

# Friuli 1976: emergency management between the May and September earthquakes

G. ZAMBERLETTI

*Government Commissioner for the Friuli earthquake*

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**ABSTRACT** The coordination of the emergency operations after the two strong earthquakes of May and September 1976 in Friuli are described, together with the specific problems faced and solved to help the local population return to normal life.

**Key words:** 1976 earthquake, emergency management, Friuli, NE Italy.

## 1. Introduction

I believe that the emergency of the Friuli earthquake, especially regarding how it has shaped and influenced the subsequent evolution of the national civil protection system that we know today, should be divided into clearly defined time periods, in which the management of interventions and the coordination of relief and assistance were characterised, and in many ways guided, by the sequence of the two earthquakes of May and September in 1976.

In my recollection of operations, I tend to distinguish a very early phase concerning the impact of the event with its immediate effects on the population and territory, and how to start and organize the first aid. Then, a period from 6 May to the end of the first emergency commission (25 July), relating in particular to the care of the homeless in tents and caravans and immediate repair of repairable damage. Then, there was an intermittent non-commissioned management period up to 13 September, which saw the unsuccessful attempt by the Friuli Venezia Giulia Region to facilitate the resettlement of those displaced before winter. Lastly, there was a second government appointed commission period, characterized by the exodus to the tourist accommodation structures along the Friuli and Veneto coasts, and the rush to set up provisional prefabricated dwellings and buildings together with assisting the local population remaining in the area affected by the quake.

## 2. The first commission period

The very first phase was harder and more chaotic than we generally remember. Although there was a natural point of reference in the prefectures, particularly in the one in Udine, the lack or inaccuracy of information on the actual dimension of the event and its territorial extent was at the root of the difficulties and confusion in the first hours.

Thanks to the presence in the area (for entirely different reasons) of substantial contingents of the Italian army, there was not so much a problem of the rapid influx of operational structures as the initial uncertainty about the instructions to be taken by the aid columns that arrived and on the

criteria for their distribution. This was mainly due to the communication network that was entirely inadequate to withstand the impact of the earthquake and, at the time, to the lack of institutional agencies for assessment and reporting. Amateur radio operators and CBs made up for this, even heroically, though sometimes paying the price in terms of precision and in coordinating of rescue work. Until the arrival of the firefighters, there was also a dramatic lack of technicians to guide the first *impromptu* relief operations locally.

Contributing to the initial difficulties was even the very appointment of the Government Commissioner, taking place as late as 22 hours after the 6 May mainshock. This was mainly due to uncertainties in legislation that at the time did not have clear procedures to recognise a “natural disaster” or to appoint a commissioner, above all in such a confusing information framework.

Lastly, but perhaps decisively, there was a lack of preventive planning for the response to events of a regional extent. On the one hand, there were the wide-ranging plans of the prefects, with a provincial context, rather generic and lacking operational indications based on real past experiences, with resource and equipment lists that were out dated and largely inaccessible to non-specialists. On the other, military mobilization plans, valid only for internal activation by the army, had always been kept restricted and, therefore, were useless for general coordination purposes.

From the moment I took up office in the Udine Prefecture, I immediately had to conceive the operational scenario that was needed to reorganize the initial chaos, as well as to start and set in motion an organizational machine that was to prove truly massive in the next few days. I brought in three deputy commissioners, the prefects of Udine and Pordenone and the general commander of the “Mantua” Division.

The situation was tragic; moreover, there was no recent memory of a disaster of such proportions. As the firefighters later reported, there were 976 deaths and about 2,000 injured. The homeless were a little under 60,000 out of a population of 370,000.

In taking on the role entrusted to me, a few certain points immediately became apparent in that overall turmoil. It was evident that it was indispensable to hold frequent meetings with the mayors, in the light of their operational difficulties, even in the first decisions that tended to over-centralize the management of the problems.

Furthermore, a clear division of roles needed to be made between the firefighters and the army, which early on tended to overlap in the coordination functions. In practice, there was a need for an efficient coordination centre for the decision-making procedures of state institutions or agencies that, by their very nature, have their own considerable autonomy and internal hierarchy.

