



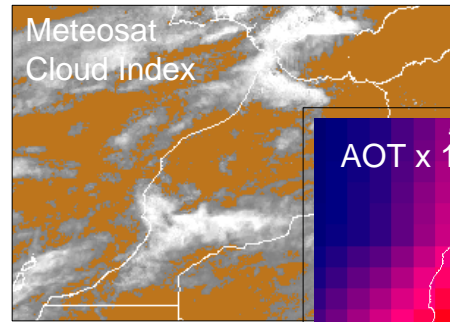
STEPS

Solar **T**hermal **E**xpert
System
for **P**ower **S**tations

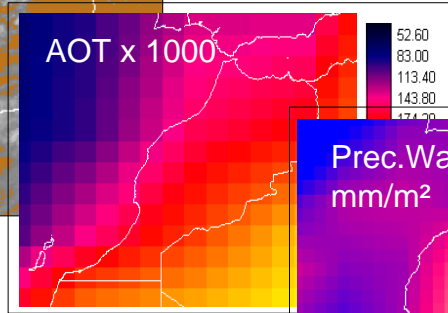
- Solar Beam Radiation Resource Assessment
- Site Qualification
- Site Ranking by Technical and Economic Performance
- Geographic Data Base (GIS)



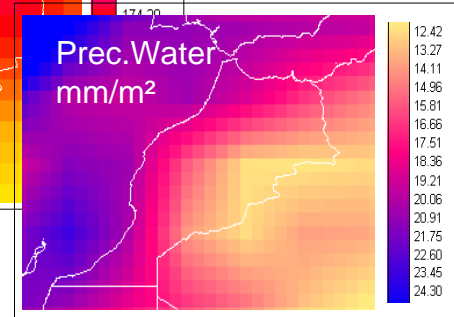
STEPS



Clouds

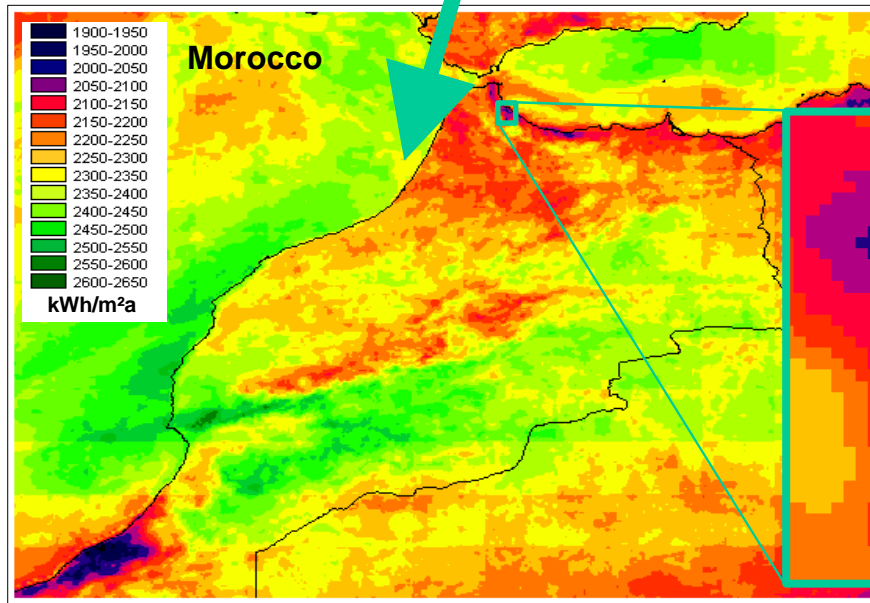


Aerosols

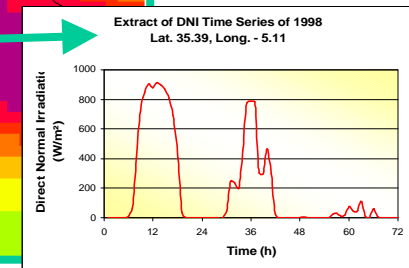
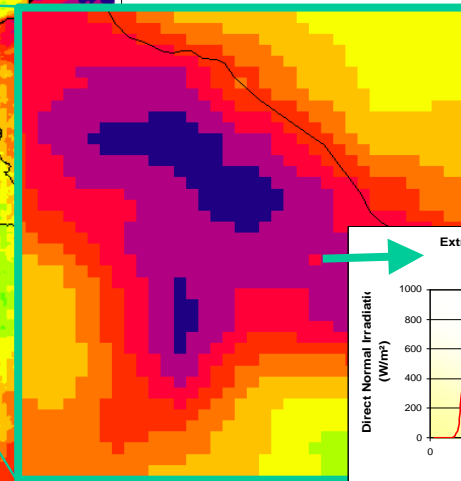


Water Vapour, Ozone, etc.

