

HOLISTIC project - Application of ICT in wildfire prevention and protection with emphasize to wildfire monitoring and surveillance in Adriatic area

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"Application of Informatics and Communication Technologies In Fire and Rescue Services" 4.9.2015., Hotel Westin, Zagreb

Projekt HOLISTIC- Primjena ICT u prevenciji i zaštiti od požara raslinja s naglaskom na protupožarni nadzorni i motrilački sustav Jadranske regije area

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"Application of Informatics and Communication Technologies In Fire and Rescue Services" 4.9.2015., Hotel Westin, Zagreb

Opći cilj projekta HOLISTIC je poduprijeti održivo upravljanje zajednički prirodnim resursima kroz prevenciju požara i potresa i razvoj prekogranične suradnje na području Jadrana vezano uz ove prirodne katastrofe koje su najveće ugroze jadranske regije.

Overall **objective** of HOLISTIC project is to support the **sustainable joint management** of natural resources through the **prevention of wildfires and earthquakes** and to developing the **cross-border cooperation** in the Adriatic area concerning these natural catastrophes.

HOLISTIC je projekt sufinanciran od EU kroz program pred-pristupne pomoći **IPA Adriatic Cross Border Cooperation** 2007 – 2013.

Inicijator i voditelj projekta je **Splitsko – dalmatinska županija**.

HOLISTIC project is co-funded by EU Instrument for Pre-Accession Assistance through **IPA Adriatic Cross Border Cooperation** 2007 – 2013.

The project initiator and leader is **Split – Dalmatia County** from Croatia.



Partneri / Partners

20 partnera – Županije, regije i organizacije svih zemalja jadranske regije (Hrvatska, Italija, Bosna i Hercegovina, Crna Gora, Albanija i Grčka).

20 partners - Counties and organizations from Adriatic region (Croatia, Italia, Slovenia, Bosnia and Herzegovina, Monte Negro, Albania and Greece).



REGIONE DEL VENETO



ideas information innovation
consorzio punto europa

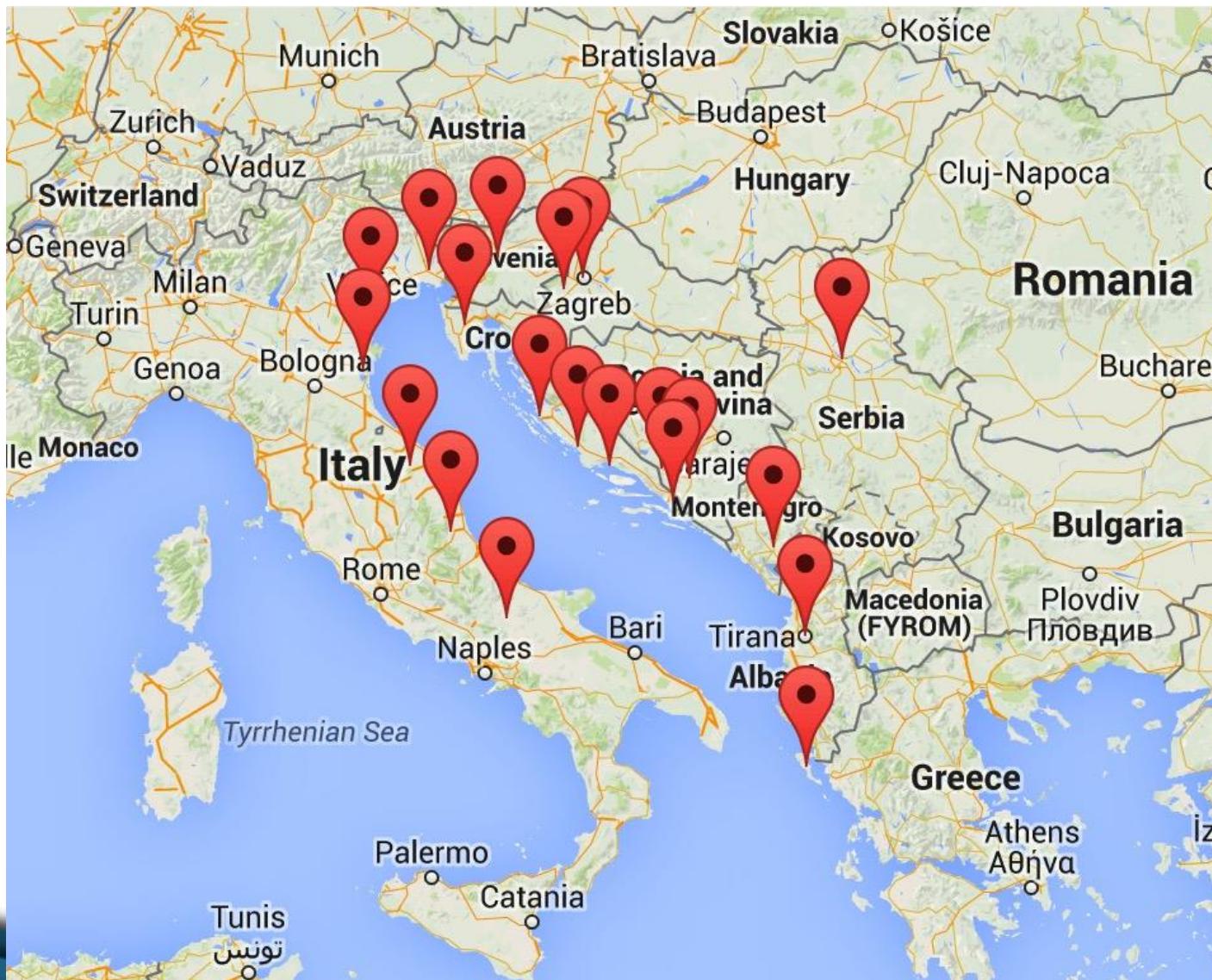


REGIONE MOLISE



PROTEZIONE CIVILE
REGIONE AUTONOMA
FRIULI VENEZIA GIULIA
civil defence





POVIJEST / BACKGROUND

Otoči, priobalno i zaobalno područje Jadrana spada u područja s velikim rizikom od požara raslinja, posebno tijekom ljeta zbog

- Vrlo tople i suhe klime,
- Gusto raspoređene pretežno borove šume,
- Veliki broj turista.