On the evening of 10 May, I decided to set up 9 Sector Operation Centres (SOCs, C.O.S. in Italian, today C.O.M.) as accessible places to effectively organize and coordinate interventions. Actively participating in the activities of the SOCs, that depended for the coordination and technical functions on the officials of the Prefecture and Fire Brigade, were the mayors, representatives of the Region Friuli Venezia Giulia, army officers, and all the other forces operating in the area. To distribute them rationally across the affected territory (Fig. 1), I set up a SOC in Cividale, Gemona, Maiano, Osoppo, Resiutta, San Daniele, Tarcento, Tolmezzo, and Spilimbergo (later transferred to Pordenone). Each SOC was to provide an effective response, wherever possible, mainly in three areas of action: the survey and assessment of intervention needs, the coordination of the various bodies and forces involved in the operations, and the support to local administrations. The mayors played a vital role in gathering information and

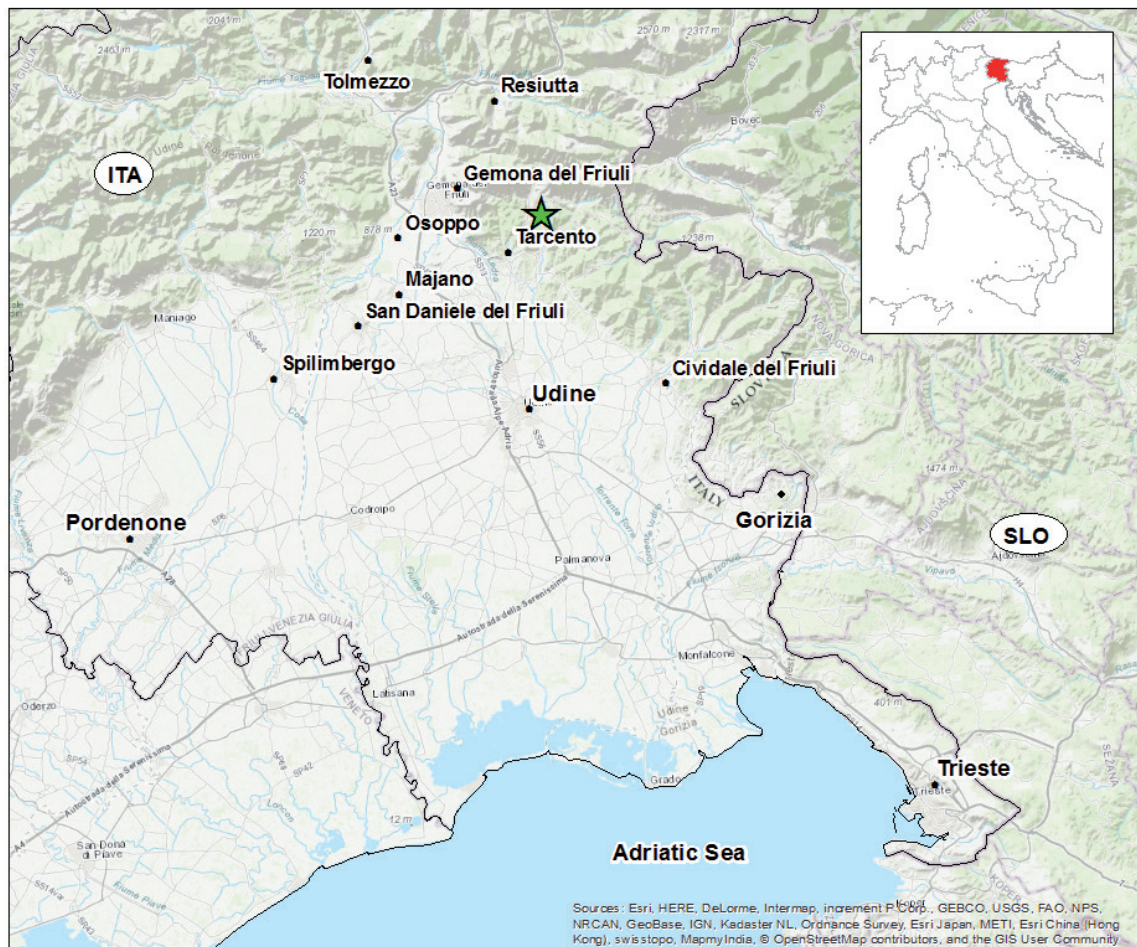


Fig. 1 - The SOCs set up four days after the main shock of 6 May (indicated by the star).

in collaborating to meet the needs of their communities, but were generally lacking adequate operational and technical means.

