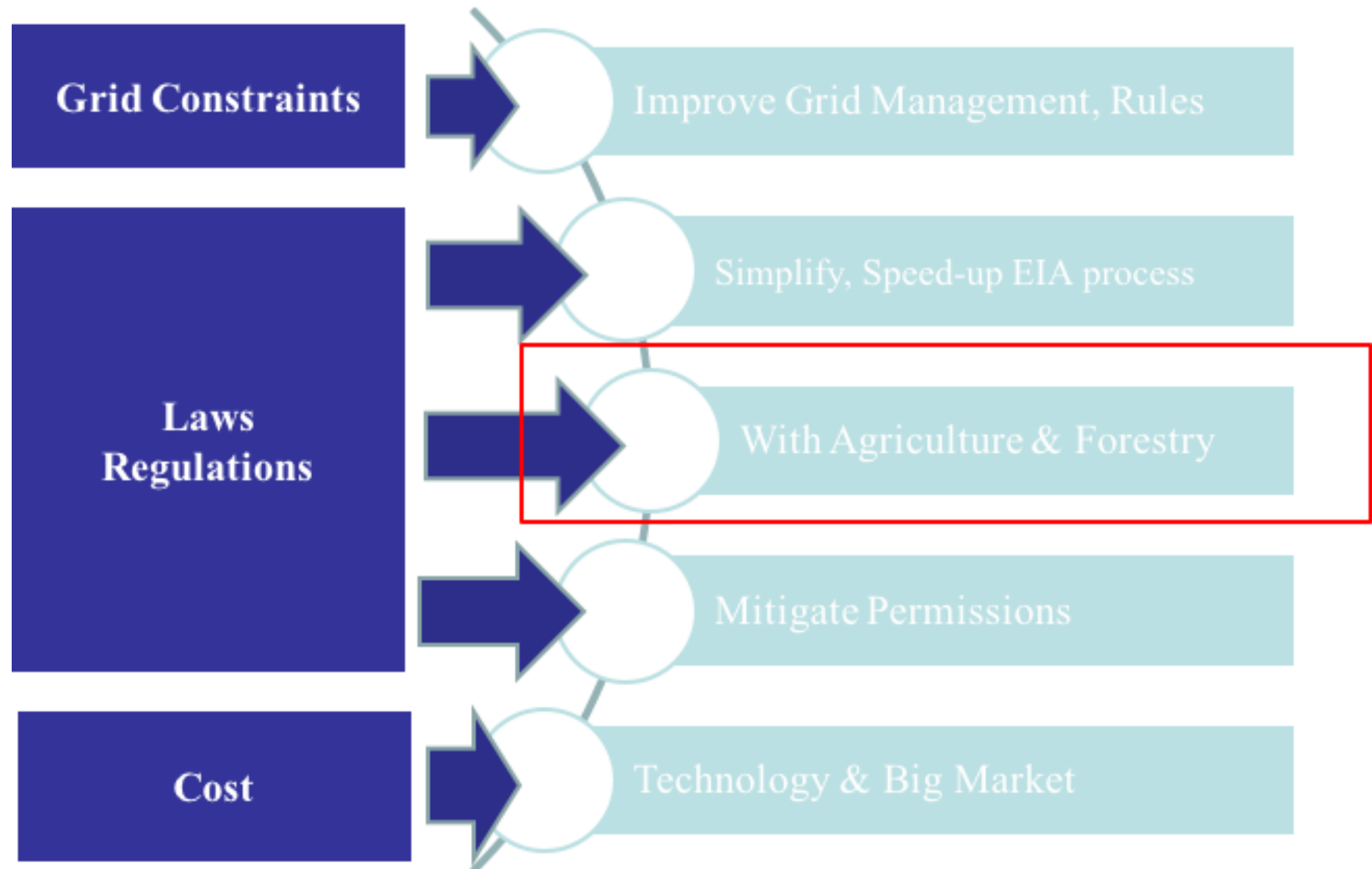


Installation in the past decade = only **1.9 GW**

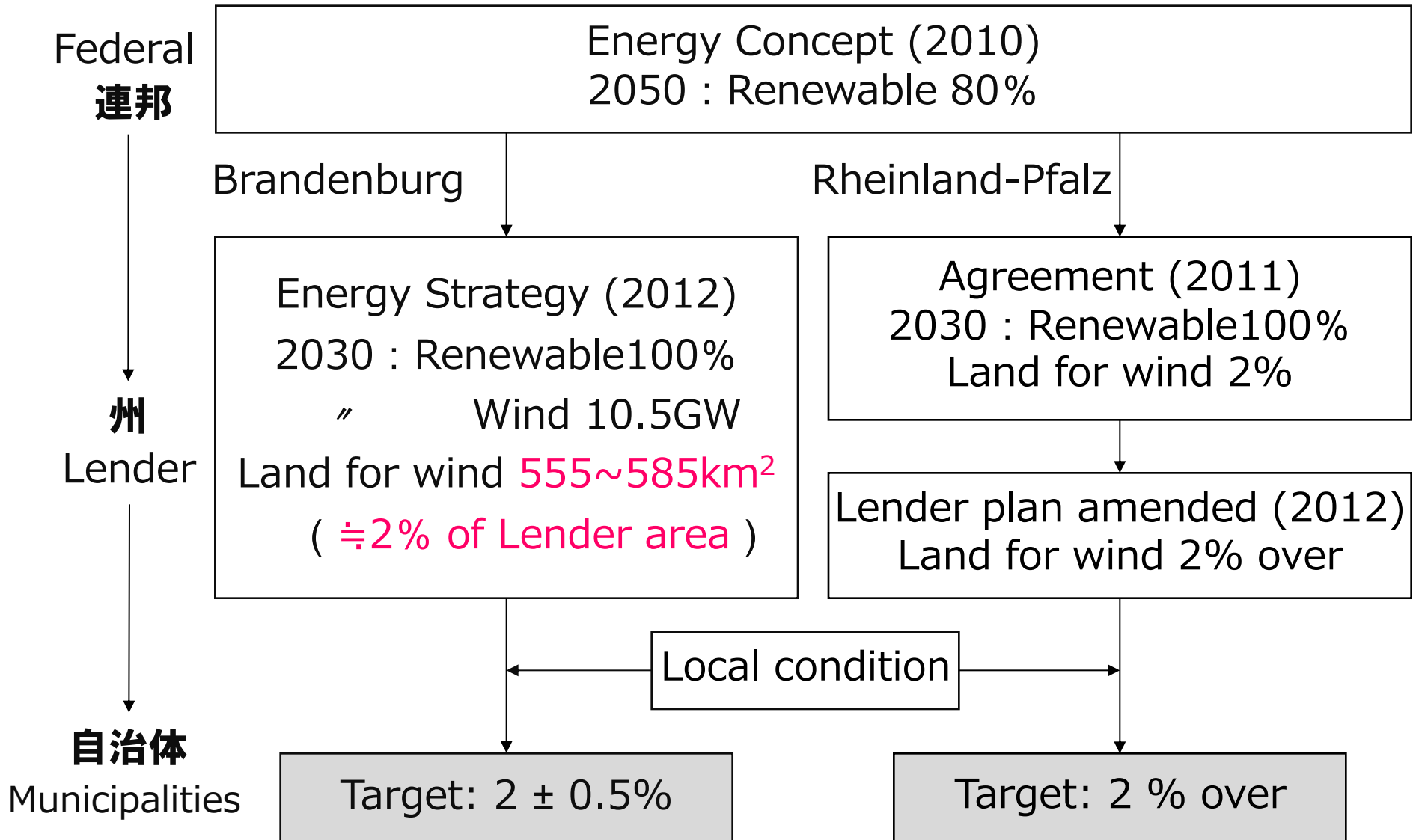


Source : NEDO, JWPA

Towards Accelerating Installation of Wind



Framework of zoning for wind in Germany



Source) Azechi (2015)

Land use

- The Japanese Archipelago is green and mountainous.
- Large forest resources, but relatively small area per capita.
- Agricultural area is limited.