The costal area of Adriatic and its neighboring areas belong to regions with high risk from forest fires, especially during the summer due to

- Very warm climate with low level of humidity,
- Densely spaced conifer forests,
- Lot of tourists.

POVIJEST / BACKGROUND

Jedna od takvih regija je i Splitsko – dalmatinska županija u kojoj je primjerice katastrofalne 2003 godine bilo 130 požara raslinja koji su uzrokovali direknu štetu od 16 miliona €.

Zbog toga je u jesen 2003. g. Županija inicirala rad na holističkom pristupu protupožarnoj zaštiti koja je uključivala različite aktivnosti, od prijedloga novog načina korištenja biomase do upotrebe novih tehnologija.

One of such high risk regions is **Split Dalmatia County**, where for example during the year 2003 some 130 wildfires occurred, causing direct damage of almost 16 million €.

Therefore Split Dalmatia County has initiated in 2003 a work on **holistic approach** to wildfire prevention that will include various preventive actions, use of biomass and new technologies.

PRIPREMA PROJEKTA / PROJECT PREPARATION

Na temelju ovih iskustava Splitsko dalmatinska županija je još u 2007. počela pripremati strategijski projekt za IPA Adriatic fondove. Napokon u 2013. projekt je prihvaćen pod prioritetnom temom

2 Prirodni i kulturni resursi i prevencija rizika, mjera 2.2. Upravljanje i prevencija od prirodnih i tehnoloških rizika prirodnim i kulturnim resursima.

Based on this project Split Dalmatia County has started in 2007 preparation of strategic project targeted to IPA Adriatic funds.

Finally in 2013 the project was prepared and accepted as **Adriatic IPA** project under priority

2 Natural and Cultural Resources and Risk Prevention, measure 2.2 Natural and cultural resource management and prevention of natural and technological risks.



FIRERISK PREVENTION AND PROTECTION



Safeguard



Case study



Best Practices



Pilot Projects

SEISMIC RISK MONITORING OF STRATEGIC BUILDINGS



Safeguard



Case study



Best Practices



Pilot Projects

PROJEKT UKRATKO / PROJECT HIGHLIGHTS

- 20 partnera / partners
- 8 zemalja / countries
- 30 mjeseci trajanja (od 1.01.2014) / months duration (from 1st January 2014)
- 9 radnih paketa (WP) / Workpackages (WP)
- 9.3 million €

RADNI PAKETI WP5 i WP6 / WORK PACKAGES WP5 i WP6

Nama su za ovaj skup posebno zanimljivi radni paketi:

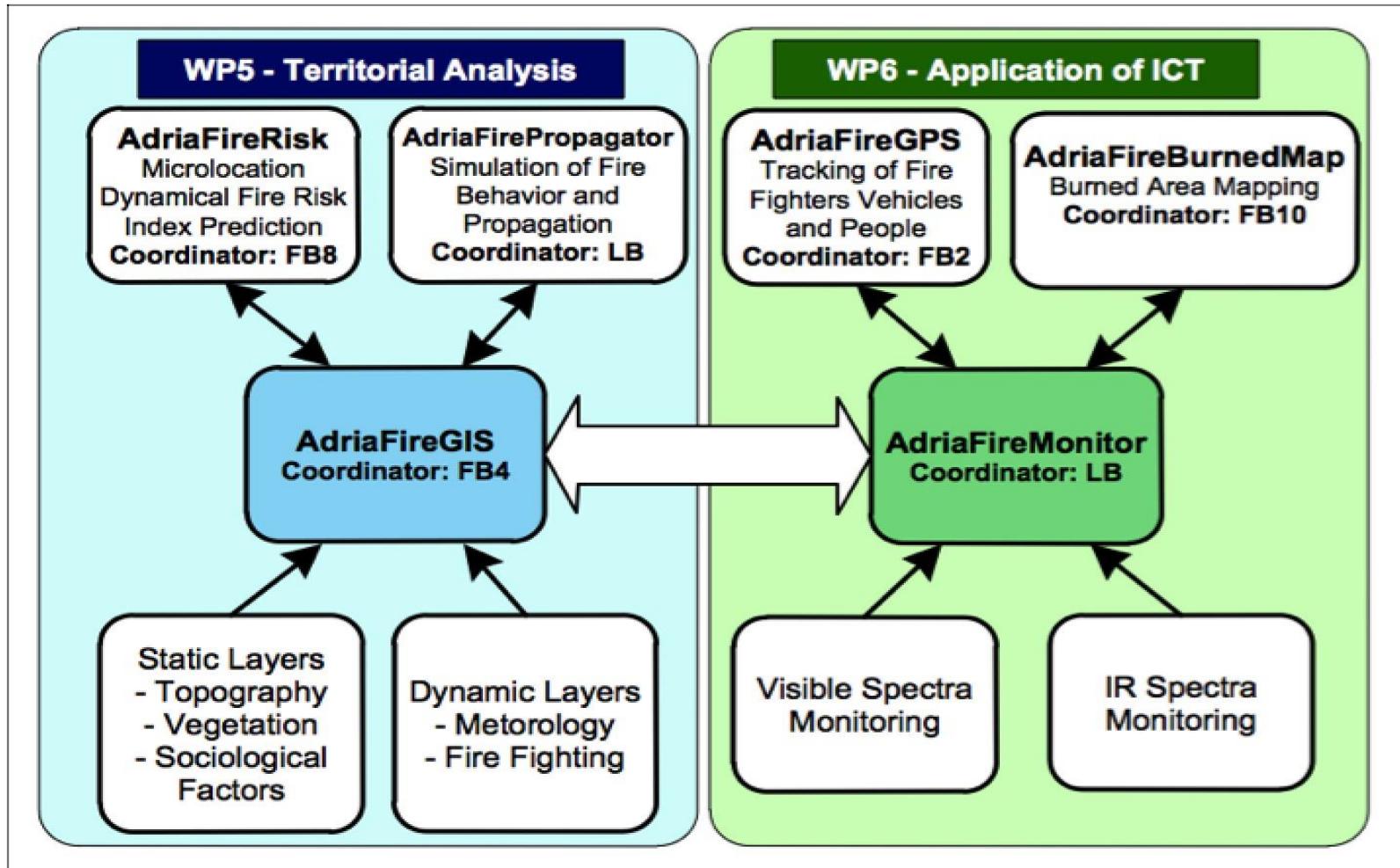
WP5 – Teritorijalna analiza vezana uz prevenciju i borbu protiv požara raslinja i primjena CloudGIS tehnologija u pred-požarnim, požarnim i post-požarnim aktivnostima

