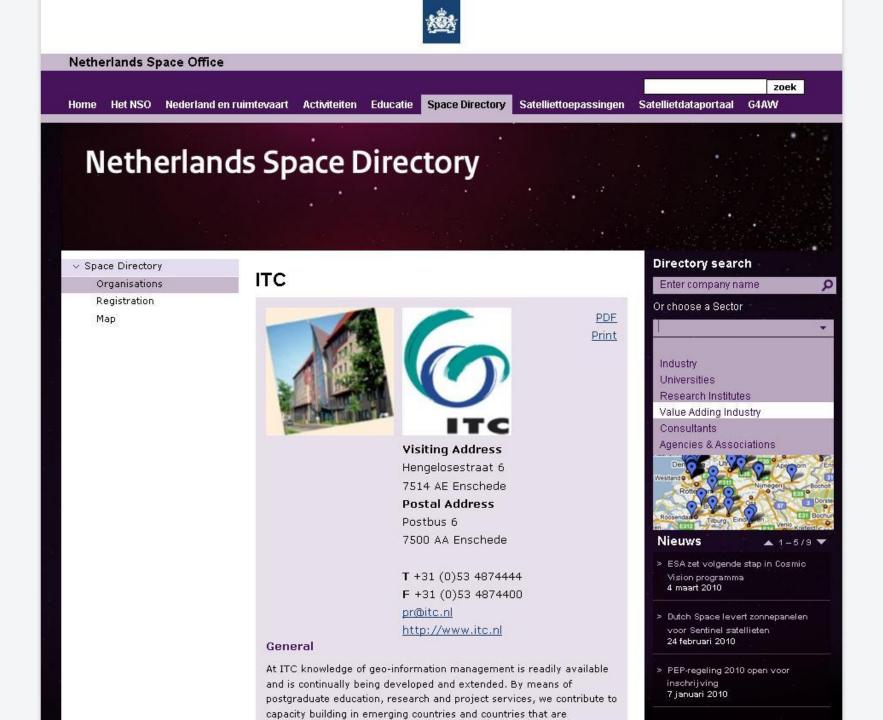


### **Overview of Dutch partners -Agriculture, Water and Space sector**



Netherlands Space Office (NSO) Workshop Maputo May 21, 2014



## www.waterandclimateservices.org

Netherlands Cooperation on Water and Climate Services



150 5000

An unique cooperation of 45 Dutch organisations that offer solutions for water and climate related challenges

"Joint effort of 45 Dutch private companies, knowledge institutes to create added value within the Information Chain, from satellite to end-user, as a key towards affordable food security and water safety"



## **Netherlands Cooperation** on Water and Climate Services



An unique cooperation of 45 Dutch organisations that offer solutions for water and climate related challenges

#### Food Security Services



#### Agro and Ecosystem services

Combining ecosystem services and agricultural products. Land use systems that produce biomass for energy and chemical industry



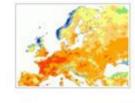
#### **Building with nature**

Aquaculture, niche in water management. Adaptation of coastal structures and water management for secured livelihoof in delta's for sustainable food production



#### **Crop Micro-insurance**

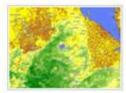
Meteosat based flood and drought microinsurance reaching every farmer in Africa: RE drought index, CCD flood index, 30 years of data



#### Crop monitoring and forecasting

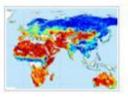
Regional crop monitoring and forecasting providing weather and crop indicators and crop yield forecasts to support plicy on trade and food security.

