ICP Forests

MAKING FOREST MONITORING CHEAPER AND CLOSER TO SOCIETY: THE LIFE+ PROJECT "SMART4Action"

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LIFE13 ENV/IT/000813

4th ICP Forests Scientific Conference 2015

19–20 May 2015, Ljubljana, Slovenia

THE LIFE+ PROJECT “SMART4Action”

duration: September 2014 – March 2018

goals:

(1) design a new system to reduce the current annual costs by 30%, while recognizing the importance of national and regional statistics on key variables linked to sustainable forest management and ecosystem services

(2) improve communication with, and data transfer to, relevant stakeholders and citizens through a participatory process

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NETWORK OPTIMIZATION

During FutMon, the Level I network was merged with the National Forest Inventory.

There are still 31 level II permanent plots, with a different number of analysis.

For example deposition and air quality was monitored in 22 plots during FutMon and it is still monitored in 16 plots.

NETWORK OPTIMIZATION

Altitudinal gradient (0 – 2000 m)

Nitrogen gradient (4 – 16 kg/ha/a)

Aridity gradient (700 – 2400 mm/a)

High ozone concentration (35-65 ppb as mean of the vegetative period)

Different species

Abies alba
Fagus sylvatica
Larix decidua
Picea abies
Quercus cerris
Quercus ilex
Quercus robur/petrea

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NETWORK OPTIMIZATION

Geo-statistical modeling of the network

Analysis of relationships between abiotic factors (meteo-climatic, deposition and ozone) and biotic response (defoliation, growth, foliar element ratios)

Identify redundant information in order to abandon selected activities in selected plots (or entire plots) with minimal information loss

Define which measured data can be replaced by modeling and in which plot

Verify if any analysis can be performed at reduced frequency

Cost assessment of different network hypothesis

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COMMUNICATION IMPROVEMENT

Courses and info days at selected plots

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Touchscreens at the plots

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WebGIS of the full data set

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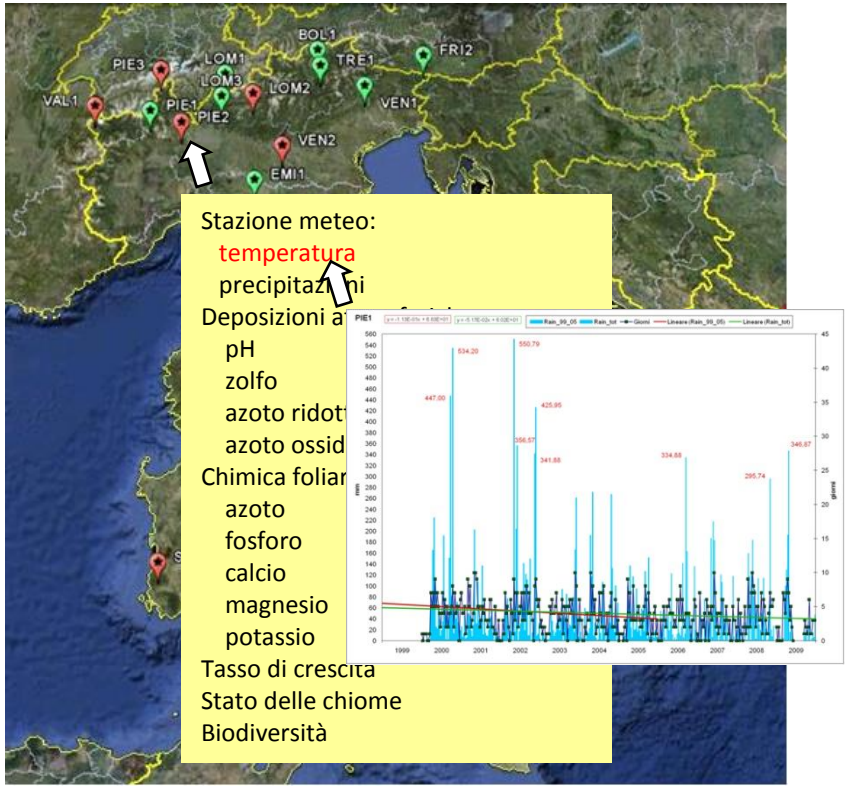