WP6 – Primjena ICT u prevenciji i zaštiti od požara raslinja.

For this Conference Workpackages WP5 and WP6 are of particular interest:

WP5 - Territorial analysis concerning wildfire prevention and fire fighting policy and application of Cloud GIS technologies in pre-fire, fire and post-fire activities

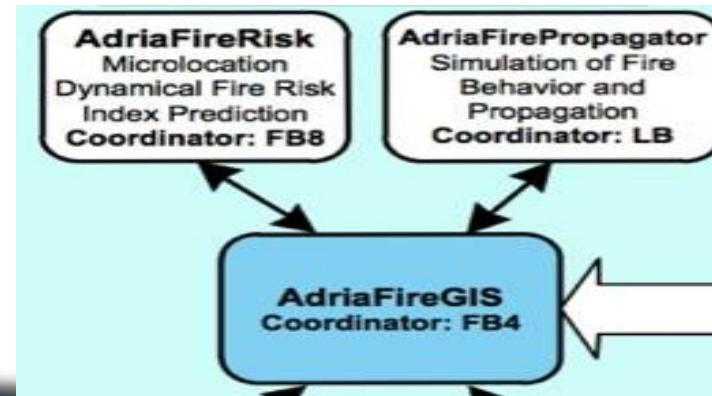
WP6 - Application of ICT in wildfire prevention and protection



Povezanost WP5 i WP6 / Interconnections of WP5 and WP6

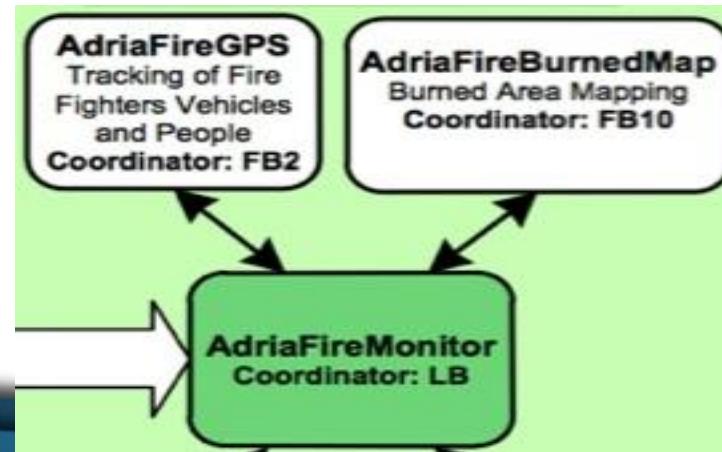
Centralni dio WP5 je CloudGIS aplikacija AdriaFireGIS posebno prilagođena jadranskoj regiji s dva modula za dinamički proračun rizika opasnosti od požara (AdriaFireRisk) i simulaciju ponašanja i kretanja požara (AdriaFirePropagator).

Central part of WP5 is Cloud GIS application AdriaFireGIS specially adapted for Adriatic area with two Cloud based modules for micro location dynamical fire risk index prediction (AdriaFireRisk) and simulation of wildfire behavior and propagation (AdriaFirePropagator).



WP6 osim samog nadzora i motrenja u vidljivom i IR području uključuje i GPS praćenje vatrogasnih vozila (AdriaFireGPS), kao i mapiranje izgorene površine korišćenjem aplikacija za pametne telefone i tablete(AdriaFireBurnedMap).

WP6 includes, beside the wildfire monitoring and surveillance in visible and IR spectra, GPS tracking of Fire Fighters Vehicles (AdriaFireGPS) and Burned area mapping using smart phones and tablets (AdriaFireBurnedMap).