🚯 WUR 🖾 Contact



#### Data for Agricultural production

Timely, objective and transparent data based on satellite and ground observations for food security and agricultural planning around the globe



#### **Drymon Soil Moisture detection**

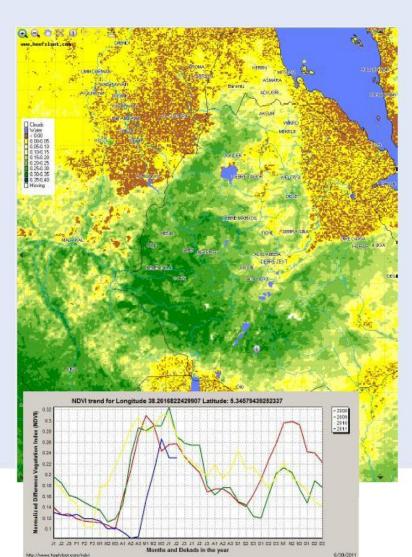
Daily measurement of water in the soil with satellites based on daily observations NEO I Contact

## Data for Weather and Agricultural Production

- Timely, Objective and Transparent data based on satellite and ground observations. For Food Security and Agricultural Planning around the globe.
- Organisation involved: Hoefsloot Spatial Solutions & World Food Programme
- Countries applied: Ethiopia, Ghana and many other African Countries

#### More information:

- Website: www.hoefsloot.com Contact person: Peter Hoefsloot
- Email: peter@hoefsloot.com



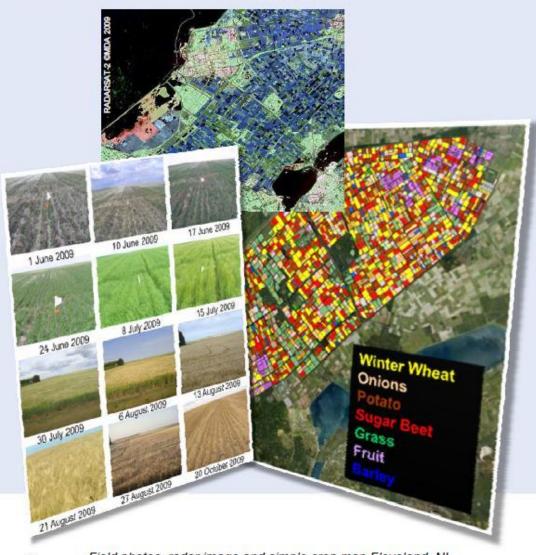
## Agriculture crop type, area, biomass and change maps

- Description service:
  - Easy online access to bi-weekly agricultural crop type, area, biomass and change maps
  - Based on cloud-free 5-30m or 250m radar and optical imagery
  - In support of farmers, traders, and policy makers for efficient and sustainable agriculture, biofuel feedstock and food security
- Organisation(s) involved:
  SarVision together with users
- Countries applied:

Europe. Near future: South America, West and Central Africa, South East Asia

#### More information:

Website: www.sarvision.nl Sarvision Contact: Niels Wielaard (wielaard@sarvision.nl)



Field photos, radar image and simple crop map Flevoland, NL

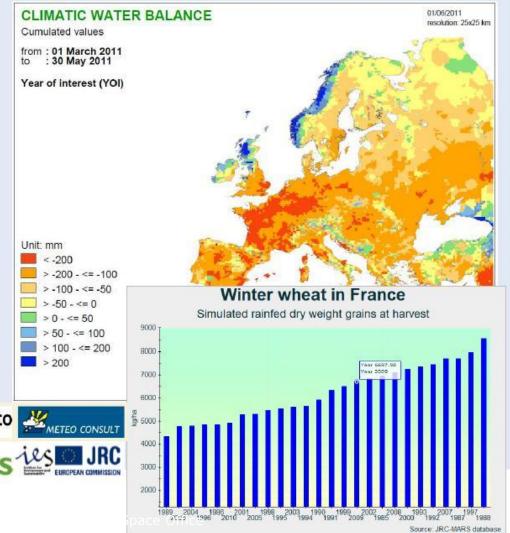
## Regional crop monitoring and forecasting

- Providing weather and crop indicators and crop yield forecasts to support policy on trade and food security
- Organisation(s) involved: European Commission Alterra Wageningen UR, Vito, MeteoConsult, Un. of Reading, Gisat
- Countries applied: Europe and other strategic areas of the world

GENINGENUR

#### More information:

Website: www.marsop.info Contact person: Hendrik Boogaard Email: Hendrik.boogaard@wur.nl



