

DestinE Platform

VISIT [PLATFORM.DESTINE.EU](https://platform.destine.eu)
AND DISCOVER

 DestinEStreamer



Powered by
DestinE Platform

a service developed
and operated by

GeoVille

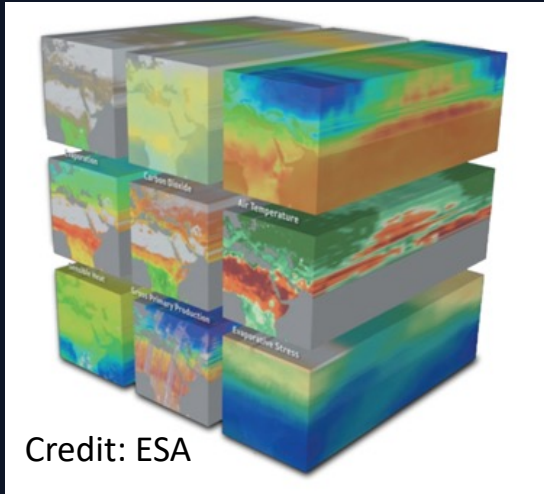
Novel high performant access to Climate and Earth Observation data

Enhanced Streaming technology from OTT Streaming (e.g., VOD Service Providers, Broadcasters) – extended and adapted for Earth Observation and Climate data.

- ∞ **proven** high compressions with best quality – reducing costs, enabling more insights
- ∞ **fast** access to huge datasets, locally in the platform, for non-experts and experts
- ∞ **full timeseries** and **analysis-ready data-cubes** in seconds for enhanced analysis

A new Approach - DestinEStreamer

Compression in 3D



Transformation
into Bitstream
representation



Enhancing
data analysis
capacities in
the DestinE
Platform

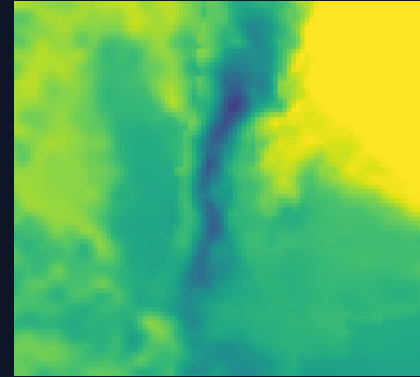
✓ **ready for domain applications:** earth observation, climate change, situational awareness, defense and security data

Quantity and Quality DestinEStreamer

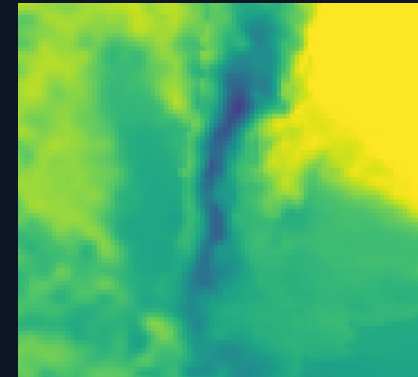
the impact



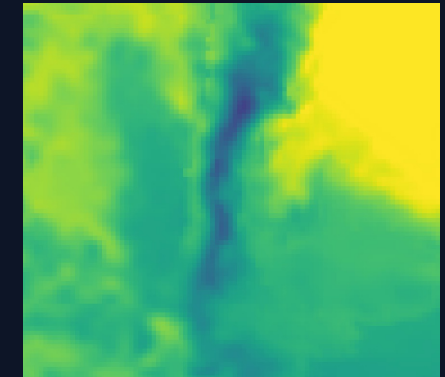
Zoom in
ERA5 Dataset
long-wave radiation flux