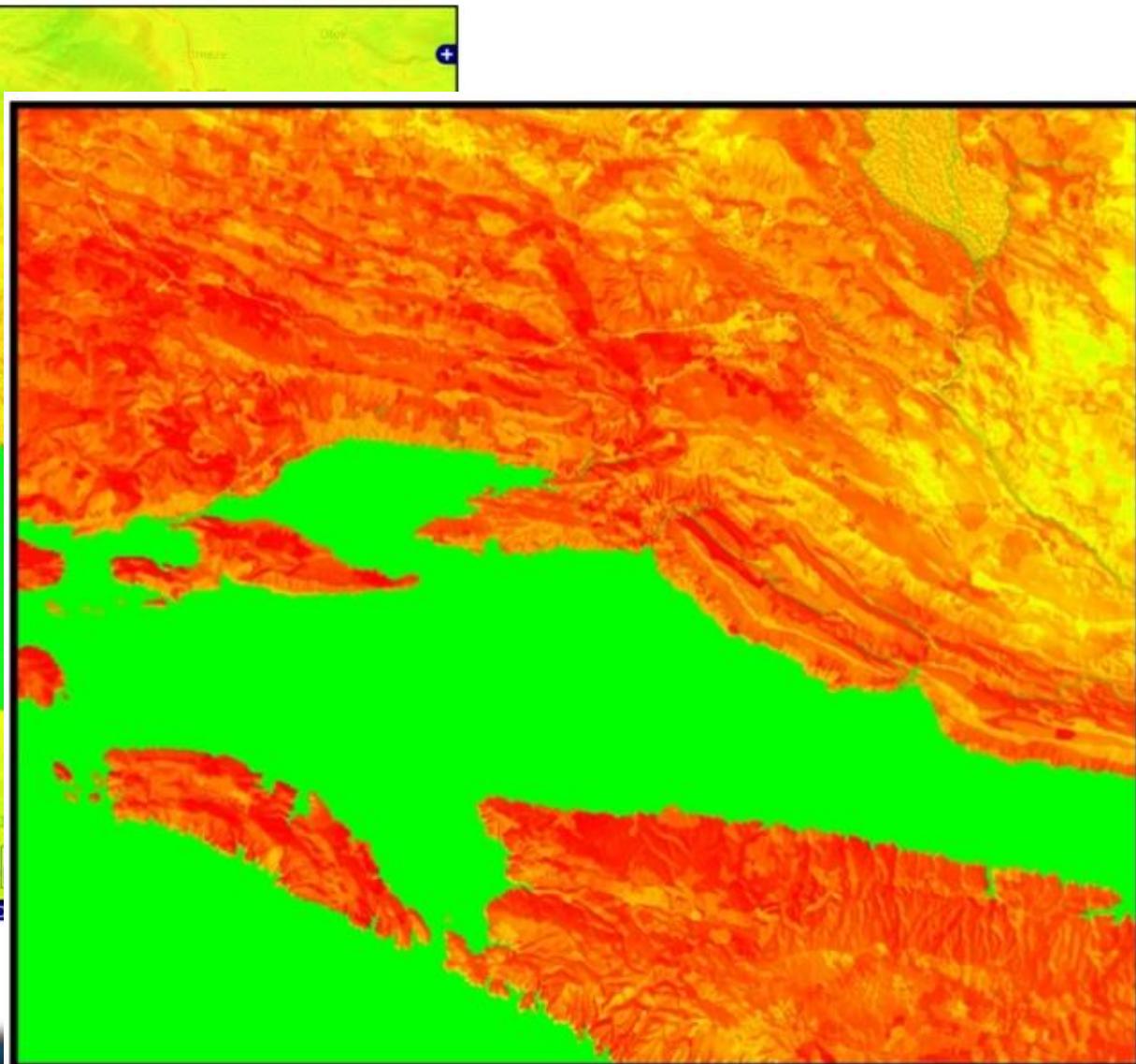
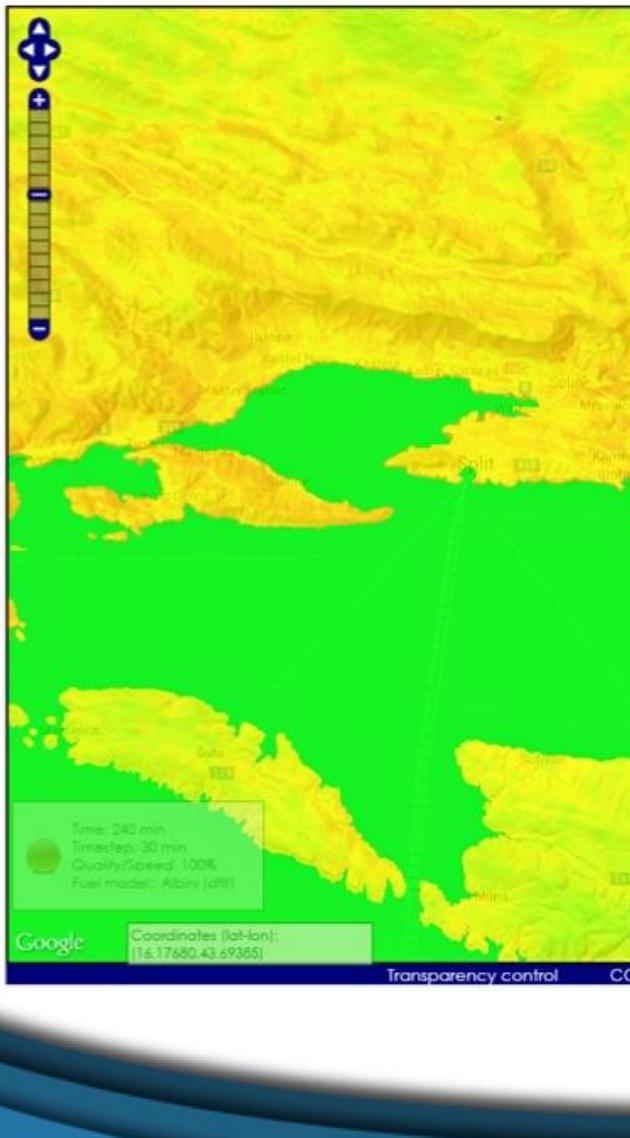
PILOT PROJEKTI / PILOT PROJECTS

