



Spanish-Portuguese Meteorological Information System for Trans-Boundary Operations in Forest Fires

Context

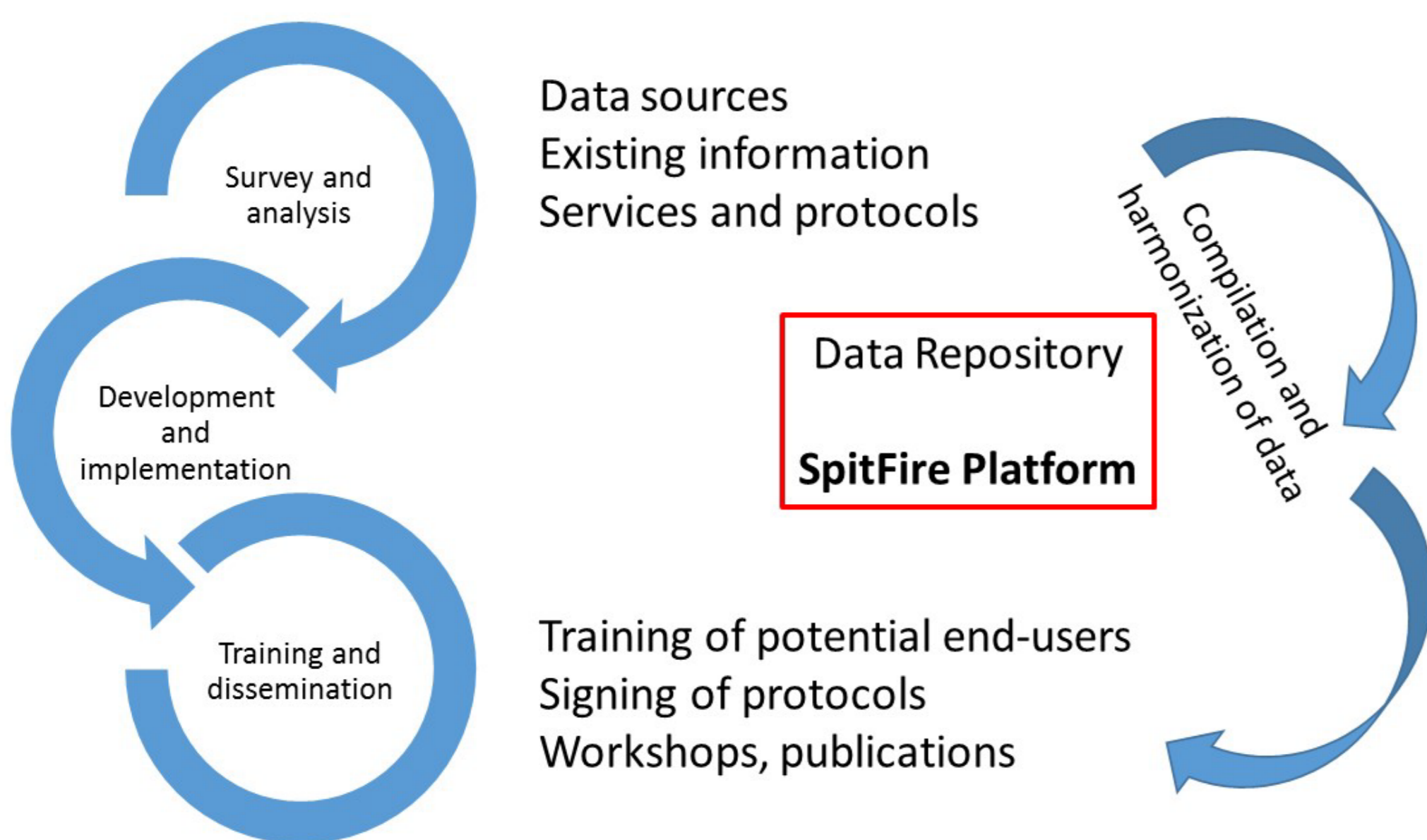
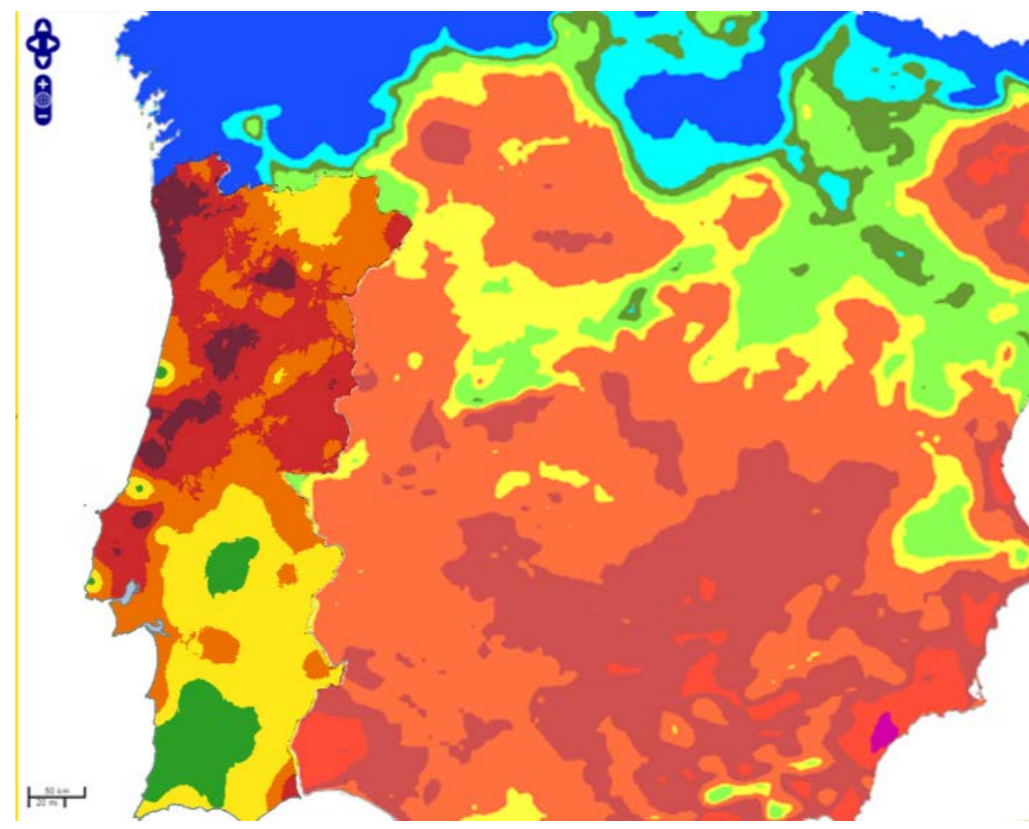
SpitFire addresses several issues aiming at the improvement of the efficiency of actions of prevention, preparedness and response to wildfires in the transboundary area between Portugal and Spain.