Photo) JAXA

<Forest and agricultural area>

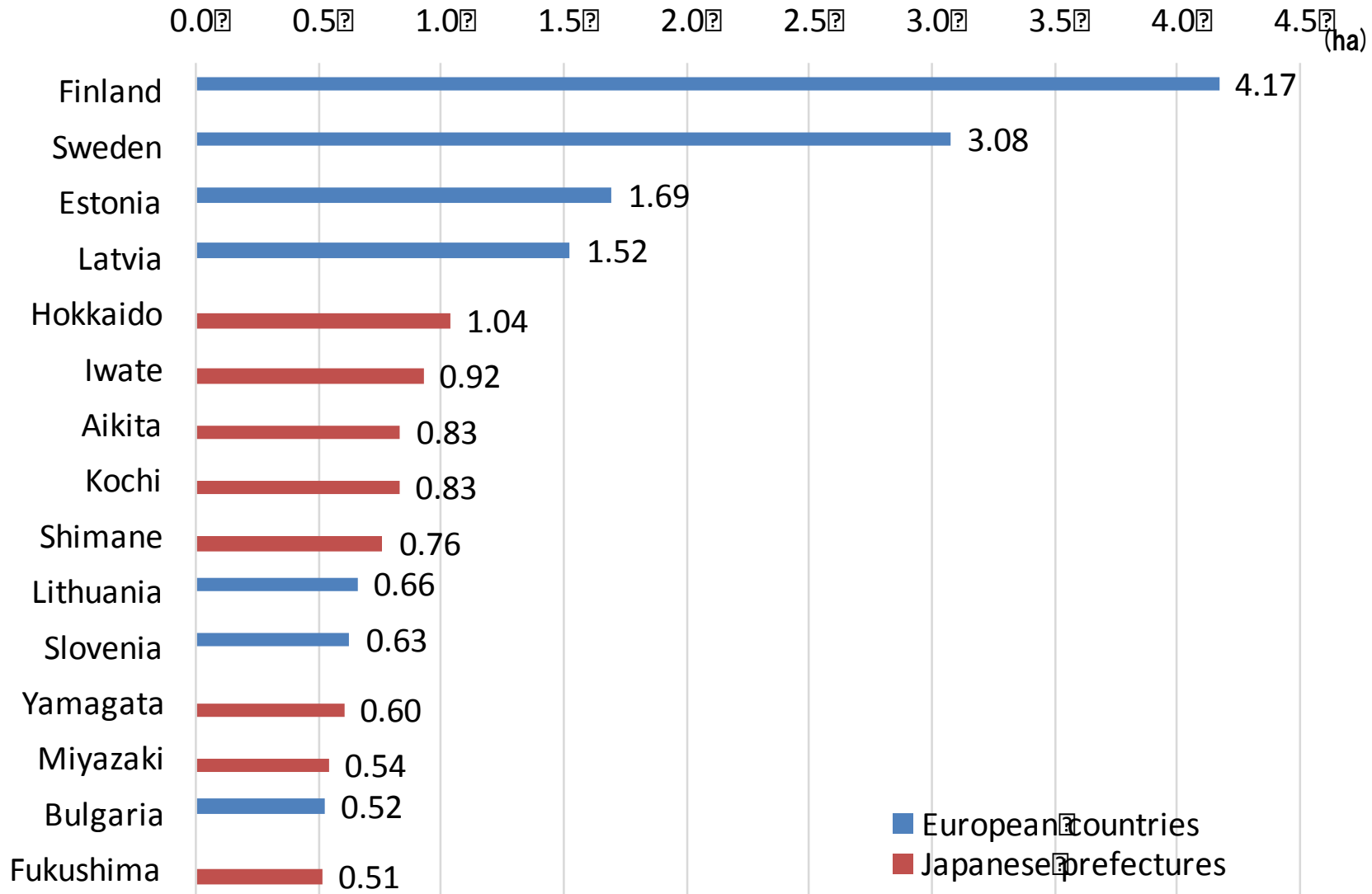
Country	Population (thousands)	Forest area		Agricultural area	
		1,000ha	ha/capita	1,000ha	ha/capita
Germany	82,652	11,415	0.13	11,871	0.14
Austria	8,256	3,863	0.46	1,354	0.16
Sweden	9,631	28,083	3.08	2,696	0.28
Finland	5,443	22,218	4.13	2,249	0.41
Japan	127,083	24,959	0.20	4,237	0.03

Source) FAOstat

There are some forest rich prefectures in Japan!



