

The wildland fire-fighting system in Friuli Venezia Giulia (Italy)

Nadia Di Narda; Damiano Giordani; Aldo Primiero ¹

Abstract

In Friuli Venezia Giulia the structures involved in wildland fire emergencies are Civil Protection of the Friuli Venezia Giulia Region (PCR), Regional Forest Corp, National fire brigade, Air Fleet of National Department of Civil Protection coordinated by COAU (Unified Air Operative Center)

The Civil Protection of the Friuli Venezia Giulia Region (PCR) was born after the catastrophic experience of the earthquake of 1976. From the official foundation in 1986 PCR has grown up and has improved focus on the protection of environment and citizens against natural risks (seismic, hydraulic, hydrogeologic, wildland fire).

The PCR coordinates the wildland fire management through its Operative Center and is active in fire suppression by means of fire-fighting teams of municipality civil protection volunteers groups and fire fighting associations and through its own Regional Air Service of Civil Protection.

In the Friuli Venezia Giulia Region there are two national border lines, with Slovenia and Austria (Carinzia region). In 2006 the Civil Protection of the Region underwrote a crossborder cooperation agreement with Republic of Slovenia and the austrian region of Carinzia on prevision and prevention of risks and common assistance in emergency situations. On 21st of July 2006 a forest-fire started in the Karst area near the border with Slovenia between the municipalities of Duino-Aurisina (Ita) and Komen (Slo). During the fire, after the help request from slovenian Civil Protection, the Operative Center of PCR activated the regional and national air services to support the slovenian firefighting system. In particular technicians of Civil Protection of the Friuli Venezia Giulia Region took part in fire suppression operations and a B3 "Ecureuil" helicopter of Regional Air Service, two Canadair and a S64 Sikorsky helicopter of COAU from Air fleet of National Department of Civil Protection were used.

¹ Engineers - Civil Protection of Friuli Venezia Giulia Region
www.protezionecivile.fvg.it

Friuli Venezia Giulia

The Friuli Venezia Giulia is a region located in north-eastern Italy. Its territory is delimited by the Carnic and Julian Alps and the Adriatic sea. It ranges from snowy Alpine mountains to very green Prealps, gentle hilly slopes, fertile plains and enchanting beaches.

The surface of the Region is 7 855 sq.km, about 30% is wooded, in particular with beech, pine, manna-ash, oak and carpine.

The region is characterized by two types of climate: Alpine in the North and Mediterranean in the plain. The driest periods are the late winter from the middle of January to the middle of March and the summer season in July and August: during these periods there are the most of the wildland fires.

Precipitation is abundant but humidity decreases quickly especially in the karstic area, because of limestone nature of the rocks and because of the wind's action. In particular, the karstic zone of Trieste suffers from violent and freezing north-eastern wind named "Bora" that blows with gusts of more than 100 km/h speed.

The Civil Protection of the Friuli Venezia Giulia Region

The Civil Protection of the Friuli Venezia Giulia Region (PCR) was born after the catastrophic experience of the earthquake of 1976. From the official foundation in 1986 PCR has grown up and has improved his focus on the protection of environment and citizens.

The main activities of PCR are grouped in these tasks:

- Prevention;
- Forecasting – Prediction – Alert;
- Fast intervention – Rescue.

The regional Civil Protection System is based on the regional functionaries working in the Operative Center of the PCR (OC) of Palmanova and the civil protection volunteers organized in the municipality groups. The OC is connected with National Department of Civil Protection in Rome.

The Operative Center in Palmanova is composed by:

- Technical and scientific service for forecasting-prediction, alerting and coordination of rescue
 - h24 control room
 - Monitoring networks and logistic
- Service of prevention and fast intervention
 - Civil an environmental engineers, geologists and technicians,
 - Volunteers management
- Administrative service



Figure 1—Civil Protection of Friuli Venezia Giulia: h24 control room.

Municipality civil protection groups are formed by 11000 Volunteers organized in:

- 219 technical-logistic teams;
- 119 fire-fighting teams;
- 1 water rescue team.

The wildland fire-fighting system in FVG

The PCR coordinates the wildland fire management in collaboration with Regional Forest Corp. The activities of the wildland fire-fighting system in FVG are:

- Prevention,
- Fire suppression,
- Recovery and restoration of burned areas.

Prevention is focused on:

- instruction of citizens about wildfires emergency;
- vigilance;
- prevention interventions.



Figure 2—Volunteers, regional functionaries and forest rangers.

The structures involve in wildland fire emergencies are:

- Operative Center of PCR;
- Regional Forest Corp;
- Fire-fighting teams of Municipality civil protection volunteers' groups and fire fighting Associations;
- Regional Air Service of civil protection;
- Air Fleet of National Department of Civil Protection coordinate by COAU (Unified Air Operative Center);
- National fire brigade.



Figure 3—Canadair of Air Fleet of National Department of Civil Protection.

Figure 4—Helicopter Ecureuil B3 of Regional Air Force.

Crossborder collaboration

Friuli Venezia Giulia Region borders with Slovenia and Carinzia (Austria). The borderline is characterized by cross-border rivers, alpine forest in the north and a large karstic area in the south east, also earthquakes are clustered in the cross-border area. This means that emergencies like floods, wildfires and earthquakes in a border region can turn into dangerous problems to environment and citizens of both regions.

Nevertheless, in the recent years a strong need for exchanging data and information has grown. This is a fundamental requirement for the knowledge and comprehension of common regional emergency procedures to be realized with the purpose of risk assessment and civil protection planning.

In this sense, the necessity to underwrite a common agreement for harmonizing the informative systems, integrating and interconnecting the existing national monitoring networks, is fundamental and leads to creation of a cross-border coordinate emergency system.

The Agreements want to help the set up of a cross-border risk management system, joining and harmonising Friuli Venezia Giulia and bordering nations' procedures, for civil defence actions and population safety in both countries.

In this framework the Civil Protection of the Region underwrote on the 18 January 2006 a cross-border cooperation agreement with Republic of Slovenia focused on prevision and prevention of risks and common assistance in emergency situations.

In the common assistance tasks the parts send specialized technicians, volunteers' groups and specific equipments, helicopters, commodities, medical facilities, food and everything needed to guarantee the public safety. In particular, the agreement has a specific part dedicated to common procedures in wild-fires operations.



Figure 5—Miran Bogataj (Operative Director of Slovenian civil protection) and Guglielmo Berlasso (Director of civil protection of Friuli Venezia Giulia)

Wildfire in Komen – Slovenia

During the hot July 2006 in Friuli Venezia Giulia there were more than one hundred wildfires, in particular on 21/07 a forest-fire started in the Karst near the border between the municipalities of Duino-Aurisina (Italy) and Komen (Slovenia). This fire was characterized by flames more than 20m high and by a high advancing front speed and it has interested thousand hectares of karstic forest in Italy and Slovenia and encircle Komen.



Figure 6—Fire in Komen – July 2006

During the fire, a help request from Slovenian Civil Protection arrived at the Operative Center of Palmanova which activated the regional and national air services to support the Slovenian firefighting system. In particular, technicians of Civil Protection of the Region Friuli Venezia Giulia have taken part to fire suppression operations and a helicopter B3 “Ecureuil” of Regional Air Service, two Canadair and a helicopter S64 Sikorsky of COAU from Air fleet of National Department of Civil Protection have been successfully used to help Slovenian forces to suppress the fire.