Beam Radiation Resource Mapping and Time Series

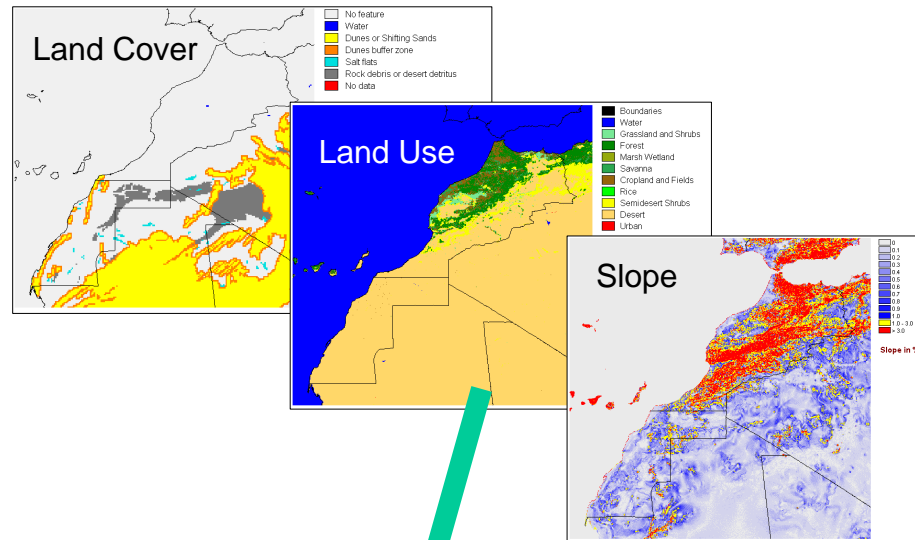


Spatial Resolution: 1 km
Time Resolution: 1 h



DLR

STEPS

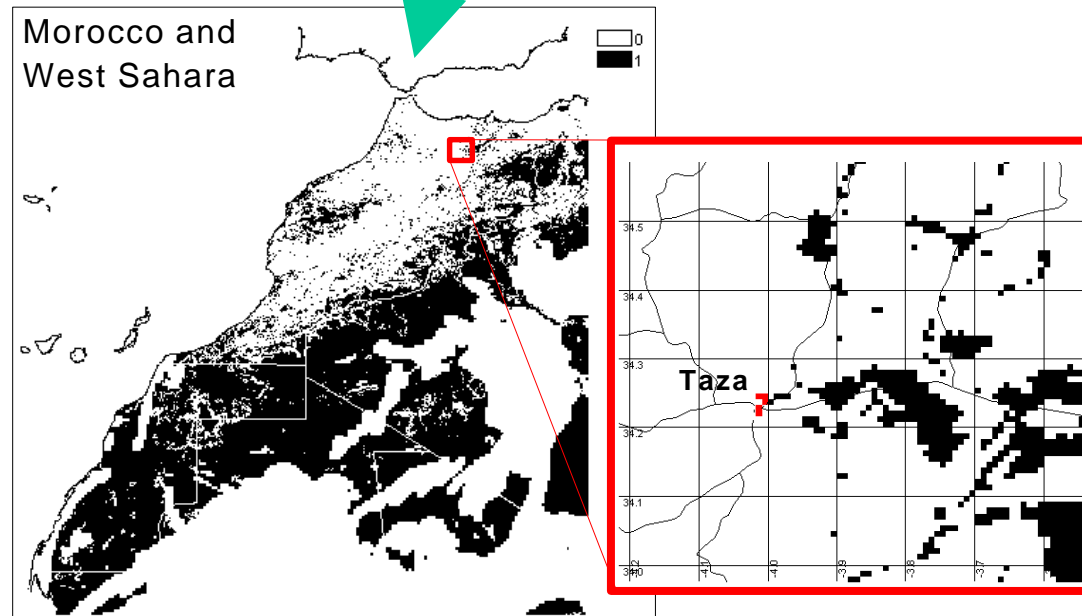


Site Qualification

Data is combined to exclude

Shifting Sands, Swamps, Water, Forests, Salt Pans, Slope > 1 %, etc.

