



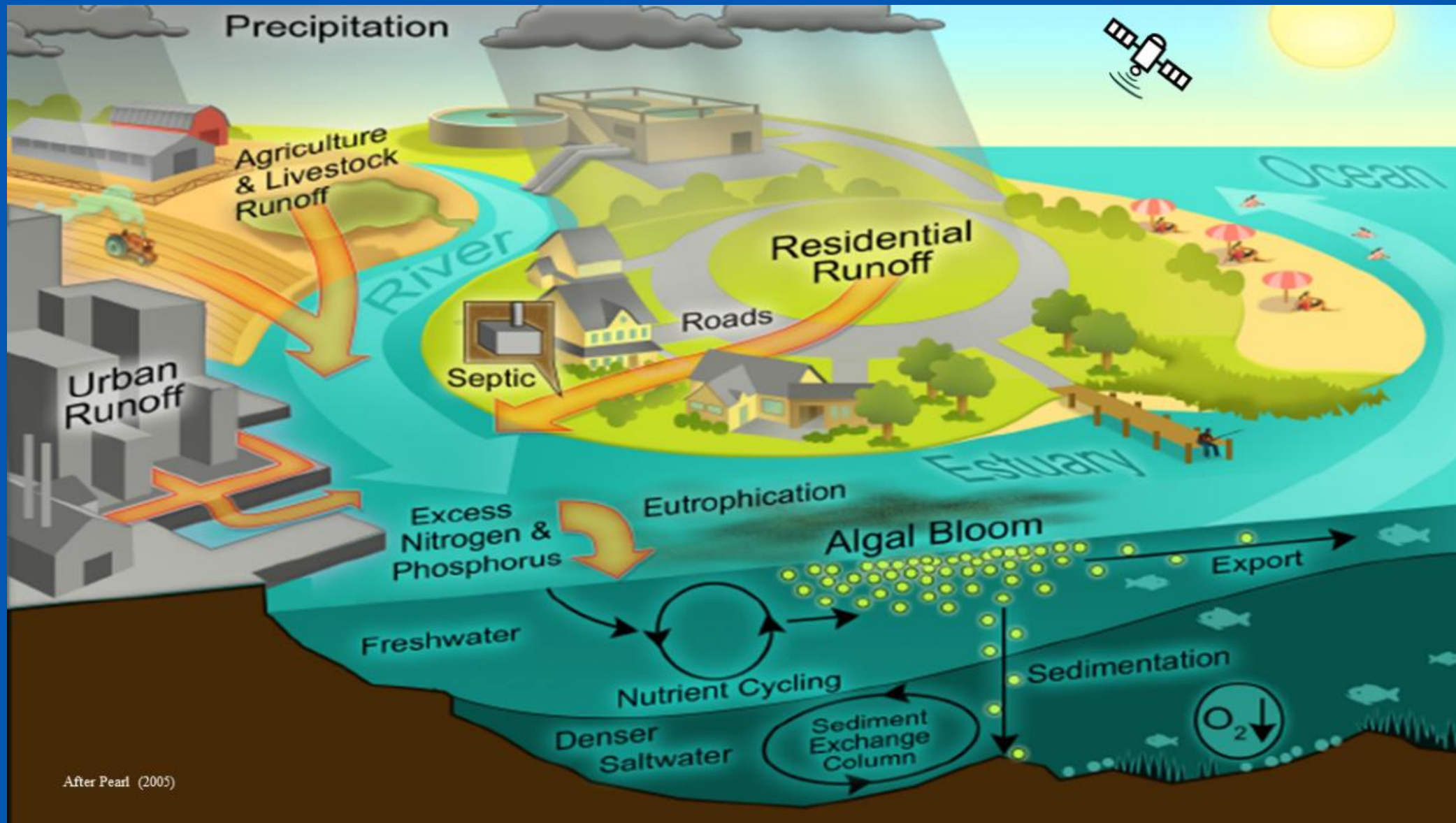
Hydropower research activities at the JRC on hydropower, EU leadership and Horizon funded projects

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Emanuele.quaranta@ec.europa.eu
D.2. Ocean and Water



JRC Ocean and Water

Holistic and integrated support: freshwater - coast - sea



After Pearl (2005)