Original

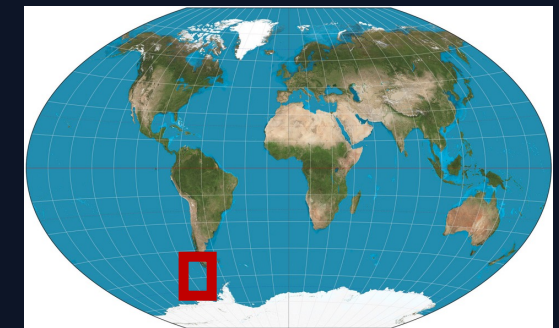


Average SSIM 0.9096
Ratio: 33.82



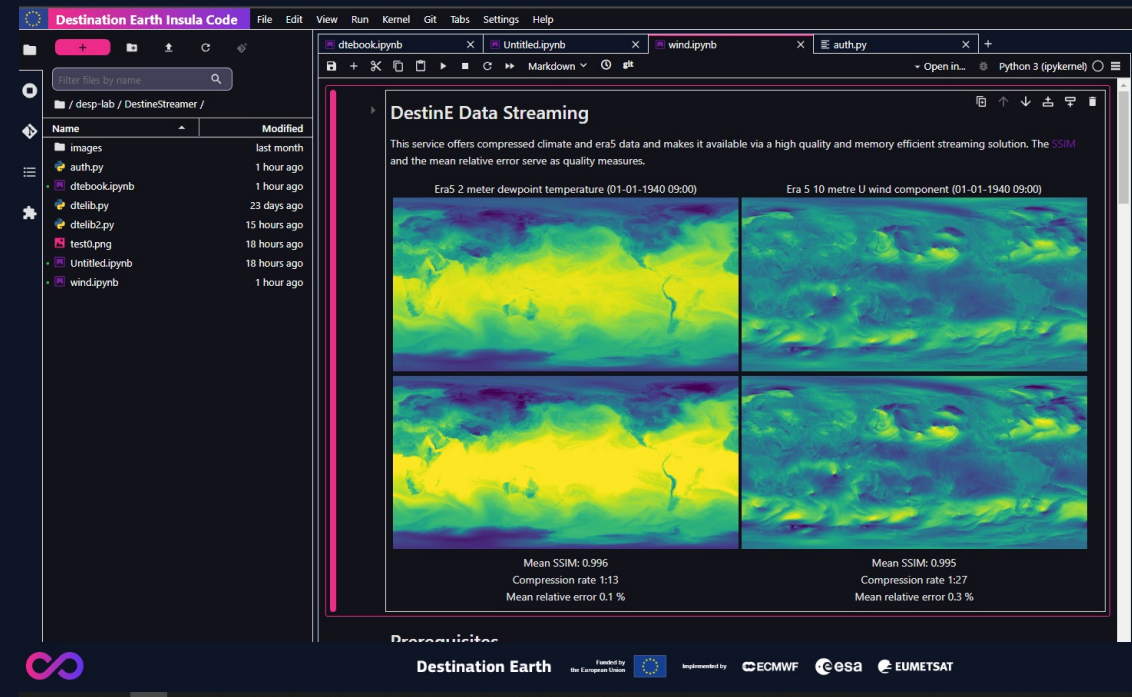
Average SSIM 0.88
Ratio: 44.64

Reduction in size of a
factor of ~10 to ~30
leads to quality
differences in values
< 0.1%