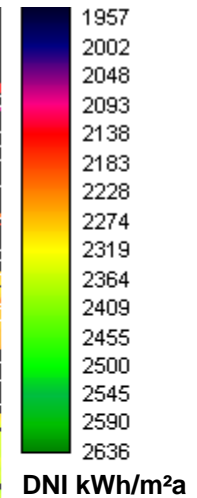
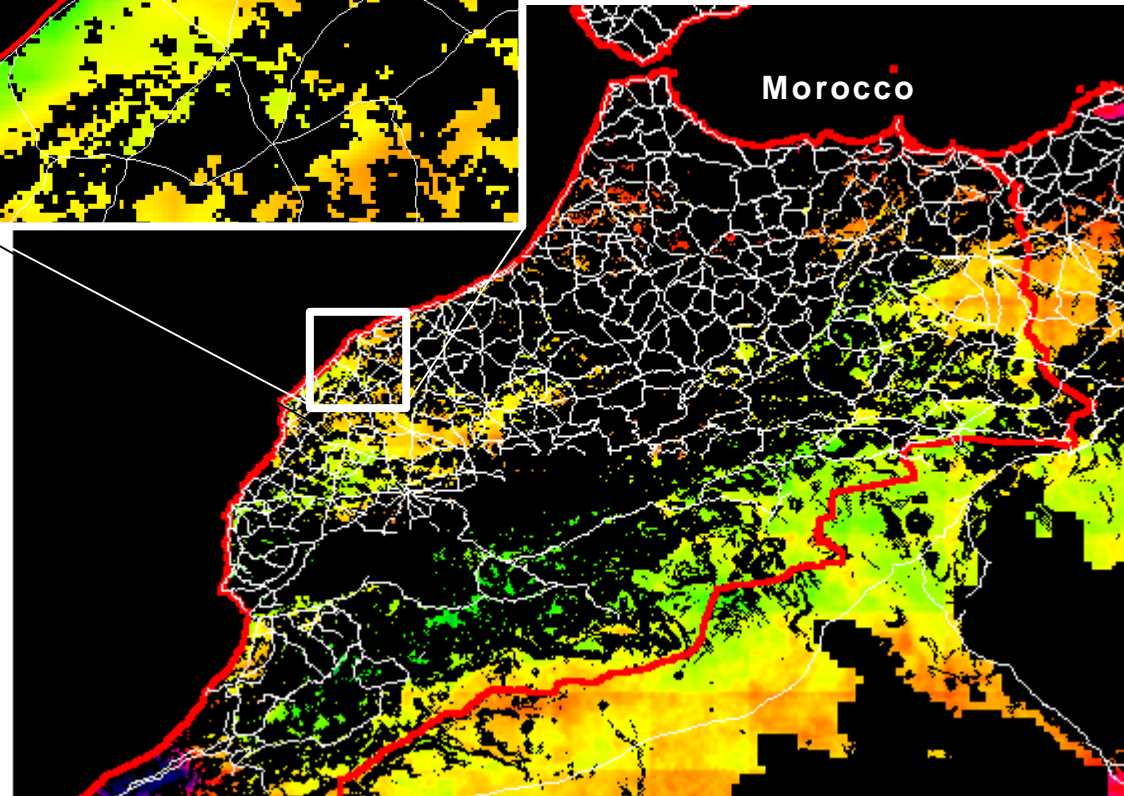
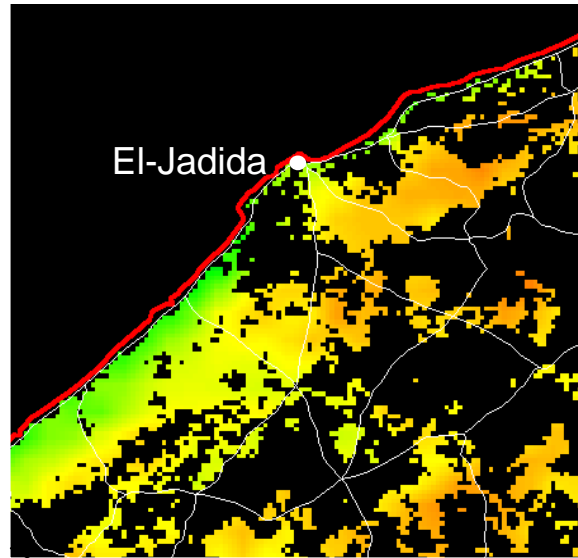
Resolution: 1 km



STEPS



Site Ranking by Solar Beam Radiation



Site Ranking by

- Annual Solar Electricity Yield (Power Plant Model)
- Infrastructure Cost (GIS Analysis)
- Electricity Cost (Economic Model)

200 MW SEGs
Solar Only
No Storage

