

# MARKET OPPORTUNITY

## JAPAN



ENVIRONMENT  
& WATER  
TECHNOLOGIES

Japan's environmental  
market by 2020

€493+  
Billion



Japan is the world's  
second largest market

### OVERVIEW

- High opportunities for EU SMEs with unique, innovative and price-competitive technologies linked to circular economy principles, water supply, management of natural hazards and ICT-enabled projects.
- The Japanese population is expected to drop below 100 million by 2050, a decrease of 22% since 2015. Labour shortage, especially in rural communities, will drive demand for automation and innovative tech solutions in this sector.
- Rural regions: Urbanisation will create new opportunities for unused land, boosting opportunities for environmental infrastructure technologies.
- Urban regions: High demand for efficient resource management systems.

### Business opportunities for EU companies

|   |   |
|---|---|
| <p><b>Waste Management</b></p> <p><i>Recycling, Reusing and Reducing</i></p> <p><i>Circular Economy</i></p> | <ul style="list-style-type: none"> <li>• Japan is considered "resource poor", with limited land areas resulting in <b>recycling and waste disposal</b> industries being major focus areas.</li> <li>• <b>Resource recovery</b> and urban mining, especially for plastic used in packaging (e.g. turning plastic into fuel) and electronics</li> <li>• <b>Food waste</b> reduction and recycling, food waste to energy</li> <li>• <b>Life-cycle design</b>, advanced materials technologies and green plastics</li> <li>• <b>Incineration</b> plays a significant role in waste disposal in Japan, given the shortage of land available for landfills. However, domestic technology is advanced.</li> <li>• High demand for price competitive and innovative <b>measurement, extraction, sorting and selection</b> systems</li> <li>• Innovative <b>recycling and renovation</b> technologies for <b>solar panels</b></li> </ul> |
| <p><b>Water Solutions</b></p> <p><i>Wastewater</i></p> <p><i>Fresh Water supply</i></p>                     | <ul style="list-style-type: none"> <li>• <b>Infrastructure</b>: monitoring, retrofitting or maintenance of sewerage systems, including automated or remote solutions</li> <li>• <b>Wastewater recycling</b> in factories and commercial buildings (sustainable buildings)</li> <li>• High quality <b>water purification</b> and <b>reduction of water consumption</b></li> <li>• <b>Sludge</b> volume and moisture content reduction</li> </ul>   |
| <p><b>Environment</b></p> <p><i>ICT</i></p> <p><i>Natural hazards management</i></p>                        | <ul style="list-style-type: none"> <li>• Low-cost <b>contaminated site remediation</b> and regeneration of brownfield sites</li> <li>• <b>High demand for ICT and automation technologies in control and measurement systems</b></li> <li>• Innovative flood prevention technologies</li> </ul>   |

### Market Characteristics

#### Waste Management

- Highly concentrated population in urban areas and limited land area for final waste disposal is a challenge for industries across all sectors.
- Industrial waste regulation is set by each prefecture. Residential waste is managed at the municipal level. Regulations vary across the country, with no regulated definition of "waste for recycling".
- Five major recycling sectors: automobile, plastics, building materials, food waste, home appliances. Solar panel recycling is an emerging area due to volume of materials.
- Japan is seeking innovative solutions in resource recovery.

#### Water Solutions

- Slow but gradual shift towards vertical separation in public water systems.
- More measures to reduce water consumption and wastewater production.

#### Regulations

- Multiple regulations are set in Japan's environmental sector: <http://www.env.go.jp/en/laws/index.html>
- 2001 Policy for Promoting Procurement of Eco-Friendly Goods and Services is currently under review, and is relatively undeveloped by comparison to European standards. Japan looks to Europe for innovation and future trends to develop the circular economy.

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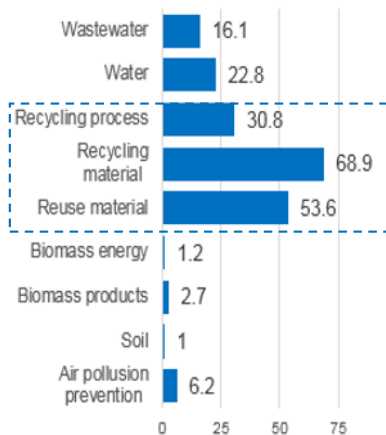
### DRIVERS

- High demand for advanced technologies for monitoring, measurement and analysis processes and techniques
- Price competitive technologies have a strong advantage
- High demand for flood prevention systems, driven by the increased frequency of natural hazard occurrences
- Ageing infrastructure renovation and recycling e.g. Solar PV parks recycling
- Technologies which can address macro-economic issues e.g. ageing population and declining workforce












### BARRIERS

- Strict environmental regulations in all related sectors
- Japanese cultural uniqueness such as language, business customs, and demanding customers requires a specific approach for market entry
- Municipalities struggle to find budget to maintain water infrastructure, especially in depopulated rural areas, reducing investment opportunities

Estimated Environment Market Volume (billion €) By 2020



Source: Ministry of Environment  
<http://www.env.go.jp/press/files/jp/108379.pdf>

| Sub-sector              | Opportunities for EU SMEs  | Market Size – (2020)  | Main Players   |
|-------------------------|--|---|--|
| <b>Waste Management</b> | <ul style="list-style-type: none"> <li>• Technologies in resource recovery, recycling and waste management processes</li> </ul> <p><i>Japan's regulated waste disposal and recycling market has been showing low or non-existent technological advancement, where many of the current products have been around for many years.</i></p> <ul style="list-style-type: none"> <li>• E-Waste collection</li> </ul> | € 86 Bn   |       |
| <b>Water Management</b> | <ul style="list-style-type: none"> <li>• High quality water purification and water softening</li> <li>• Retrofitting of water infrastructure</li> <li>• Internet-of-Things (IoT): monitoring and management systems</li> <li>• Rural maintenance solutions</li> <li>• Renovation and renewal technologies for ageing systems and infrastructure</li> </ul>   | <p><b>Water supply</b><br/>€12 Bn</p> <p><b>Sewage</b><br/>€15 Bn</p> <p>(Capital Investment)</p> |       |