## Continental to Regional Scale Soil Moisture Mapping

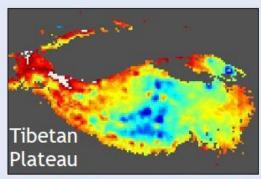
- The Faculty of ITC uses both coarse (25 km) and high (75 m) resolution microwave observation for soil moisture monitoring, which may serve as an early warning system for droughts and floods.
- Organisation involved: Faculty of ITC, University of Twente
- Countries applied: Netherlands, United States, China

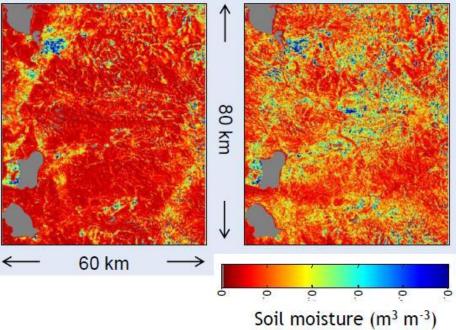
#### More information:

Website: <u>http://www.itc.nl/Pub/research-</u> themes/WCC

Contact person: Dr. Ir. R. van der Velde or Prof. Dr. Ir. Z. Su

Email: velde@itc.nl or b\_su@itc.nl





## WaterPlanner

- online insight in water availability and water needs
  - Irrigation advice
  - Water supply control

#### Based on:

- Real time moisture content
- Precipitation and evaporation forecast
- Organisation(s) involved:
  DHV, Nelen & Schuurmans, Deltares

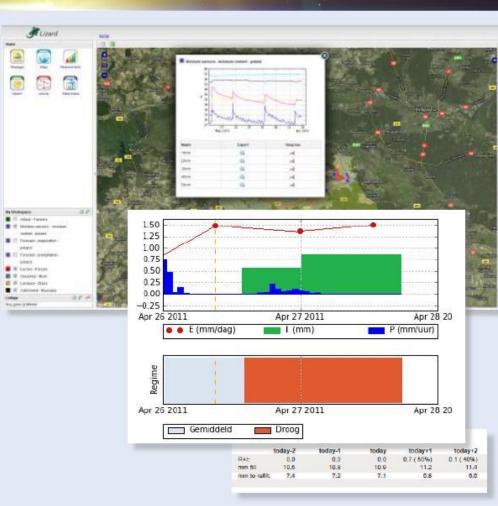
Together with SME like: Dacom, MeteoConsult, KNMI,eLeaf, NEO

• Countries applied:

Netherlands, Poland

#### More information:

Website: www.dhv.com/rainapp Contact person: Hanneke Schuurmans Email: <u>hanneke.schuurmans@dhv.com</u>



Irrigation advice in Poland, based on now- and forecasting of hydrological system

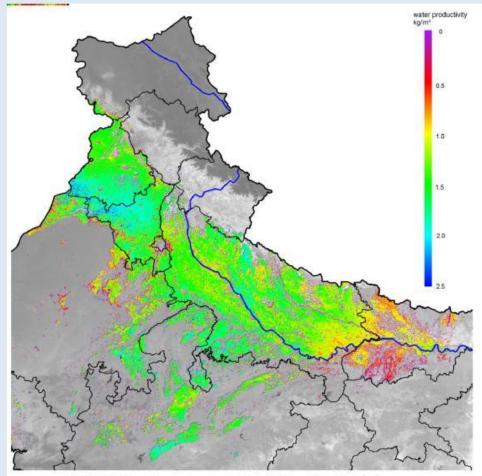
## Increasing Crop per Drop

Description service
 Improving land and water
 productivity

Organisation(s) involved:
 IFC & Tata

 Countries applied: India, Sout Africa, Russia More information:

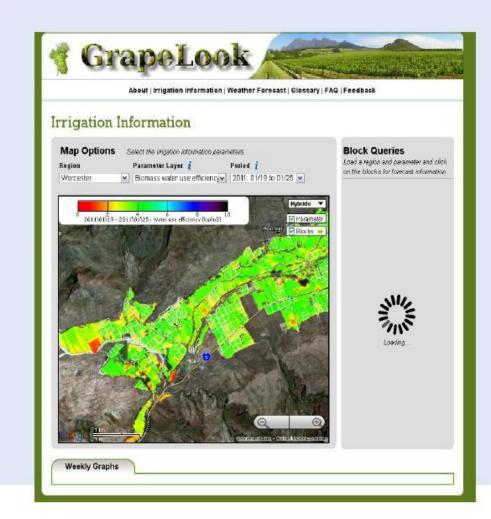
Website: www.eleaf.com Contact person: Wim Bastiaanssen Email: wim.bastiaanssen@eleaf.com



2009 Wheat water productivity (kg/m<sup>3</sup>) in northwestern India

# Grapelook: improving efficient grape water and nitrogen use

- GrapeLook supports irrigation management decisions by agricultural producers by combining satellite technology and in situ measurements to deliver
   Balk Binnersheet blanco.jpg Thew Sources of information to the Western Cape grape farmers
- Organisations involved: WaterWatch BV and University of KwaZulu-Natal
- Countries applied: South Africa



#### More information:

Website: www.GrapeLook.co.za Contact: Annemarie Klaasse (a.klaasse@waterwatch.nl)

## Pesticide Risk Reduction Programme (PRRP)

- PRRP is collaborative programme on pesticide registration and post registration and it functions as a pilot project for other African countries / regions
- Organisation(s) involved: MoA Ethiopia, Alterra Wageningen UR, FAO, UNEP and more
- Countries applied: Ethiopia

#### More information:

Website: http://prrp-ethiopia.org Contact person: Floor Peeters Email: floor.peeters@wur.nl

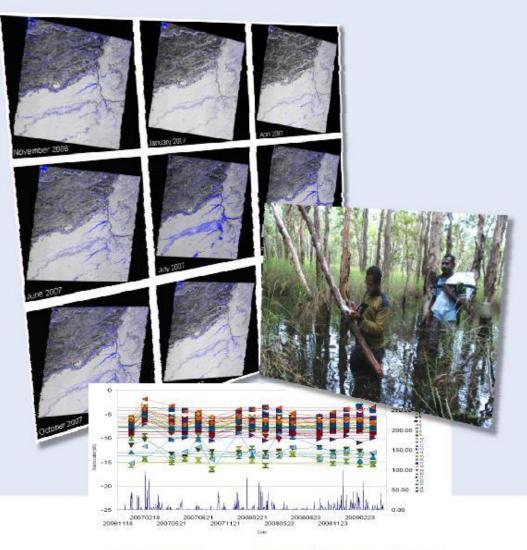


## Flood extent and duration maps

- Description service:
  - Easy online access to bi-weekly flood extent and duration maps
  - Based on cloud-free 5-30m or 100m radar imagery
  - In support of spatial planning, (disaster) risk reduction and agricultural/agro-industrial plantation planning and management
- Organisation(s) involved:
  SarVision together with users
- Countries applied:
  South America, West and Central Africa,
  South East Asia

#### More information:

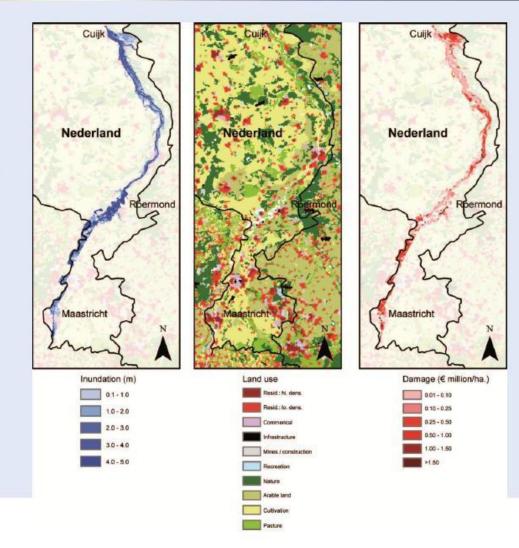
Website: www.sarvision.nl SarVision Contact: Niels Wielaard (wielaard@sarvision.nl)