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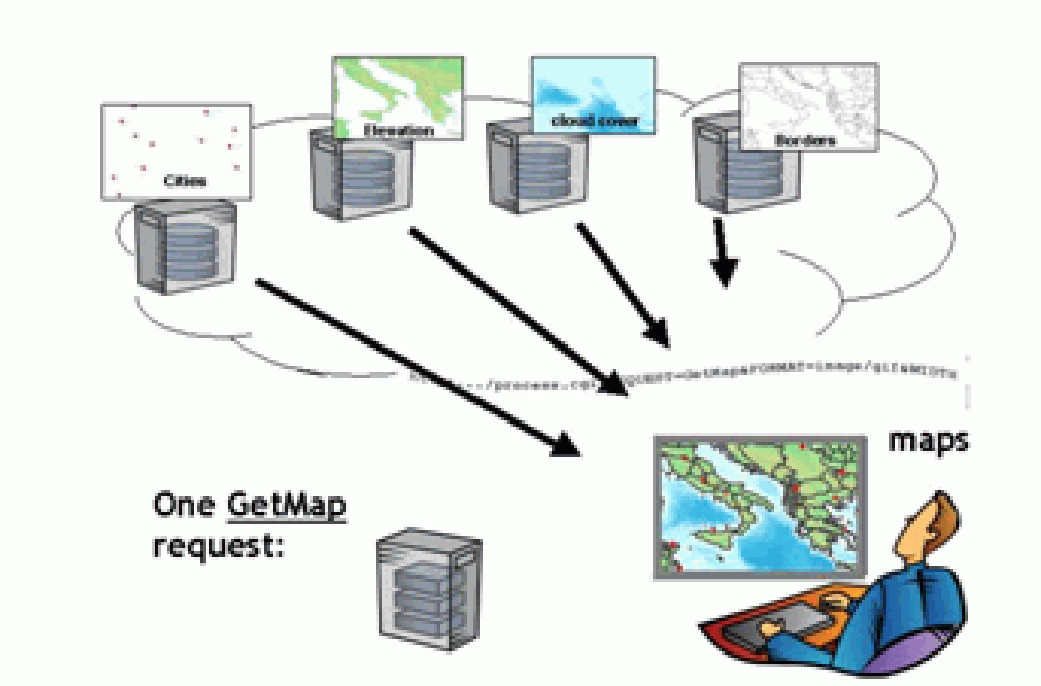
Geographical web services to provide data to technicians and administrators



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Geographical web services to provide data to technicians and administrators

Smartphone applications for informing citizens

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Geographical web services to provide data to technicians and administrators

Smartphone applications for informing citizens

Smartphone applications for involving citizens

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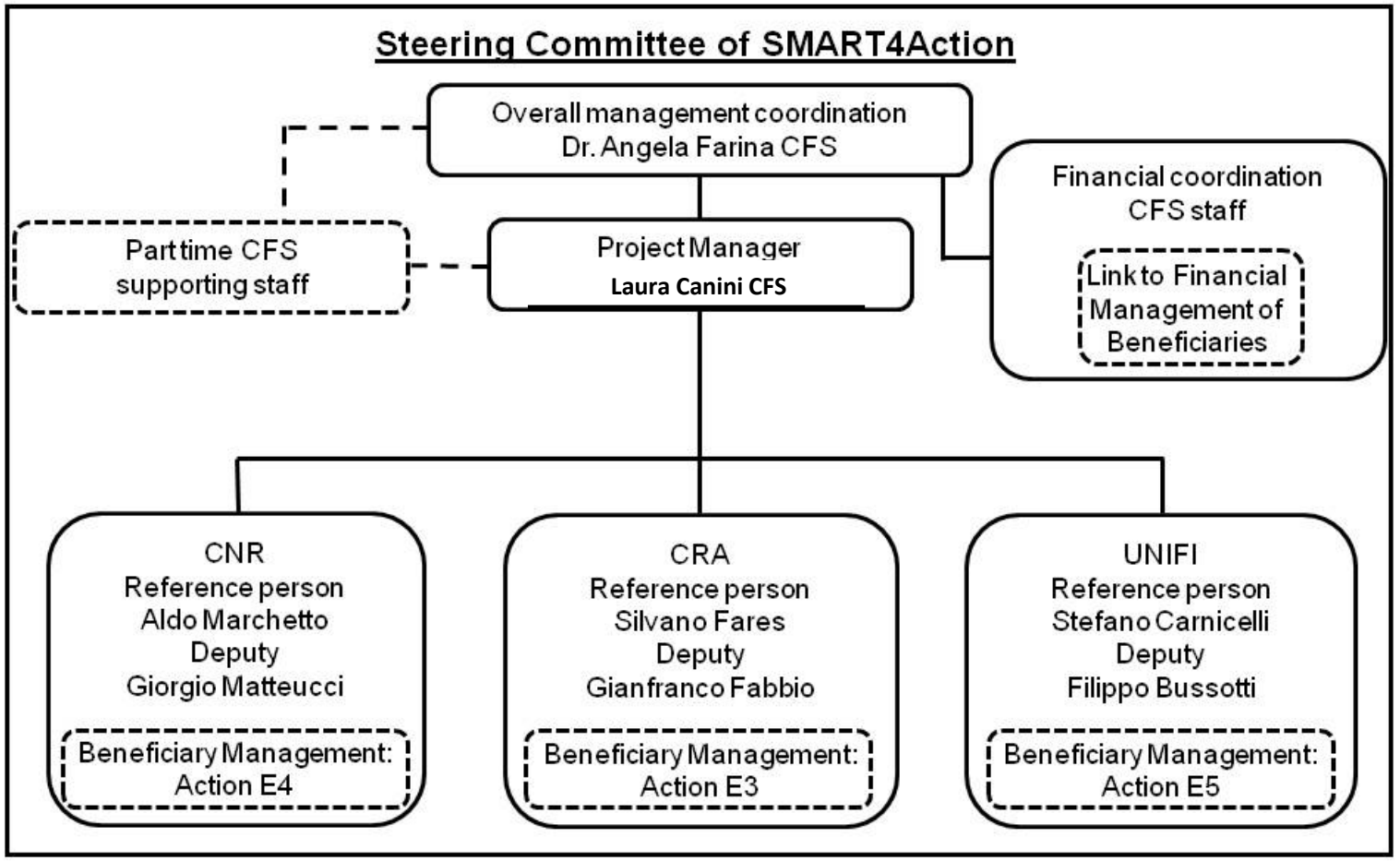