Objectives

Improve and increase the sharing of meteorological and forest fire risk information of the border area between Portugal and Spain.

Methodology

- identification, design and implementation of data interchange protocols;
- development of the *Spitfire Platform* to facilitate the sharing of information between Portuguese and Spanish civil protection authorities, and to provide decision support tools.



(above, left) General methodology used in the project spitfire (above, right) Area of interest in the border area between Portugal and Spain (very above, on the right of the "Objectives") Currently used fire risk map where is possible to observe the under data harmonization for both countries.

Consortium



ADAI - Associação para o Desenvolvimento da Aerodinâmica Industrial (PT) - Coordinator
www.adai.pt



METEGRID - Meteorological services (SP)
www.meteogrid.com



AEMET - Agencia Estatal de Meteorología (SP)
www.aemet.es



IPMA - Instituto Português do Mar e da Atmosfera (PT)
www.ipma.pt



ANPC - Autoridade Nacional de Proteção Civil (PT)
www.proci.pt

Project structure

T01 – Requirements analysis; survey and assessment of the existing services; system specifications

T02 – Information collection and data repository

T03 – Development of common fire weather indexes

T04 – Development of the SpitFire Platform

T05 – Training and operational implementation

T06 – Workshops organization and case studies



Important dates

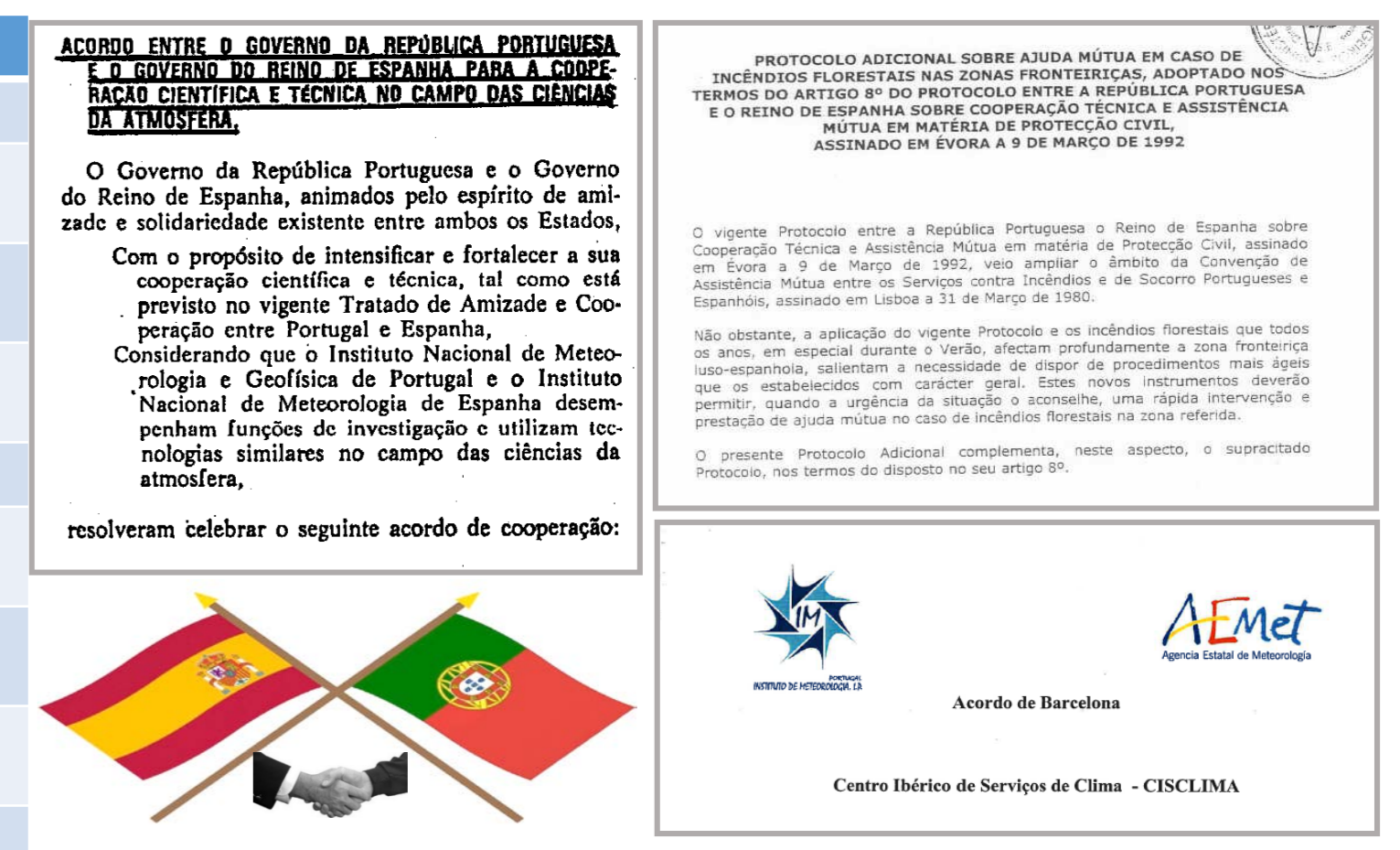
- January 1st, 2015 – SpitFire Project kick-off
- December 11th, 2015 – 1st Workshop: presentation of the preliminary results
- October 03rd, 2016 – SpitFire Training Session
- November 11th, 2016 – Final Workshop: presentation of the final results

Important Information

- SpitFire Project webpage – www.adai.pt/spitfire
- To receive information about the project, to clarify eventual doubts, to participate in the public SpitFire activities or to communicate with the consortium, please contact: e-mail: xavier.viegas@dem.uc.pt; telephone: 00351 239790731.