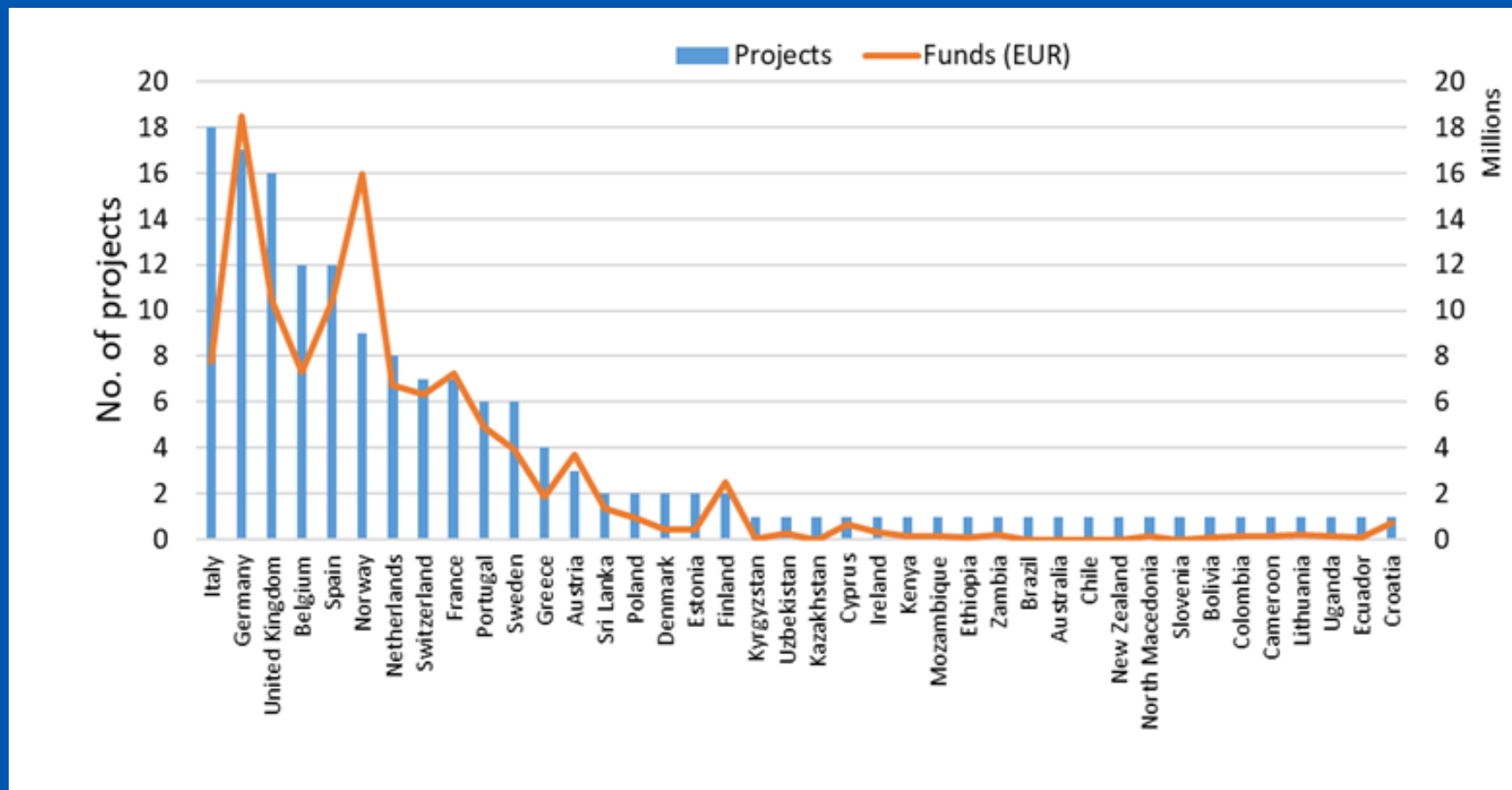
The EU Water Acquis



Some activities

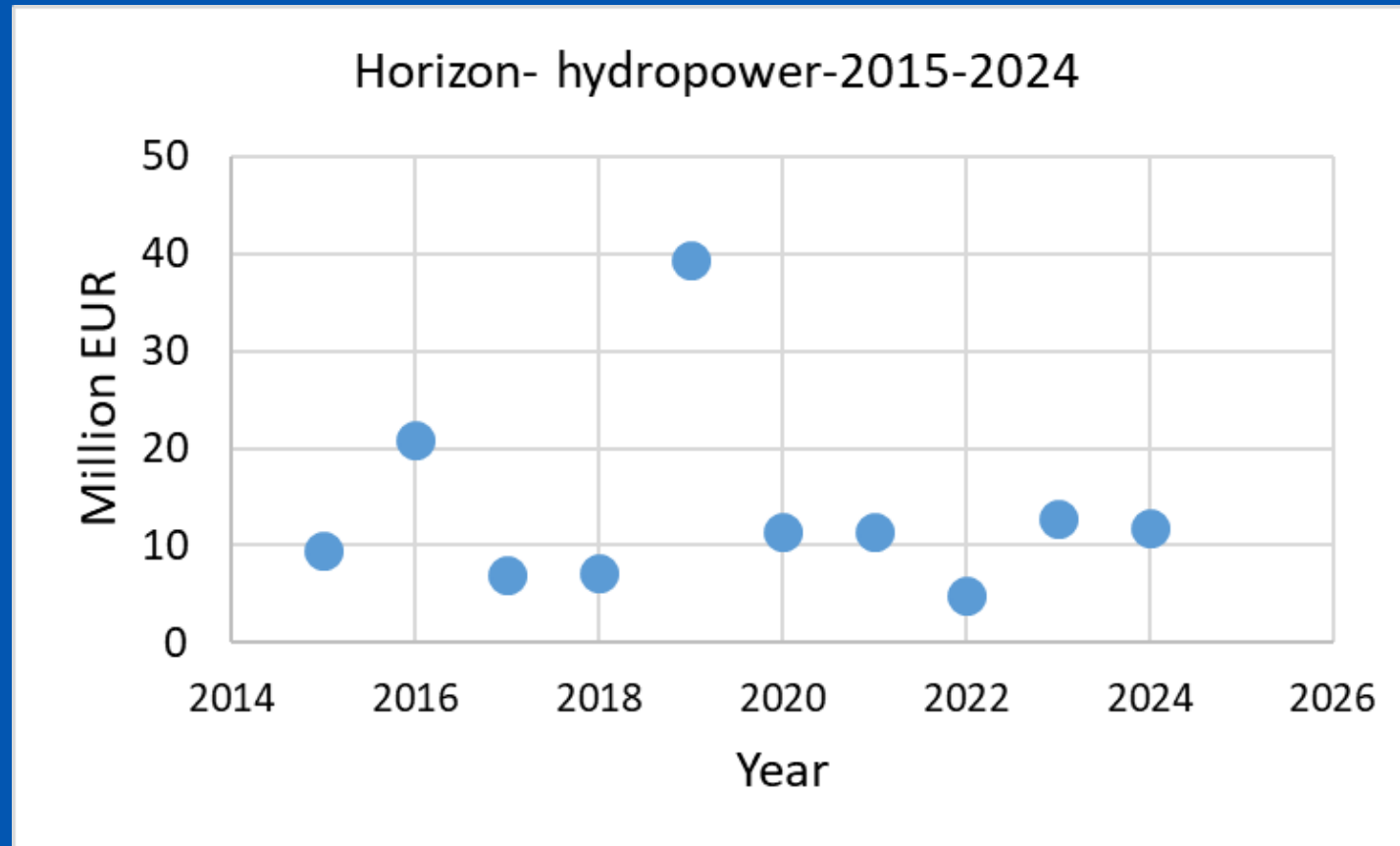
1. SustHydro exploratory activity: assessing the EU potential of sustainable hydropower (and hidden hydro) and novel technologies for sustainable hydropower development, including digitalisation
2. Water&energy storage: ongoing
3. CETO: Clean Energy Technology Observatory (annual report)

Scientific innovation in the EU: EU funded projects 2015-2022



https://setis.ec.europa.eu/hydropower-and-pumped-hydropower-storage-european-union-0_en

