

Climate Adaptation Digital Twin: the energy use case

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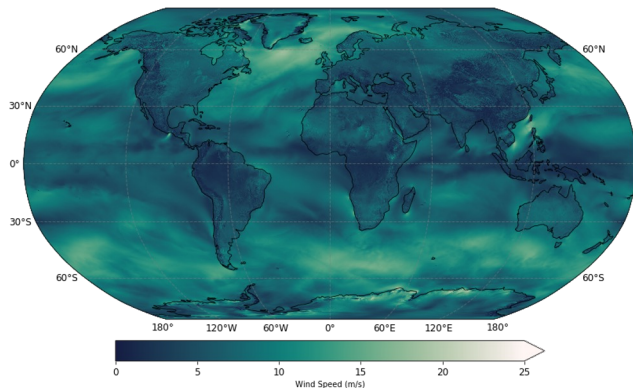
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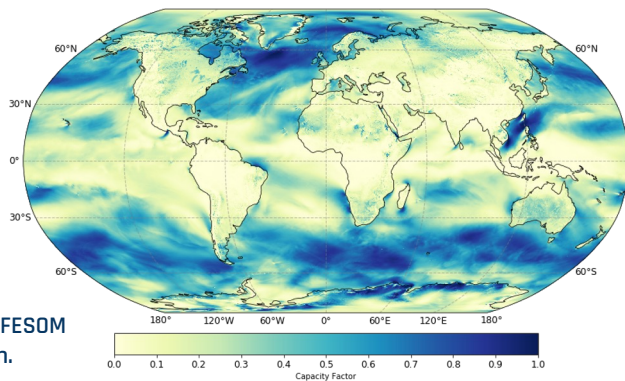
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Weekly mean Wind Speed (m/s)

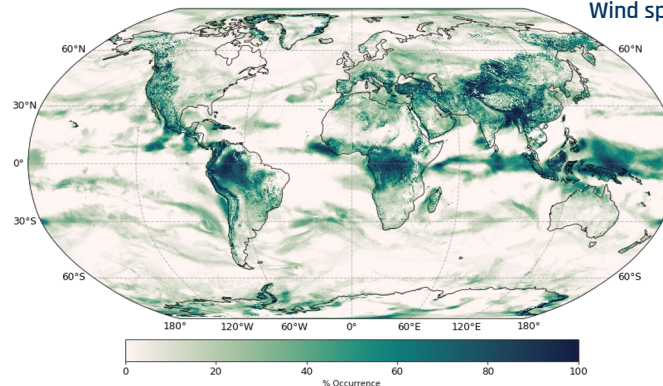


Weekly mean Capacity Factors



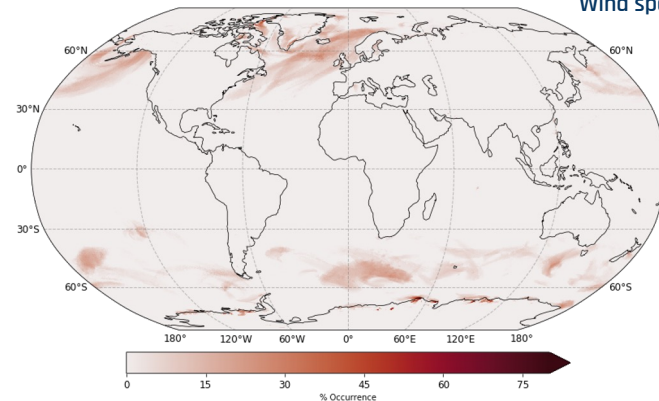
Weekly accumulated Low Wind Events (%) Occurrence

Wind speed < 3 m/s



Weekly accumulated High Wind Events (%) Occurrence

Wind speed > 25 m/s



Data: ClimateDT IFS-FESOM
projection simulation.



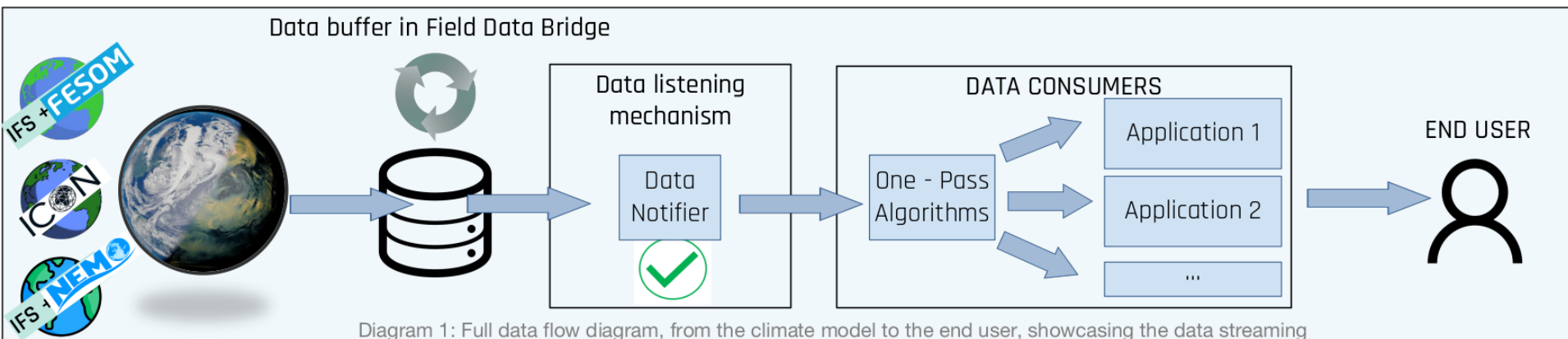
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Streaming



Data listening mechanism: Software that automatically notifies the downstream workflow that data is available. (1)

One - pass algorithms: Mathematical algorithms that compute statistics required by the user on the streamed data (storage saving). (2)

Application: independent software packages that provide key indicators for desired impact sectors.

Take home message

Indicators relevant to energy sector are **operationally produced** along with the climate simulations by using **data streaming**. In this way we can provide **local climate information at global** scale.