Task T01 – Requirements analysis; survey and assessment of the existing services; system specifications

Authors	Product	Format	Source
IPMA	FWI (obs, prev)	txt, jpg, dat	ftp, web
IPMA	Sub-indexes FWI (obs, prev)	txt, jpg, kmz	ftp
IPMA	WForecast AROME	txt, jpg, kmz	ftp
IPMA	Percentils FWI (obs., prev)	txt, jpg, kmz	ftp
IPMA	ICRIF (obs, prev)	txt, jpg	ftp
IPMA	RCM (obs, prev)	txt, jpg, ddm	ftp, web
IPMA	Meteograma AROME	jpg	e-mail
Meteo – IST	Meteograma WRF	--	web
Meteo – IST	Meteograma GFS	--	web
AEMET	FWI (obs, prev)	txt, jpeg	ftp, web, e-mail
AEMET	Sub-indexes FWI (obs, prev)	txt, jpeg	ftp, web, e-mail
AEMET	Risk classes FWI (obs, prev)	txt, jpeg	ftp, web, e-mail

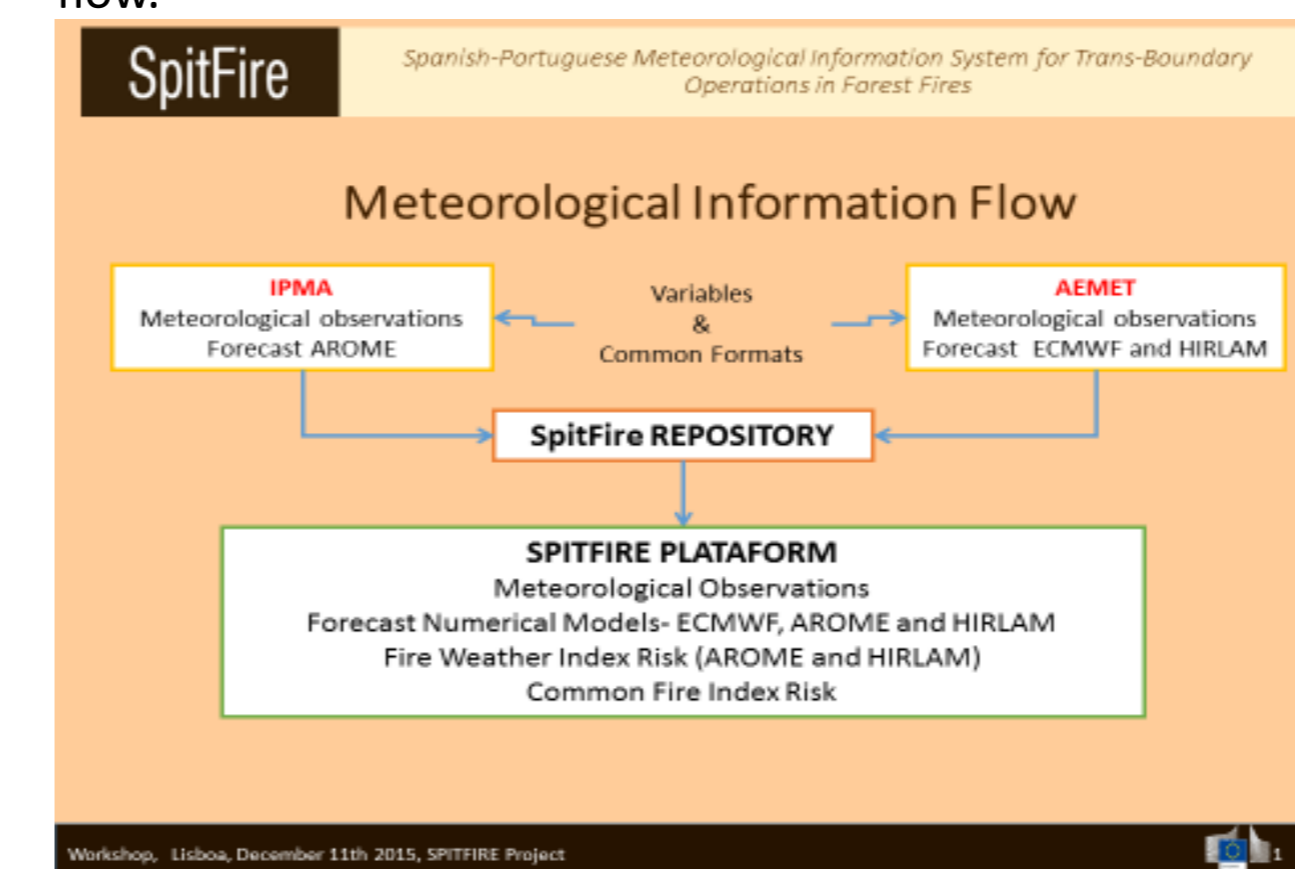


(above) Agreements and cooperation protocols between Portugal and Spain in the context of meteorological information exchange and fire fighting operational collaboration.

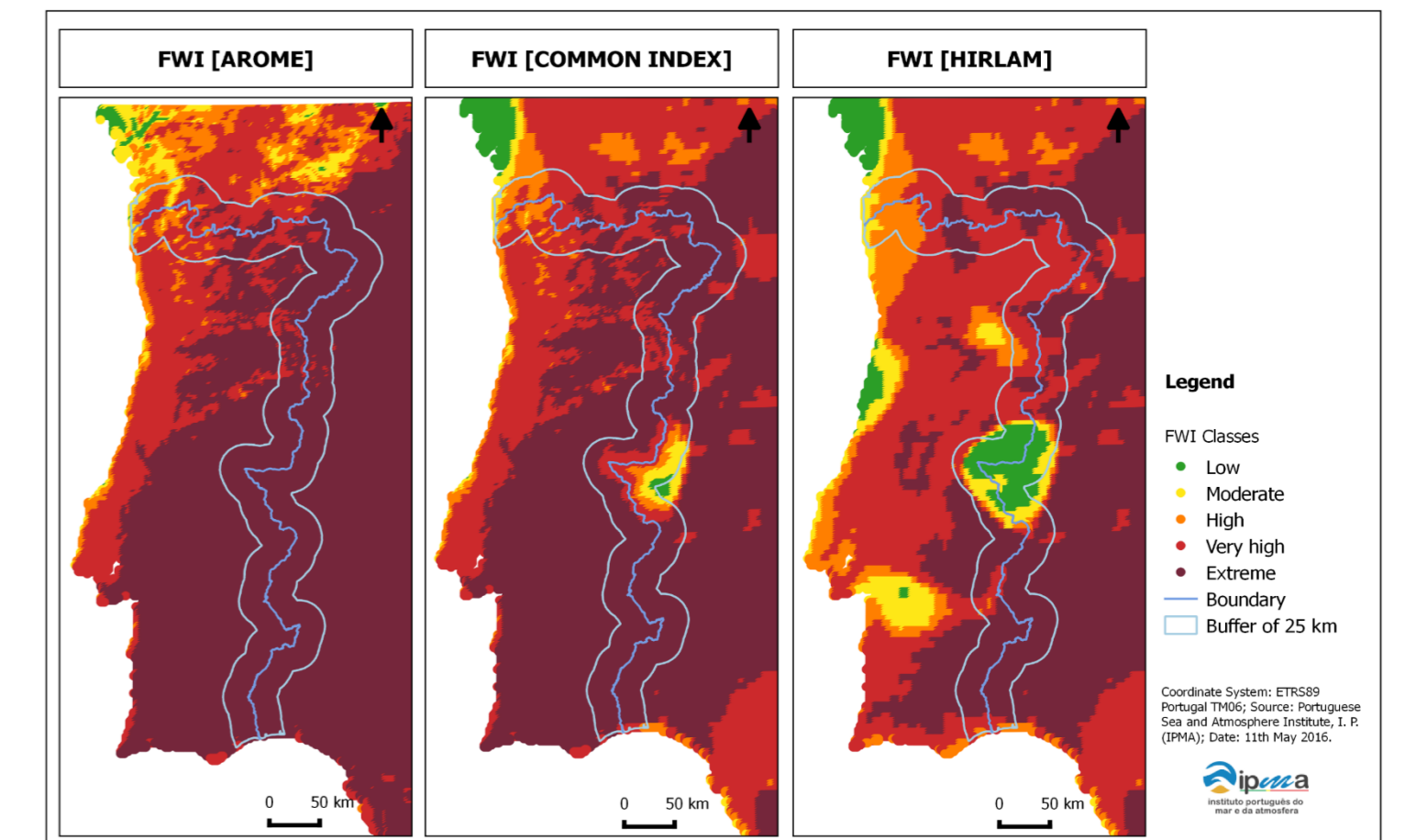
(Left) Examples of existing products and services.