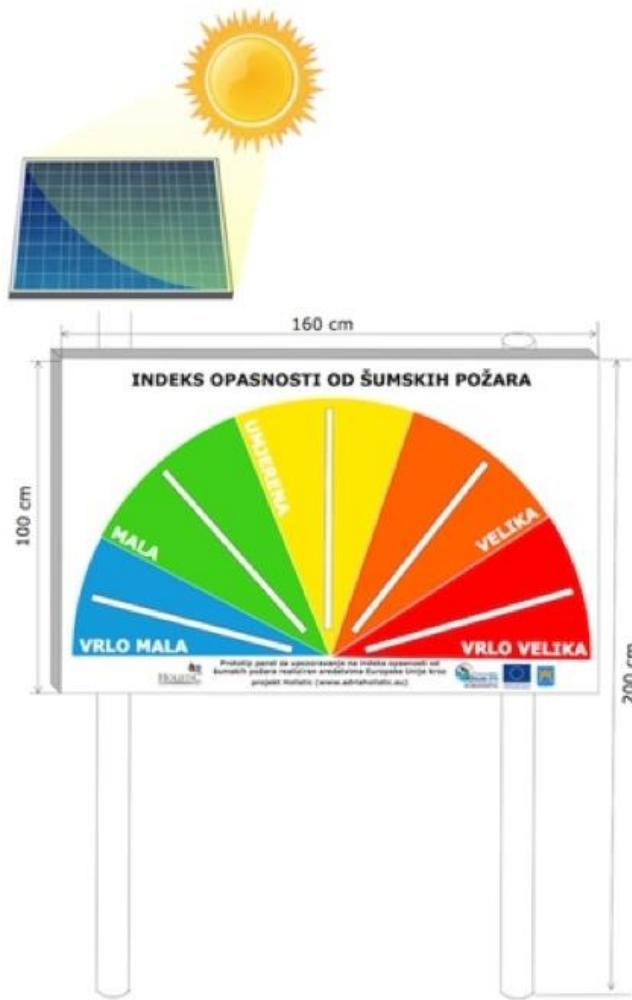
U ovim radnim paketima osim teorijske analize i pripreme elaborata predviđeni su i pilot projekti eksperimentalne realizacije svih ovih sustava u različitim regijama partnera.

In these work packages in addition to theoretical analysis and preparation of reports various pilot projects and experimental realization of all these systems are planned in different partners regions.

PILOT PROJEKTI / PILOT PROJECTS

- **AdriaFireRisk i AdriaFireRiskPanels** – Modeli i algoritmi za predviđanje rizika požara raslinja na mikro-lokacijskoj razini prilagođeni i podešeni za jadransku regiju, povezani s podizanjem senzibiliteta javnosti na povećane rizike od požara raslinja.
- **AdriaFireRisk and AdriaFireRiskPanels** - Wildfire risks predictive models and algorithms on micro-location scale adapted and tuned for Adriatic region connected with public awareness raising by installment of automatic panels for wildfire risk presentation.