Flooding map time series and satellite signal vs rainfall

## Flood risk modelling

- GIS-based flood risk modelling tools (e.g. Damagescanner) to assess risk in terms of monetary damage and loss of lives.
- Organisation(s) involved: City of Jakarta, City of Rotterdam, Deltares
- Countries applied: Indonesia, Vietnam, Western Europe



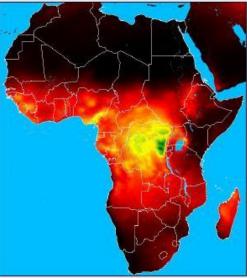
#### More information:

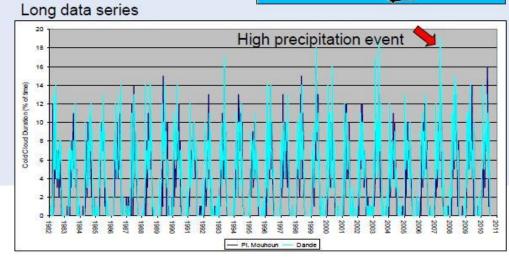
Website: <u>www.ivm.vu.nl/SPACE</u> Contact person: Dr. Philip Ward Email: philip.ward@ivm.vu.nl

## **Crop Micro-Insurance**

- Meteosat based flood and drought micro-insurance reaching every farmer in Africa
  - RE drought index
  - CCD flood index
  - 30 years of data
- Organisation involved: EARS
- Region applied: Africa

#### Risk of excessive precipitation





#### More information:

Website: www.ears.nl

Email: andries.rosema@ears.nl

## Training, consultancy and capacity building related to water & soil research

- A platform for knowledge exchange between experts, specialists, field technicians, project designers, team leaders, fieldworkers, farmers and policy-makers involved in water and soil research.
- Organisation involved: Eijkelkamp Training & Consultancy (part of the Royal Eijkelkamp Earth Sampling Group)
- Countries applied: Worldwide



#### More information:

Website: www.eijkelkamp.com Contact person: Mrs. Marijgje Wijers Email: etc@eijkelkamp.com





## **Reaching small holders**

- Small holders represented through intermediate, e.g.:
  - Ministry of Agriculture (extension officers)
  - Industry (brewery, nutrient supplier, etc.)
  - local NGO
  - farmer cooperation
  - other







## **Possible service provision – insurance (2)**

Partnership might include e.g.:

- Intermediate(s) (Min. of Agri., NGO, value chain organization, other)
- (Spatial) information service provider(s)
- Local insurance companies
- Re-insurance company
- Others, e.g. mobile telecom provider, bank







## **G4AW Directory - Finding partner(s)**

# G4AW Facility About G4AW Agenda Tender information G4AW Directory Organisations Registration Map Subscribe Related information FAQ Contact Disclaimer

#### Note: Country matchmaking sessions assist in finding partners

#### Syecomp Business Services Ltd (Agricinghana)



#### Visiting Address F530/4 Ring-Road East, PMB CT 284, Cantonments, Accra 00233 Accra Ghana

#### T +233 201442191

sallavi@syecomp.com

#### http://www.agricinghana.com

Syecomp Business Services Ltd (www.agricinghana.com), a registered private company in Ghana, is a market leader in the provision of market access support services and Geographic Information Systems (GIS) training, survey and mapping services for smallholder farmers and agricultural development projects in Ghana.

#### Directory search Q Enter company name Selection criteria: In Sector Select sector Residing in country Select. Expertise/Core business Select Organisation looking for expertise: Select Active in country Select. Interested in G4AW country Select. Organisations

PDF.

Print





## **G4AW Contact**

- URL: <u>www.spaceoffice.nl/g4aw</u>
- E: g4aw@spaceoffice.nl

## Contact person:

Adriaan Bakker Netherlands Space Office