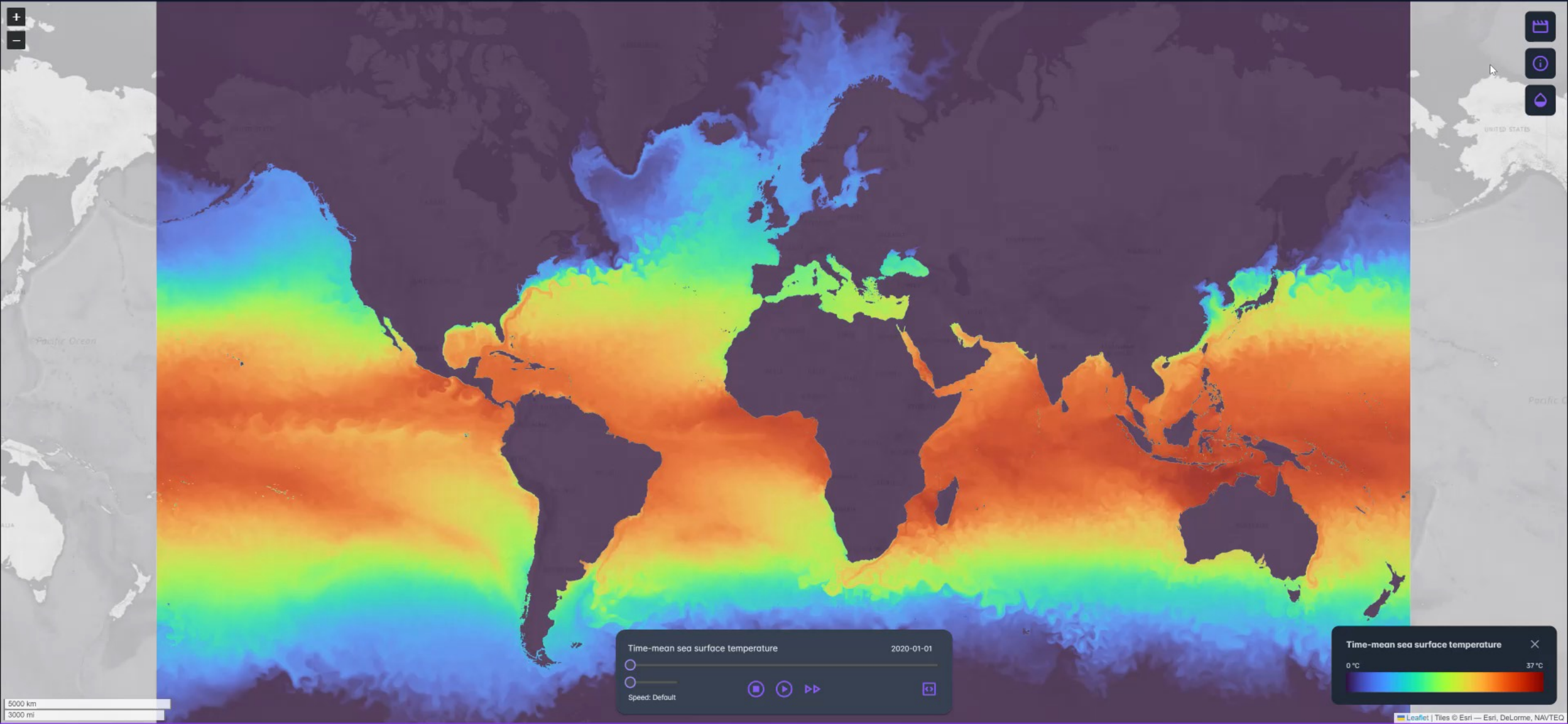


Accessing DestinEStreamer

DestinEStreamer **FastScanner** for first glance at the data.

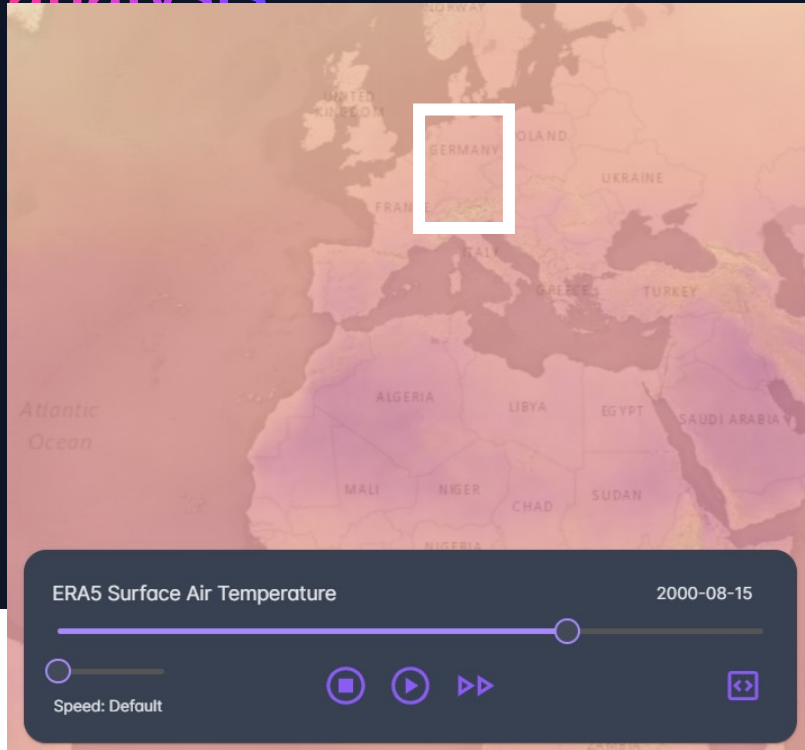


The DestinEStreamer Python module allows users to access DestinE data streams in the Destine Platform Platform in the JupyterLab Insula.



Note that new Datasets will come regularly and can be found in the UI and the API

Category	Title	Period	Compression Rate	SSIM
Climate DT				
<i>Short_name</i>				
10v	10 metre V wind component	2020-01-01 00:00 - 2029-09-08 23:00	1:22	0.993
2d	2 metre dewpoint temperature	2020-01-01 00:00 - 2029-12-31 23:00	1:14	0.997
2t	2 metre temperature	2020-01-01 00:00 - 2029-12-31 23:00	1:16	0.997
avg_tos	Time-mean sea surface temperature	2020-01-01 00:00 - 2029-08-20 00:00	1:16	0.995
str	Surface net long-wave (thermal) radiation		1:24	0.993
Era5				
<i>short_name</i>				
10u	10 metre U wind component	1940-01-01 00:00 - 2023-12-31 23:00	1:27	0.996
10v	10 metre V wind component	1940-01-01 00:00 - 2023-12-31 23:00	1:27	0.996
2d	2 metre dewpoint temperature	1940-01-01 00:00 - 2023-12-31 23:00	1:13	0.991
2t	2 metre temperature	1940-01-01 00:00 - 2023-12-31 23:00	1:13	0.996
Era5-Land				
<i>short_name</i>				
2t	2 metre temperature	1950-01-01 00:00 - 2023-10-31 23:00	1:16	0.995



If you want to learn about how to analyse the data with DestinEStreamer, join the Data Access Tutorial.

Example average temperature from 1940 to 2023 over germany in August (each day at 12 a.m.) Source ERA 5 [2t]





<https://streamer.destine.eu/>