The operation of the SOCs, under the coordination of the Commissioner, was wide ranging: the first interventions were immediate rescue operations to save lives and ensure safety, the partial removal of rubble, and the initial interventions on infrastructure and services to guarantee a minimum of safety and access in the area; then sheltering the homeless, supplying and assisting the local population and restoring essential services; at the same time, following the Commissioner's orders, a series of first steps were taken to assist the primary, secondary, and tertiary local economy to ensure a minimum level of living standards, in addition to the partial recovery of jobs.

Numerous shelters were set up for the homeless. The tents, erected mainly by the army in about 20 days, were about 18,000 in all and housed nearly 80,000 people, adding to the emergency makeshift refuges during the first few days (cars, railway berths, caravans, etc.). They were grouped into 252 camps (then reduced to 184), as well as in a thousand smaller "scattered" nuclei in the territory, and despite management difficulties (provisions, drinking water, sanitation), this allowed meeting the propensity of those affected to stay close to their homes.

The choice of staying in the tents prevailed over the immediate exodus, not only because of the clear wish to remain in the area, but also because of the lack of real information on the availability of accommodation in coastal areas (which would prove crucial after the second strong earthquake in September) and in order not to encourage the trend towards depopulation and emigration abroad, already considerable in those areas at that time.

Towards the end of July, the situation appeared stabilized and under control, with a rescue and assistance apparatus connected to the SOCs and the operation centres of the various forces. To give an idea of the effort, suffice it to consider the numbers of the armed forces involved. At the time, there was an average daily commitment of 13,000 soldiers with 1,500 vehicles, 350 special vehicles, 60 ambulances, 12 mobile lighting units, 430 petrol tankers, 216 field kitchens and 45 field toilets.

Healthcare was under control, with the population vaccinated *en masse* and subjected to periodic checks. As far as the services were concerned, albeit temporarily, roads, telephone, telegraph and postal communications, distribution of drinking water and electricity were restored.

To those who had requested, tents and necessary provisions were given. The camps were equipped with toilets, electric lighting and water supply. The insecure buildings were demolished, and the streets of the historic centres almost completely cleared. Towards the end of June, firefighters had begun reducing their numbers. There was some recovery in the local economy and industry, mainly due to regional funding: many factories had resumed their business. The region had managed its own as well as state funds in an expeditious and timely fashion, intervening in particular in the areas of economic and productive recovery, but also in public and school buildings, in the promotion of the agricultural and livestock sector and even in the tourist promotion of Friuli for a fast recovery in all sectors. Local authorities were now running at normal speed with the support of the SOCs.

This was towards the end of the first phase, and in view of the law in force at that time (Law 996/70) which envisaged the presence of a Commissioner, albeit with limited powers, only for the very first emergency, on my imminent return to Rome we began seriously considering the operational problem of how the population could pass the transitory period to a more normal, albeit still temporary but acceptable phase, which would include the autumn and the following winter. Unfortunately, with hindsight we can now say that we were too optimistic on the time needed to implement a large plan of prefabricated housing in view of the technical times to prepare the areas, to construct and assemble the materials. These were lengths of time that could not have been based on previous experiences and that, among other things, had never been estimated in preventive programming, also in terms of national production capacities. Before the end of my appointment as Commissioner, I made some inquiries into the possibilities of offering prefabricated dwellings and passed them on to the regional government.

At that point, as the emergency tasks entrusted to me by law were largely over, on 25 July I stepped down from office.

### 3. The slow return to normal life

Thus, during the commission vacancy (25 July - 13 September, 1976), with the resilient commitment of the Regional government, local authorities, Prefectures, and organized forces

remaining in the affected areas, the aim was to improve activities to get beyond the emergency, to restore services and connections, to completely remove the rubble, and repair recoverable damaged housing. Alongside the private repair program, the Friuli Venezia Giulia Region continued with its prefabricated housing plan: with these two strong initiatives, with the motto '*fasin di besoi*' (let's do it ourselves), the idea was to connect the transient phase with the definitive reconstruction stage.