Scientific innovation in the EU: EU funded projects 2015-2024



Recent funded Horizon projects – Development of digital solutions for existing hydropower operation and maintenance

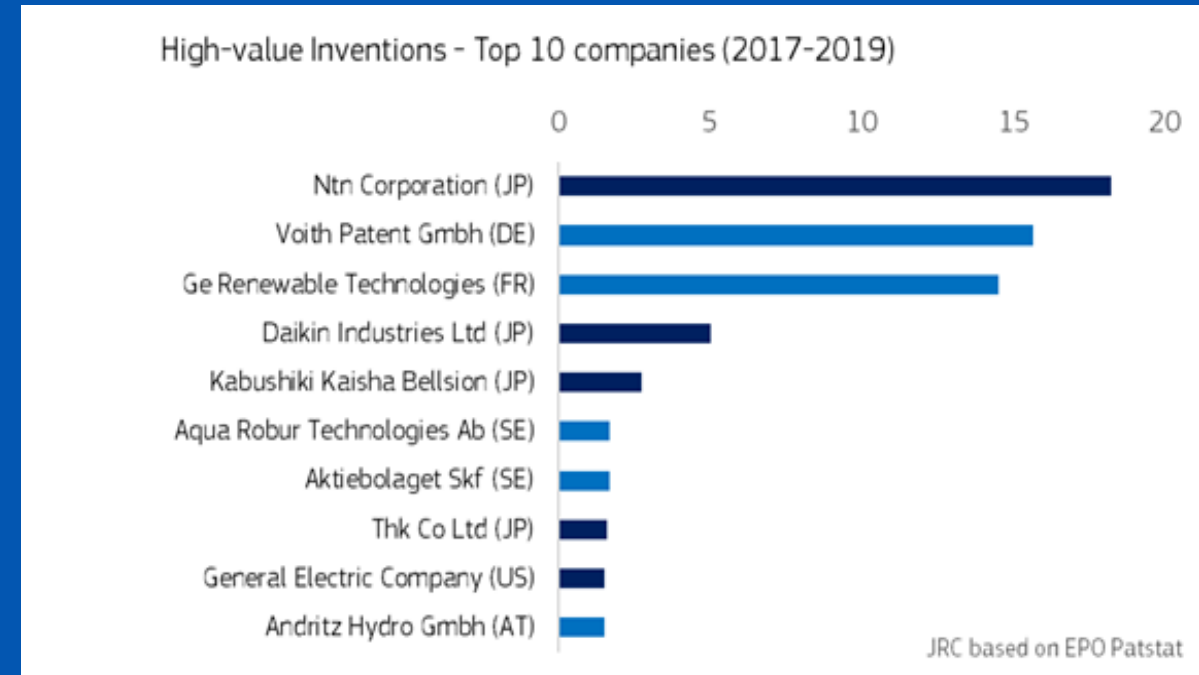
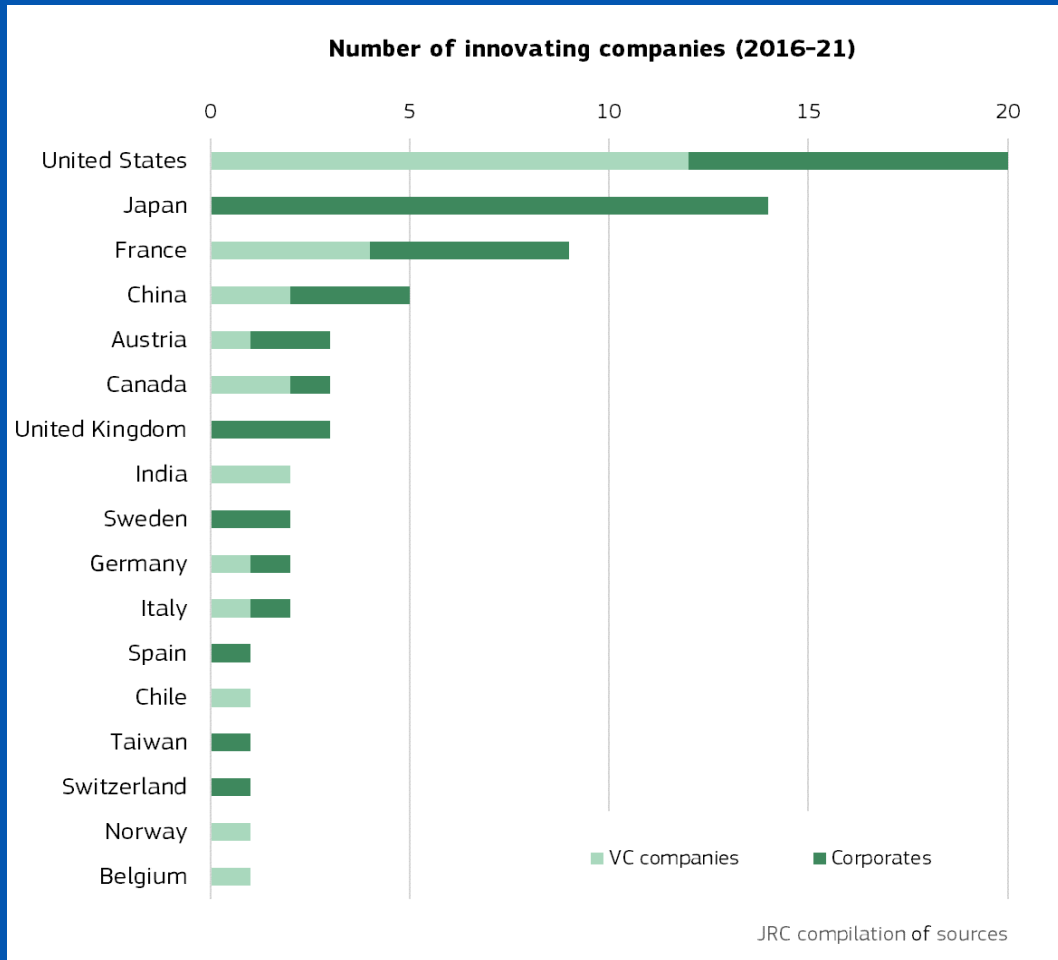
HORIZON-CL5-2022-D3-03-08

