



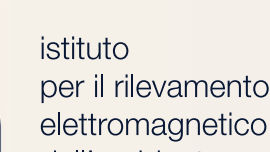
ERMES

AN EARTH OBSERVATION MODEL BASED RICE INFORMATION SERVICE



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ERMES aims to develop a prototype service dedicated to the rice sector, based on the integration of satellite Earth Observation data, in-situ measurements and crop modelling.

WHY

The agricultural sector is facing huge global challenges due to pressures of food demand, increased price-competition produced by market globalization and food price volatility (G20 Agriculture Action Plan) and needs more environmentally and economically sustainable farming practices. Earth Observation (EO) systems can significantly contribute to these topics by providing reliable real time information on crop distribution, status and seasonal dynamics.

WHAT

ERMES SERVICES ARE AIMED AT

- SUPPORTING REGIONAL AUTHORITIES IN THE IMPLEMENTATION OF AGRO-ENVIRONMENTAL POLICIES
- PROMOTING SOLUTIONS FOR SUSTAINABLE MANAGEMENT PRACTICES IN FARMING ACTIVITIES
- PROVIDING INDEPENDENT RELIABLE INFORMATION TO THE AGRI-BUSINESS SECTOR

Study areas have been selected in three Mediterranean countries, responsible for 85% of total European rice production: Italy [51.9%], Spain [25.4%] and Greece [7.0%].

IN DETAIL, trials for regional and local services will be conducted in:

- Piedmont-Lombardy rice district [Italy]
- Valencian rice district [Spain]
- Thessaloniki/Serres rice districts [Greece]

WHERE



END-USERS

ITALY DG Agricoltura Regione Lombardia | Ente Nazionale Risi • SPAIN Regulatory Board of Denominación de Origen Arroz de Valencia (C.R.D.O.) • GREECE Cereal Institute of the Hellenic Agricultural Organisation (DEMETER) | Agricultural Cooperative of Chalastra B | KANAKAS BROS Ltd • INTERNATIONAL Allianz Re

EARTH OBSERVATION DATA

SATELLITE RADAR/OPTICAL IMAGES ANALYSIS TO PERFORM

- RICE MAPPING
- CROP MONITORING
- BIO-PARAMETERS RETRIEVAL
- METEOROLOGICAL VARIABLES ESTIMATION



MODELLING

SIMULATION OF RICE GROWTH, DEVELOPMENT AND YIELD BY STATE OF THE ART CROP MODELLING SOLUTIONS

GEO PORTAL



WEB SERVICES FOR DATA ACCESS, ANALYSIS AND DISTRIBUTION

IN-SITU OBSERVATIONS DATA

IN-SITU OBSERVATIONS FROM FIELD OPERATORS PROVIDED TO THE CROP MODEL USING ADVANCED SMART TECHNOLOGIES



REGIONAL SCALE

FARM SCALE

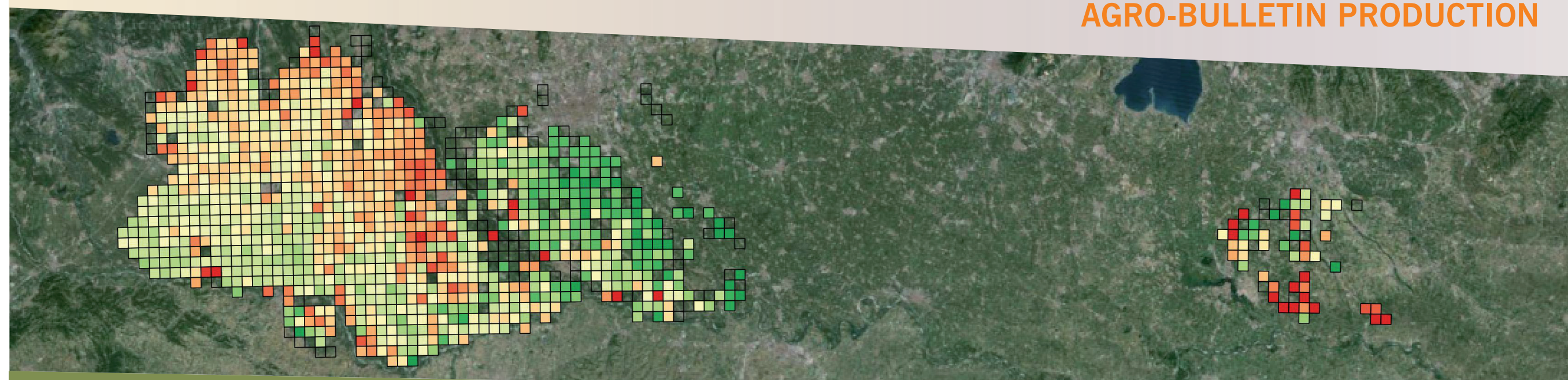
REGIONAL RICE SERVICE (RRS)



AGRO-MONITORING SYSTEM DEVOTED TO REGIONAL YIELD FORECASTING AND ESTIMATION AND RISK ALERTING

DEDICATED TO: PUBLIC AUTHORITIES, CONTROL BODIES AND PRODUCERS' ASSOCIATIONS

SERVICE: DIGITAL MAPS AND GEO-PORTAL ANALYSIS FUNCTIONALITIES OF USE FOR AGRO-BULLETIN PRODUCTION



SOWING DATE 2013

- <100
- 100-115
- 115-130
- 130-145
- 145-160

RRS PRODUCTS

- Rice Crop extent
- Crop temporal evolution (NDVI time series, phenological stages occurrence)
- Alerting on biotic and abiotic risks
- Yield forecasts; end of season yield and grain quality estimation

LOCAL RICE SERVICE (LRS)



HIGH RESOLUTION INFORMATION ON YIELD VARIABILITY, RISK ALERT AND CROP DAMAGE ASSESSMENT

DEDICATED TO: FARMERS, AGRO-SERVICE AND INSURANCE COMPANIES

SERVICE: FARM LEVEL CUSTOMIZED INFORMATION AND SMART TECHNOLOGIES TO SUPPORT AGRO-MANAGEMENT AND PLANNING



FIELD BIOMASS PATTERN

LRS PRODUCTS

- High resolution rice cultivated area
- Intra-farm yield variability
- Field level alarming on biotic and abiotic risk
- Crop damage



FINAL BENEFICIARIES: AGRIBUSINESS SECTOR

IF YOU ARE INTERESTED IN BECOMING A NEW USER AND/OR IN TESTING THE FUNCTIONALITY OF THE SERVICES, PLEASE CONTACT US!

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