<Forest are per capita of major European countries and Japanese prefectures>

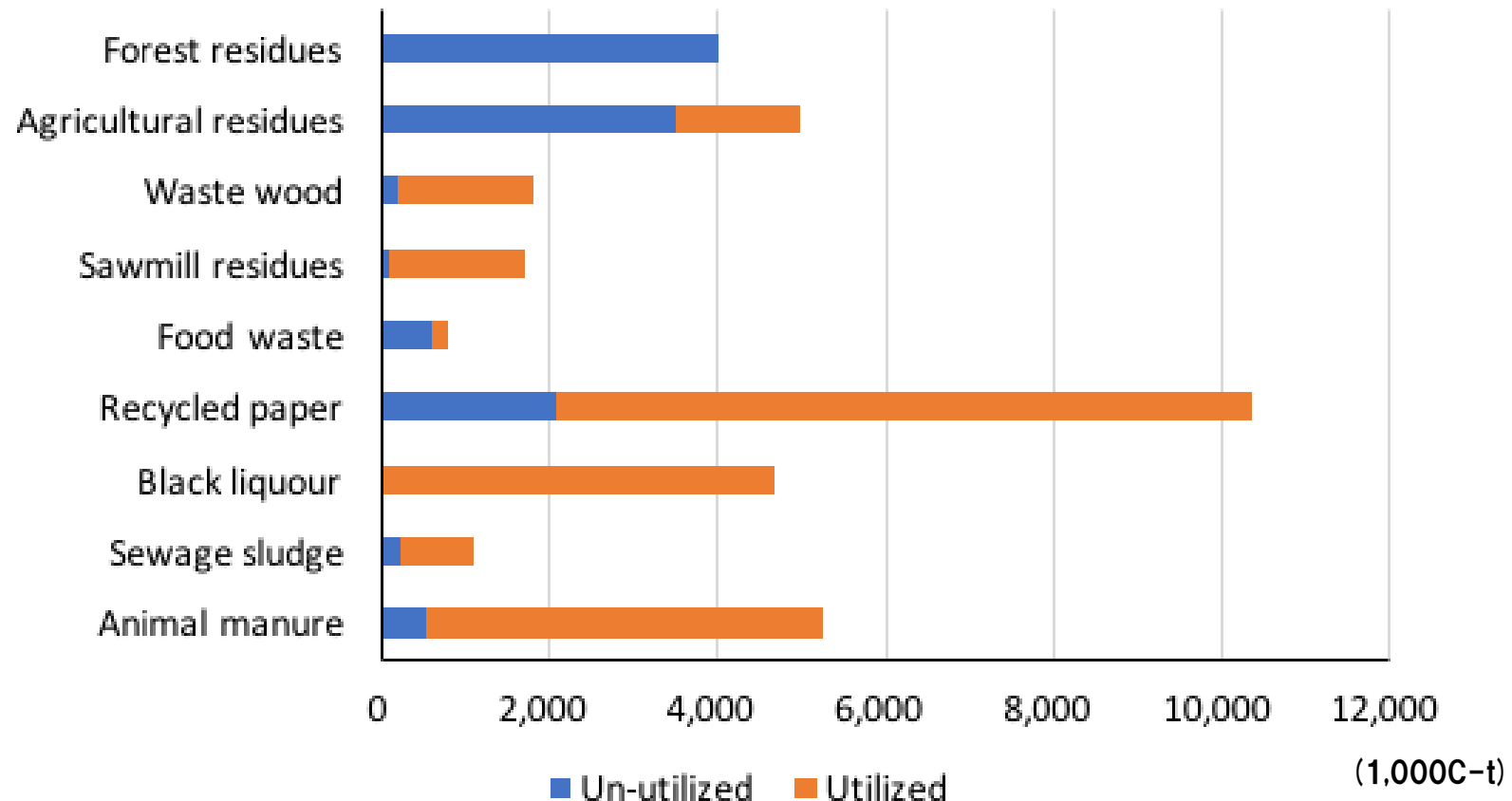


Potential of bioenergy mix



- Huge potential in forest and agricultural residues.
- Waste wood and black liquor has been utilized well.

Biomass resources potential in Japan



Source) Ministry of Agriculture, Forestry and Fishery (2012)



- What is barriers in expanding wind turbines and biomass plants?
 - How to expand wind turbines and biomass plants?
 - What kind of steps are necessary to expand them? How local government can contribute in disseminating it?
-
- 風力とバイオマスを拡大するための障壁は何か？
 - どのように拡大すればよいか？
 - どのような段階を踏むことが必要化？ 地方自治体は、普及のためにどう貢献できるか？