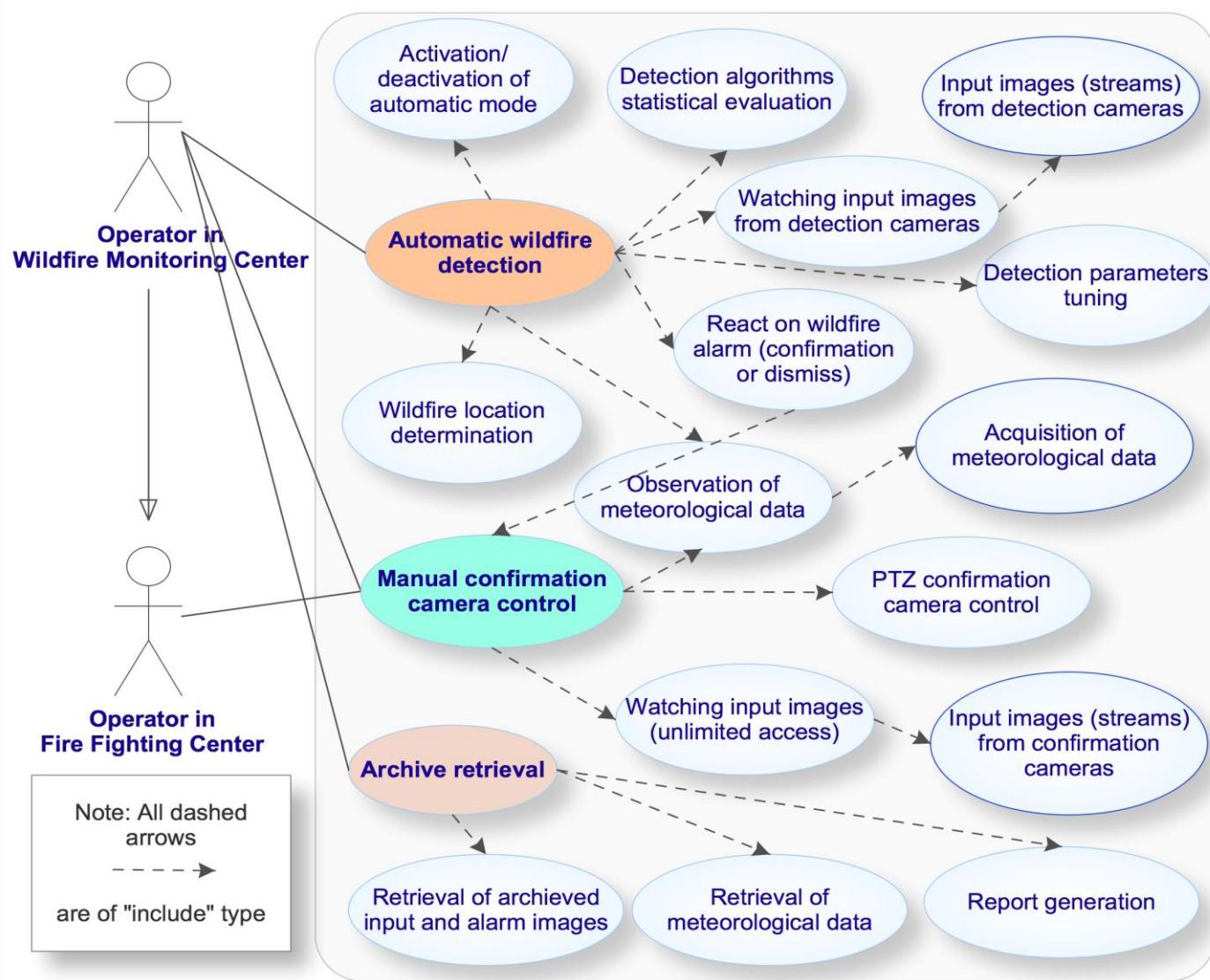
PILOT PROJEKTI / PILOT PROJECTS

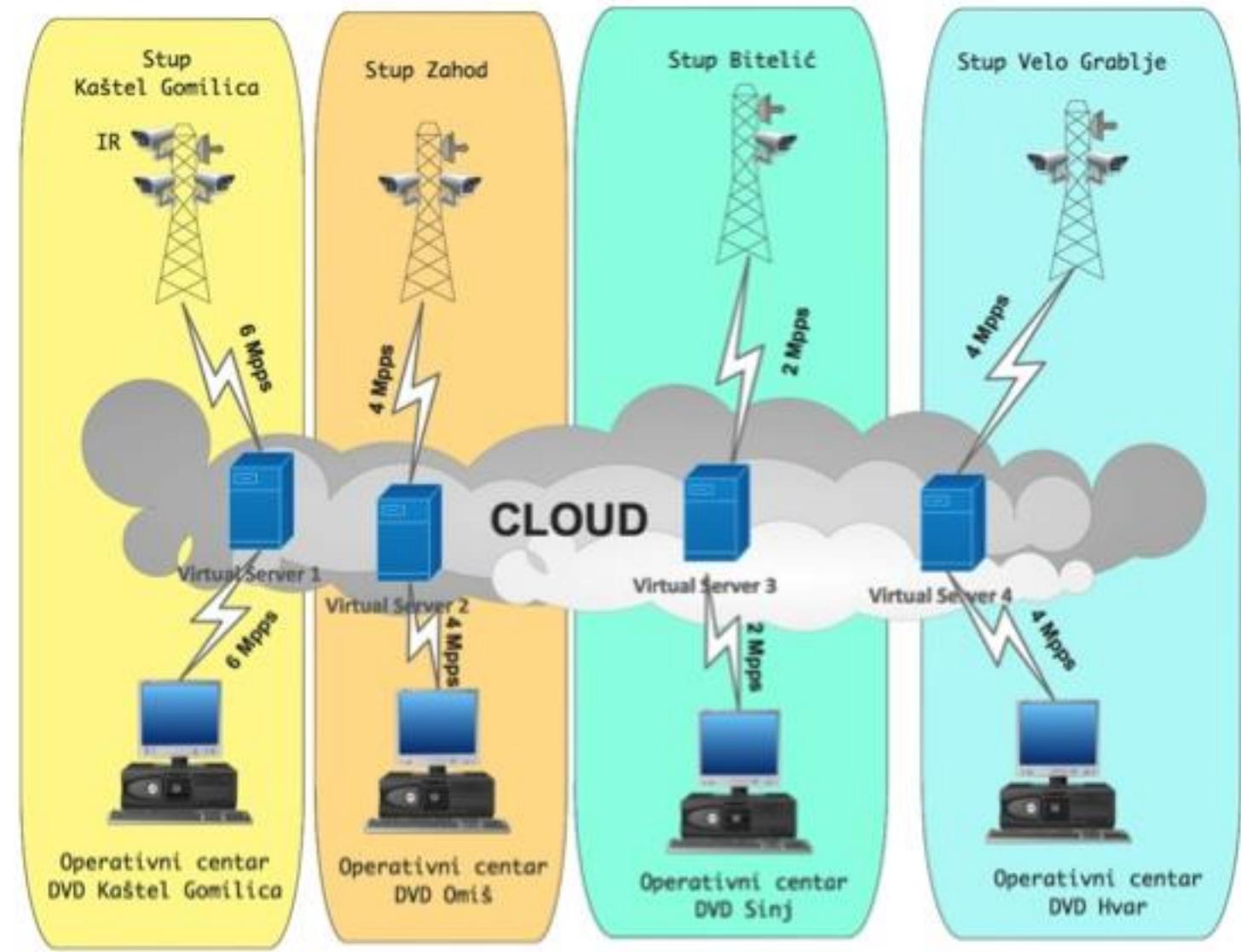
- **AdriaFirePropagator** – Web orjentirani 2-D simulator za modeliranje ponašanja i širenja požara raslinja prilagođen i podešen za jadransku regiju (u cijelosti realiziran u tehnologijama otvorenog koda)
- **AdriaFirePropagator** - Web based 2-D wildfire behavior modeling and spread simulation adapted and tuned for Adriatic region (entirely based on Open Source Technologies and Open GIS layers).

