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**NOTE**

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From: General Secretariat of the Council  
To: Delegations  
Subject: Massive forest damages in Europe  
*- Information from the Italian delegation*

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Delegations will find in Annex an information note from the Italian delegation on the above mentioned subject to be raised under "Any other business" at the session of the Council ("Agriculture and Fisheries") on 17-18 December 2018.

## Massive forest damages in Italy: mapping and monitoring activities using EU Copernicus Programme "Emergency Management Service"

Between the 27<sup>th</sup> and 30<sup>th</sup> October 2018, Italy was affected by one of the most intense and catastrophic storm since many years.

In the most severely hit areas, rainfall has exceeded 600 mm, most of them concentrated in just three days (27<sup>th</sup>-29<sup>th</sup> October), associated with strong wind storm (up to 200 km per hour).

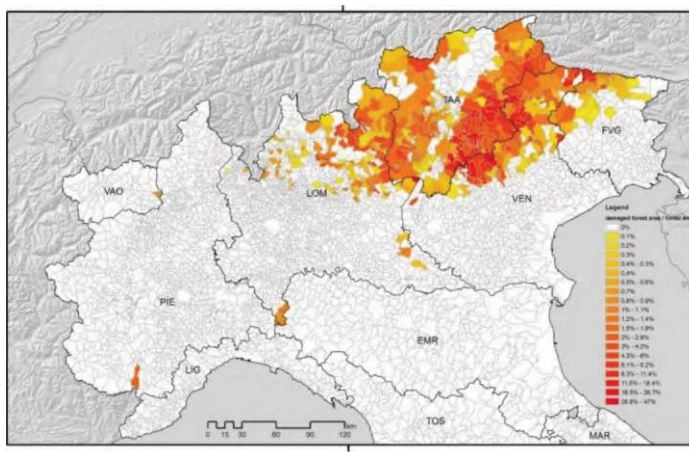
The most affected Regions by the storm, called "Vaia", are: Trentino Alto Adige and Veneto, followed by Lombardy, Friuli Venezia Giulia, and in a marginal way, by Piedmont and Valle d'Aosta.

Currently, it is estimated the storm stroke 473 Municipalities, affecting a total area of almost 2.3 millions of hectares, characterised by a dominant forest land cover, which represents 60% of the total surface.

At the end of this first phase of detection, the mapped area with extensive damages to forest is equivalent to 41,314 hectares, for 8.6 million of m<sup>3</sup> of timber.

The results of this phase are only meant to highlight the most damaged areas. It is very probable that the surface actually affected (and consequently the damaged timber) is significantly higher than the current estimation. Indeed, widespread forest damages are not yet fully detected.

Fig. – Forest area affected by "Vaia" in Italy (2018)



In this event of intense weather-wind storm, the Italian local and national Civil Protection suddenly activated the EU Copernicus Programme “Emergency Management Service” (DG Grow and JRC as operational management) for producing and providing to the user community damaged areas, after tailored pre-post Remote Sensing analysis. The data sources used ranged from Mipaaft-AGEA airborne images (summer 2018) to the open and free Copernicus Sentinel2 and other more detailed data from the market.

Contextually, Italian Ministry of Agricultural, Food and Forestry Policies and Tourism (Mipaaft) has been coordinating a regional joint activity for completing the mapping of the other affected missing zones.

These activities have generated the abovementioned damages estimation, in terms of hectares and timber volumes.

In this context, territorial monitoring and near real time mapping in continuous and in semi-automatic way appears a strategic tool to obtain and provide immediate alerts concerning any land changes and calamitous events.

Particularly, the «Monitoring» Italian experience in 2018 for the new Common Agricultural Policy (CAP) through an innovative automatic methodology based on multi-temporal satellite (approved by DG AGRI and JRC) seems adequate to provide a reliable support in case of emergency rapid management.

Italy has been starting this activity in Apulia - first in Europe - demonstrating and testing in a real territorial context the feasibility and technical capability.

Indeed, the CAP reform post 2020 is going to require a complete EU agro-territory «Monitoring» procedure, based on Copernicus open satellite constellation for the automatic generation of declared crops presence/status evidence, both at parcel and farm level. The goal is to assure, through the satellite/IT technological improvement, a continuous semi-automatic assessment of the European agro-environment, speeding up the CAP payments to the 7 millions of farmers in EU and overcoming the current 5% sample of control.

The next availability of the continuous CAP Monitoring System (automatic maps and indices potentially every 4-5 days on the same target) can therefore provide in operation, at very marginal costs, near real time alerts and first mapping services also for: flooded areas and real damage, forest clear cuts (legal/illegal), forest wind crashes, fire burnt areas and their evolution, etc.

The annex<sup>1</sup> provides information concerning the used methodology and the damaged maps related to the new «Monitoring» procedure compliant with the CAP post 2020 requirements.



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<sup>1</sup> See 15528/18 ADD1