TENSIFT Site (Morocco)

JECAM/GEOGLAM Science Meeting

Kyiv, , Ukraine

11-12 October, 2016

Site Description

- **Tensift basin in central Morocco, 20000 km2**
- **Climate**: Semi-arid mediterranean (P 240mm/year, ET0 1600 mm/year)
- **Land use**: cereals, olive groves, citrus

  + rainfed cereals the good years
- **Irrigation** mainly gravity but drip is increasing




Project objectives (agriculture): crop mapping, water budget, water stress, E-T partition, irrigation efficiency, soil moisture, yield,…

=> using remote sensing VIS+NIR+TIR+SAR+L-band (SPOT, Landsat, MODIS, Sentinel-1, Sentinel-2, SMOS…), disaggregation

Collaborations

- **The International Joint Laboratory TREMA** based in Morocco associates **scientists** (IRD (France), Marrakech University (Morocco), Meteorological agency) and **regional water managers** (Basin Agency, Regional Office for Irrigation). Staff about 10 full-time equivalent.

- Links with the **Tunisian JECAM site** (Merguellil)

- The Tensift site is involved in the **S2-AGRI project** financed by ESA.

- **Main external funding**: REC (H2020, Europe), SAGESSE (CNRST, Morocco), AMETHYST (ANR, France), MIXMOD (ANR, France), SICMED (MISTRALS, France), PHC Maghreb (French-Morocco), …

2016 main achievements

- **Land use ground data** collection (about 300 plots)
- **Permanent flux site** (rainfed wheat, citrus)
- **Intensive wheat monitoring** in frame of the REC project:
  - a drip irrigated wheat field (Meteorology, eddy correlation, soil fluxes, lysimeter, TIR and PRI vegetation monitoring,…)
  - A gravity irrigated field (Eddy correlation, soil fluxes, PRI monitoring,…)
  - Soil moisture ground campaigns on about 20 plots linked with L8, S1 and S2 acquisitions
- **Installation of a scintillometer** on mixed traditional olive + cereal agriculture (2 EC to come)