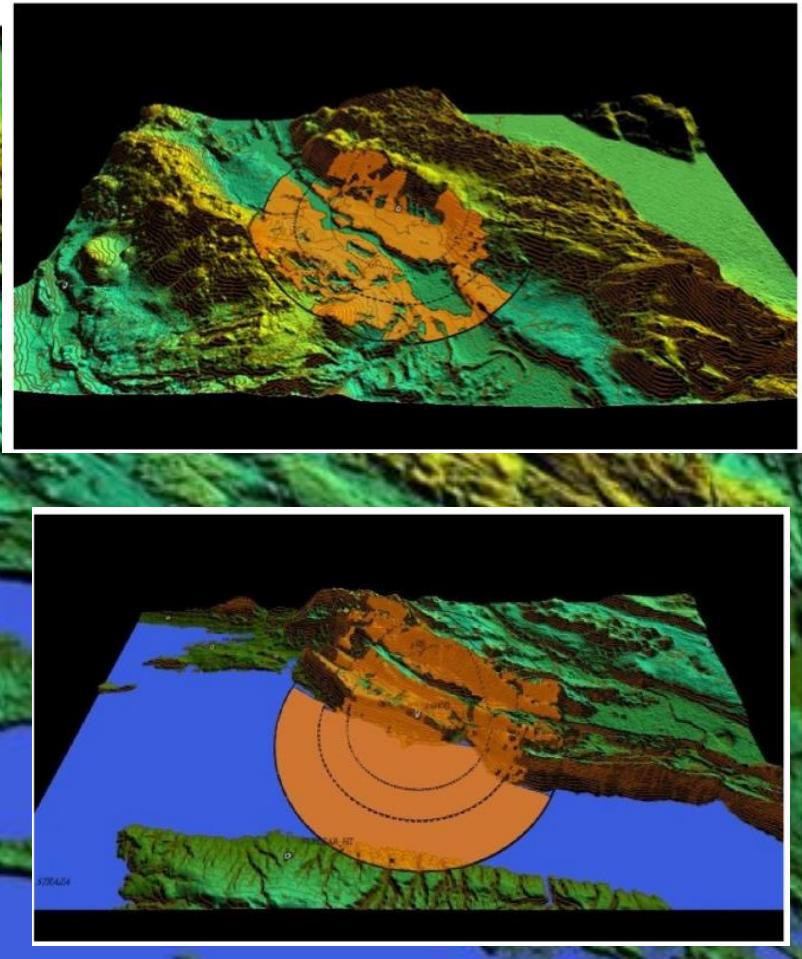
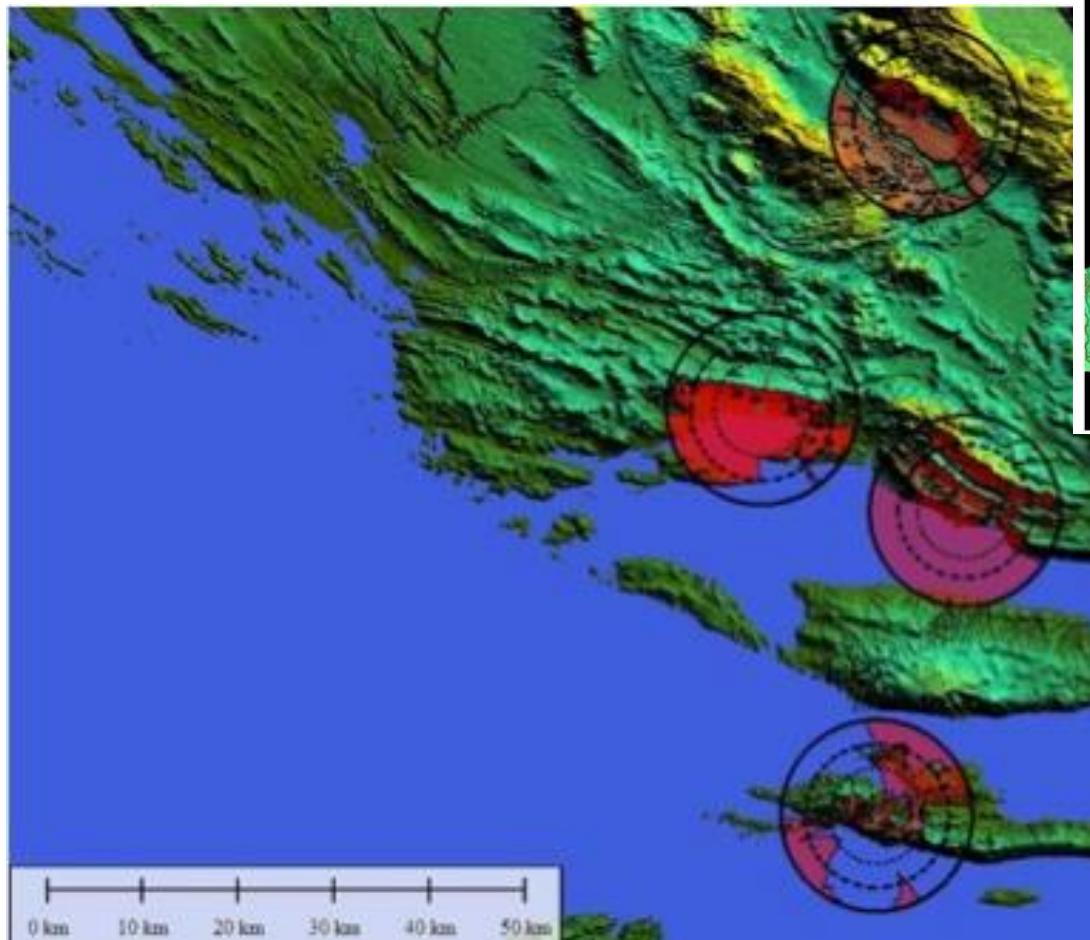