Task T02 – Information collection and data repository

- Methodology for the obtention of consistent series of meteorological indexes of fire risk (FWI) historical data, information standardization and harmonization.
- Specifications and requirements of the structure of spitfire data repository and implementation of information flow.

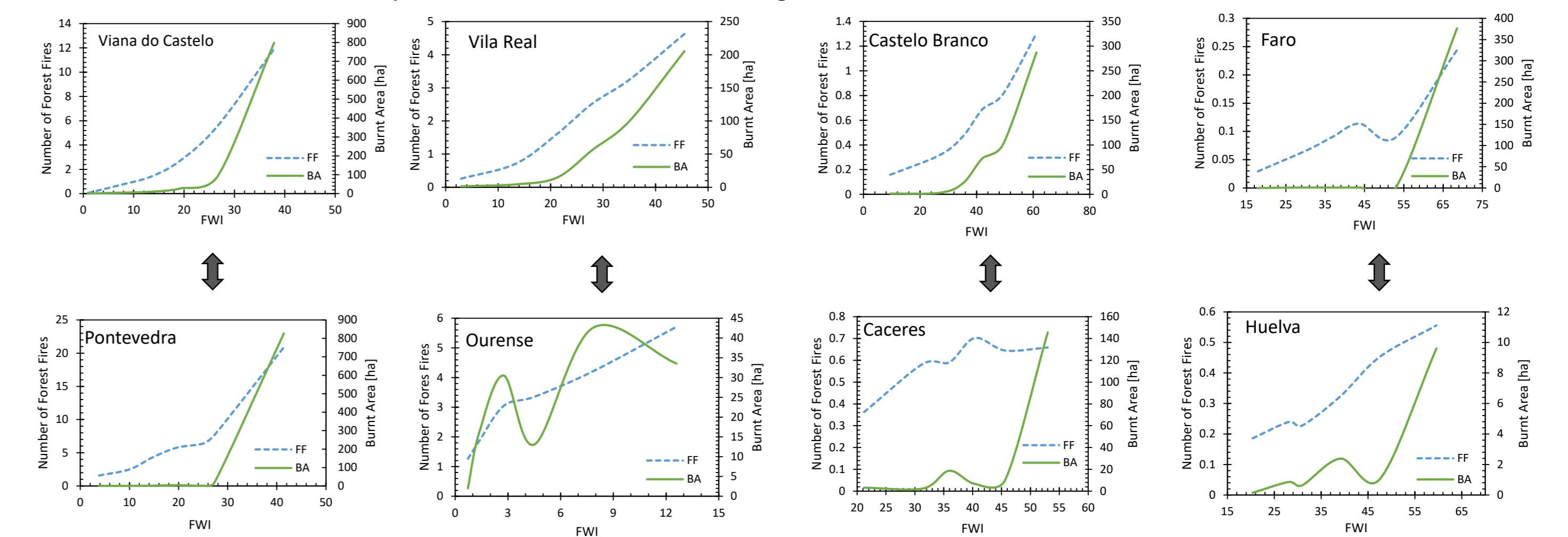


(above) Scheme of weather information flow



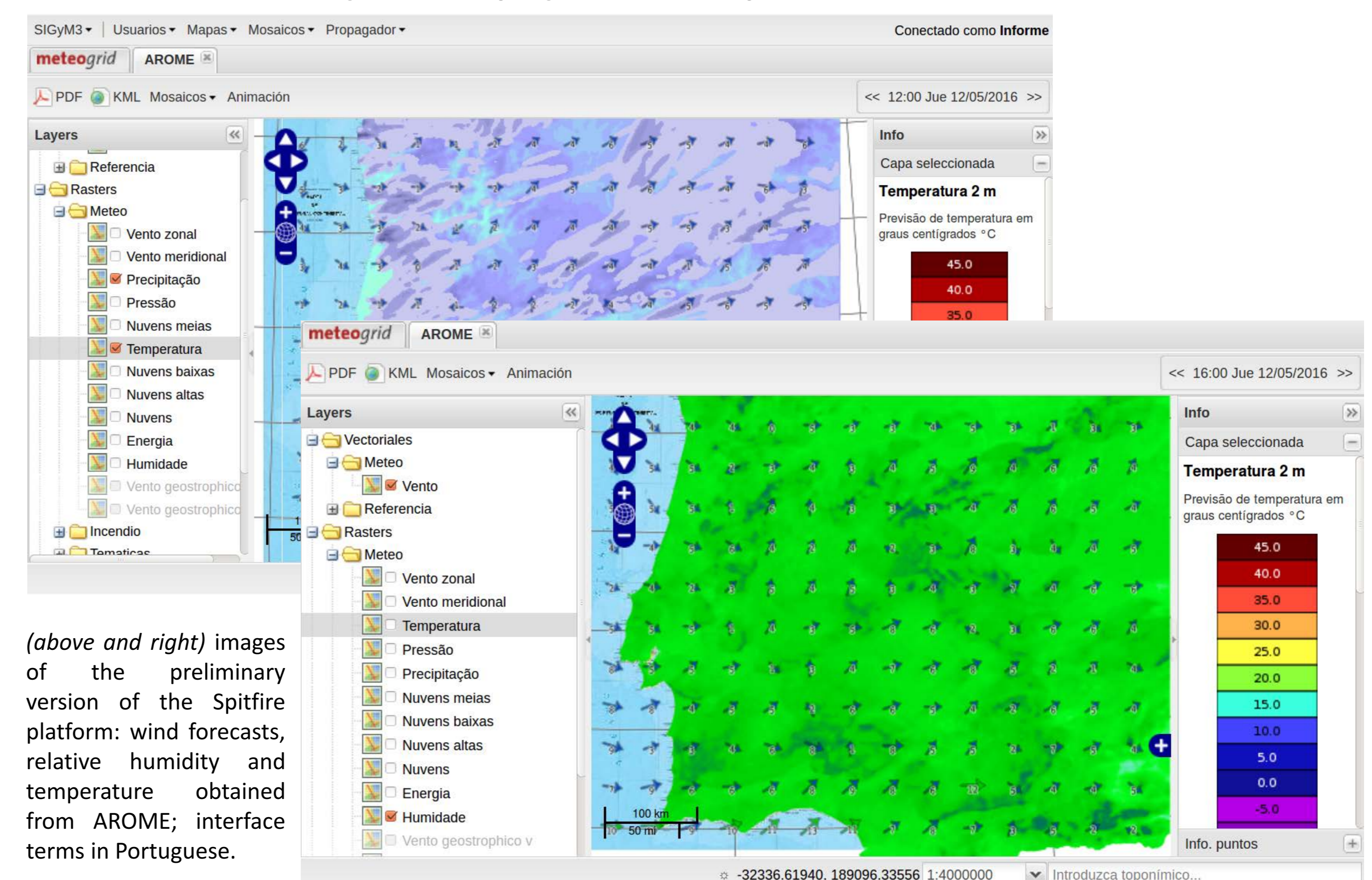
(above) Examples of the fire risk weather index (FWI). FWI determined using AROME model outputs (from IPMA, on the left); FWI determined using HIRLAM model outputs (from AEMET, on the right); common fire risk weather index (SpitFire, in the middle).

Task T03 – Development of common fire weather indexes



(above) Examples of the correlation analysis between the average burned area (AA) and the number of wildfire events (Nº IF) for the Portuguese districts and the contiguous Spanish provinces aiming the harmonization of the fire risk weather index values (FWI)

Task T04 – Development of SpitFire Platform



(above and right) images of the preliminary version of the Spitfire platform: wind forecasts, relative humidity and temperature obtained from AROME; interface terms in Portuguese.

Task T06 – Organization of Workshops



(above) Images of the 1st Spitfire Workshop on 11/Dec/2015 and SpitFire Training Session on 03/Oct/2016.