As regards the provisional housing plan, the Regional government deliberately scaled it for a smaller requirement than the foreseeable total, banking for the remainder on repairing non-irretrievably damaged housing, with a slightly higher funding than that for the prefabricated plan. The plan was, therefore, fixed at 9252 dwellings, for a total area of 343,000 m<sup>2</sup> and about 30,000 people to be accommodated.

However, on one hand, the slowness of the surveys on the damaged homes (owing to the small number of experts available) and the criteria for repairing and assigning contributions to owners, and, on the other hand, the time needed to identify and acquire of the areas, the cumbersome procedures and planning, the difficulties of the logistics management of the displaced population, delayed things to the beginning of September. This was now at the threshold of bad weather and the first cold, with the disgruntled and fearful population now having to face the winter in the tents. All this while the shocks continued to plague the area.

#### 4. The second commission period

Two new shocks (one of intensity VIII Mercalli-Cancani-Sieberg) struck Friuli on 11 September, and the population were literally once again brought to their knees. Emigration outside the region, but most of all passport applications for expatriation, continued to increase. From all overcame the demand for a new massive intervention by the state, and a parliamentary commission sent to the epicentral area proclaimed the need to proceed to a new compulsory administration. On 13 September, I was once again appointed, but this time with much wider powers of exceptional nature, not simply coordination, since it was now time to connect the rescue phase with the more complex task of reconstruction.

As soon as I was appointed, on 15 September, while I was in the Udine Prefecture, there was the terrible second strong earthquake that everyone recalled being like the one in May. There were a dozen victims, but the effects on the area were enormous, because almost everything that had not fallen in May now collapsed, and even those houses repaired during the summer also fell: the need for shelter doubled and now tents were no longer suitable for the oncoming winter.

At the time, drawing on information from the first months, I made some decisions: the provisional housing plan should be enhanced; the population, at all costs, should have been temporarily moved away to the Veneto coast, both for a safe and temporary stable shelter for the winter, as well as not to hinder the work on the buildings in any way. The proposal for an exodus, repeatedly put forth during the summer, but also equally opposed by the local people, became inevitable after 15 September, and at that point the decision to go to the coast only needed to be implemented. After resuming activities with the vice-commissioners and reactivating the SOCs with their regular structure, I backed up the plan of the Region with a second commission plan with 10,500 lodgings, and gave the go ahead to moving at least 40,000 people to the coast. These

were to return gradually as soon as the provisional housing was completed, while thousands of caravans were to be found to guarantee lodging in the epicentral area for those who had to stay for work reasons. The exodus of the population was organized according to a model without precedent, but which, in return, was successfully replicated almost entirely after the 2009 Abruzzo earthquake.

Through a rather complex operation, the displacement areas were singled out with the necessary accommodation structures and temporarily acquired (sometimes even by enforced procedures). Some operational centres, called Assistance Departments, located in Grado, Lignano Sabbiadoro, Bibione, Caorle, and Jesolo, on the northern Adriatic coast, and Ravascletto, Forni Avoltri, Forni di Sopra, and Rigolato, in northern Carnia, were set up (Fig. 2). The moving of people, heating of the houses, and provisions for the displaced, was, then, undertaken. The most demanding effort was then to build a “provisional social project” for these people so they would not feel abandoned. Thanks also to the help of the host municipalities, basic social and transport services were established, and school activities and health services were ensured.