PILOT PROJEKTI / PILOT PROJECTS

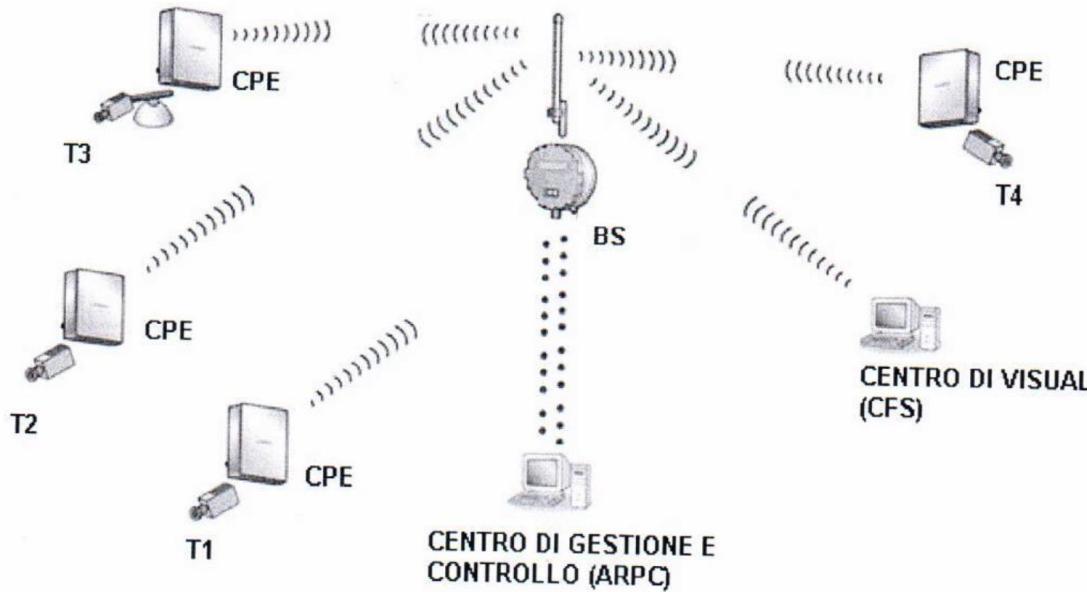
- **AdriaFireMonitor** – Nadzor i motrenje požara raslinja u vidljivom (14 regija) i IR području (3 regije) prilagođeno jadranskoj regiji
- **AdriaFireMonitor** – Video based (visible spectra – 14 regions and IR spectra – 3 regions) wildfire monitoring and surveillance adapted and tuned for Adriatic region.







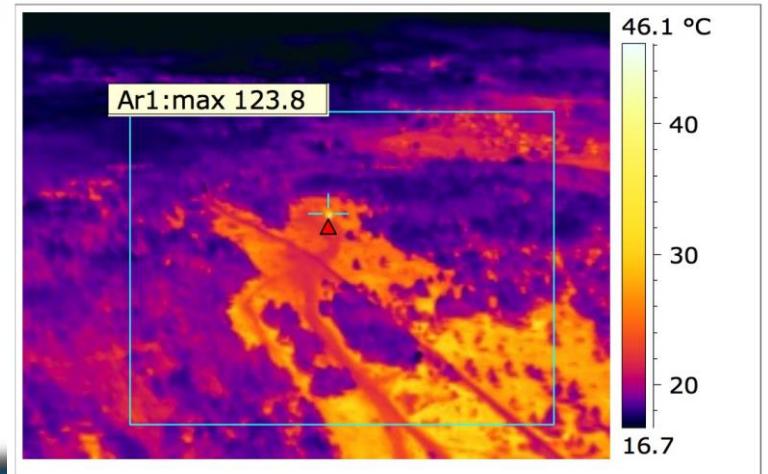
Splitsko-dalmatinska županija / Split and Dalmatia County



Regija Molisse / Molisse Region



Istria Region



REZULTATI / RESULTS

Konačni rezultati se očekuju za početak 2016.g. Tako bi od požarne sezone 2016. u jadranskim regijama uključenim u projekt na raspolaganju bili novi ICT alati za prevenciju i zaštitu od požara raslinja.

Final results are expected until the end of 2015, so firefighters in Adriatic region will have in 2016 fire season new advanced tools and applications for wildfire prevention, protection and suppression.