Deposition and Ozone
Foliar analysis

Growth, Meteo

Defoliation, Growth
Soil solution

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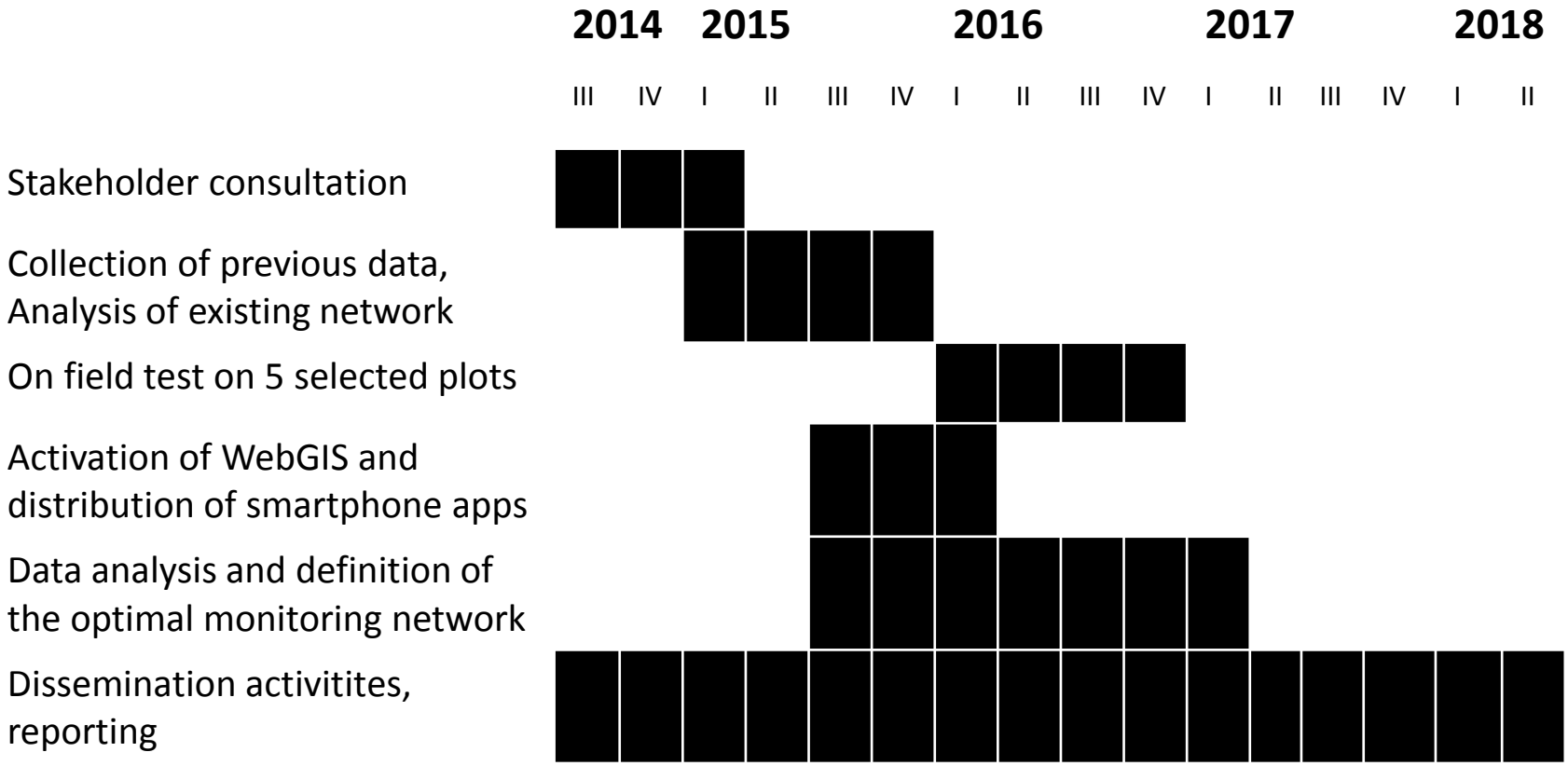

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