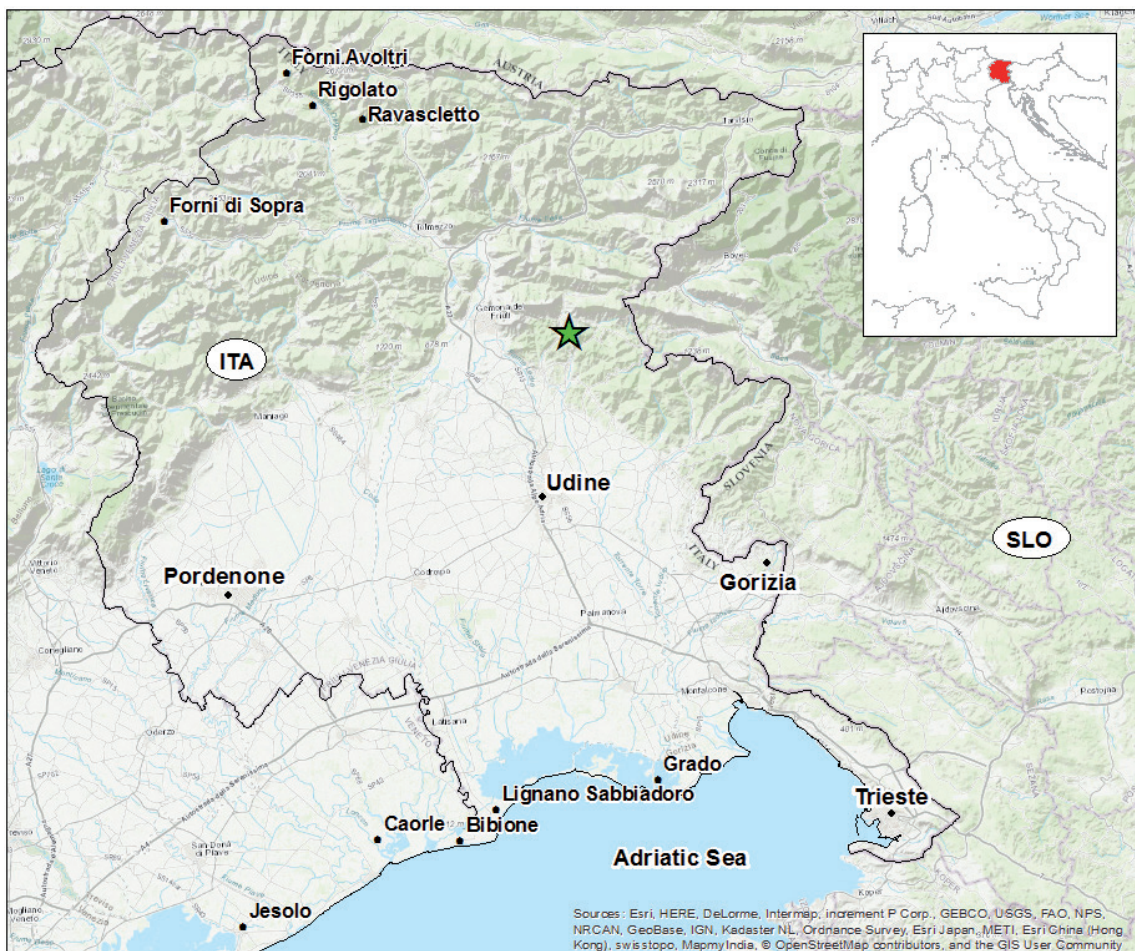


Fig. 2 - The Assistance Departments set up after the September aftershocks. The star indicates the epicentre of the main shock of 6 May 1976.

Delegations of the respective municipalities of origin were also established in the places of displacement. The return of people was programmed in conjunction with the gradual consignment of ready-made prefabricated buildings, starting with those of the first regional plan, followed by the second wave of those realised directly by the commissioner.

## 5. The end of the emergency

All the people had gradually returned by 30 April, 1977, with a slight delay, therefore, with respect to the commissioner's schedule that envisaged the end of the exodus by 31 March. On that day, with the return to more normal living conditions, the emergency could really be considered over. The date of completing the "resettlement" operation of the population in the municipalities struck by the earthquakes was also set in view of the need to guarantee to the coastal tourist industry the certainty of not losing business in the summer season, avoiding damage that could have affected the flow of tourists, steering them towards other destinations. The Italian Parliament had cautiously fixed the ending of the extraordinary commission management at 30 April. That day marked the start of the reconstruction process and saw an emotional "goodbye" between the Friulians and the many who had shared with them a distressing season but also one of commitment and confidence in the rebirth of the region.

*Corresponding author:* Giuseppe Zamberletti  
Istituto Grandi Infrastrutture  
Via Cola di Rienzo 111, 00192 Roma, Italy  
Phone: +39 06 36004684; e-mail: igiroma@tin.it