Digital solutions for improving the sustainability performance and FLEXibility potential of HYDROpower assets	D-HYDROFLEX
DIGITAL MAINTENANCE FOR SUSTAINABLE AND FLEXIBLE OPERATION OF HYDROPOWER PLANT	Di-Hydro
intelligent Asset Management Platform for Hydropower operation and maintenance	iAMP-Hydro

Recent Horizon calls

Title
Development of hydropower equipment for improving techno-economic efficiency and equipment resilience in refurbishment situations
<ul style="list-style-type: none">- Demonstration of innovative pumped storage equipment and tools in combination with innovative storage management systems- Development of novel long-term electricity storage technologies
Demonstration of sustainable hydropower refurbishment

Industrial innovation in the EU



Export capacity and import

EU share in Global Export
(2019-2021)

■ EU ■ RoW



JRC based on UN Comtrade data

Extra-EU share in Global Export
(2019-2021)

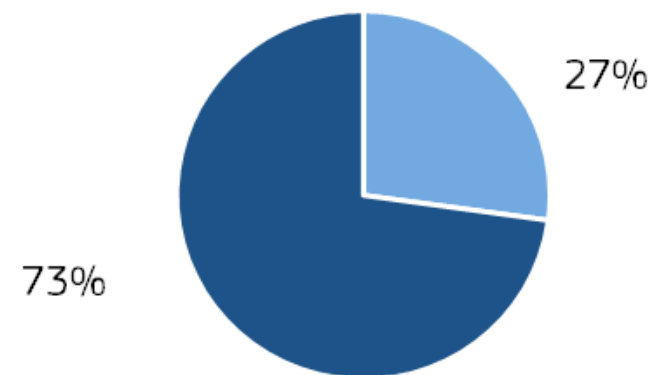
■ RoW ■ Extra-EU



JRC based on Comtrade and COMEXT data

EU MS Imports (2019-2021)

■ From RoW ■ Intra-EU



JRC based on COMEXT data

More details at: https://setis.ec.europa.eu/hydropower-and-pumped-hydropower-storage-european-union_en

Thank you



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