



# Food safety in natural disaster: the experience of L'Aquila earthquake

VSF Europa Symposium on Food Sovereignty  
International Center for Veterinary Training and  
Information (CIFIV)

Thursday October 8th, 2009, Teramo (Italy)

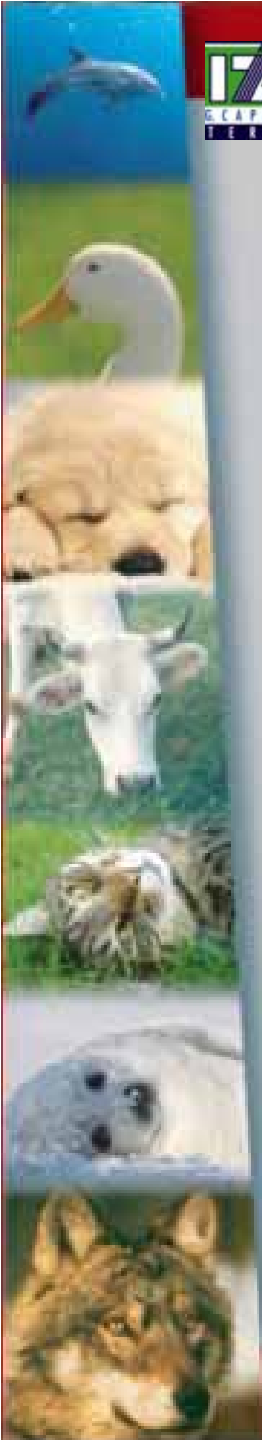
Daniela Morelli



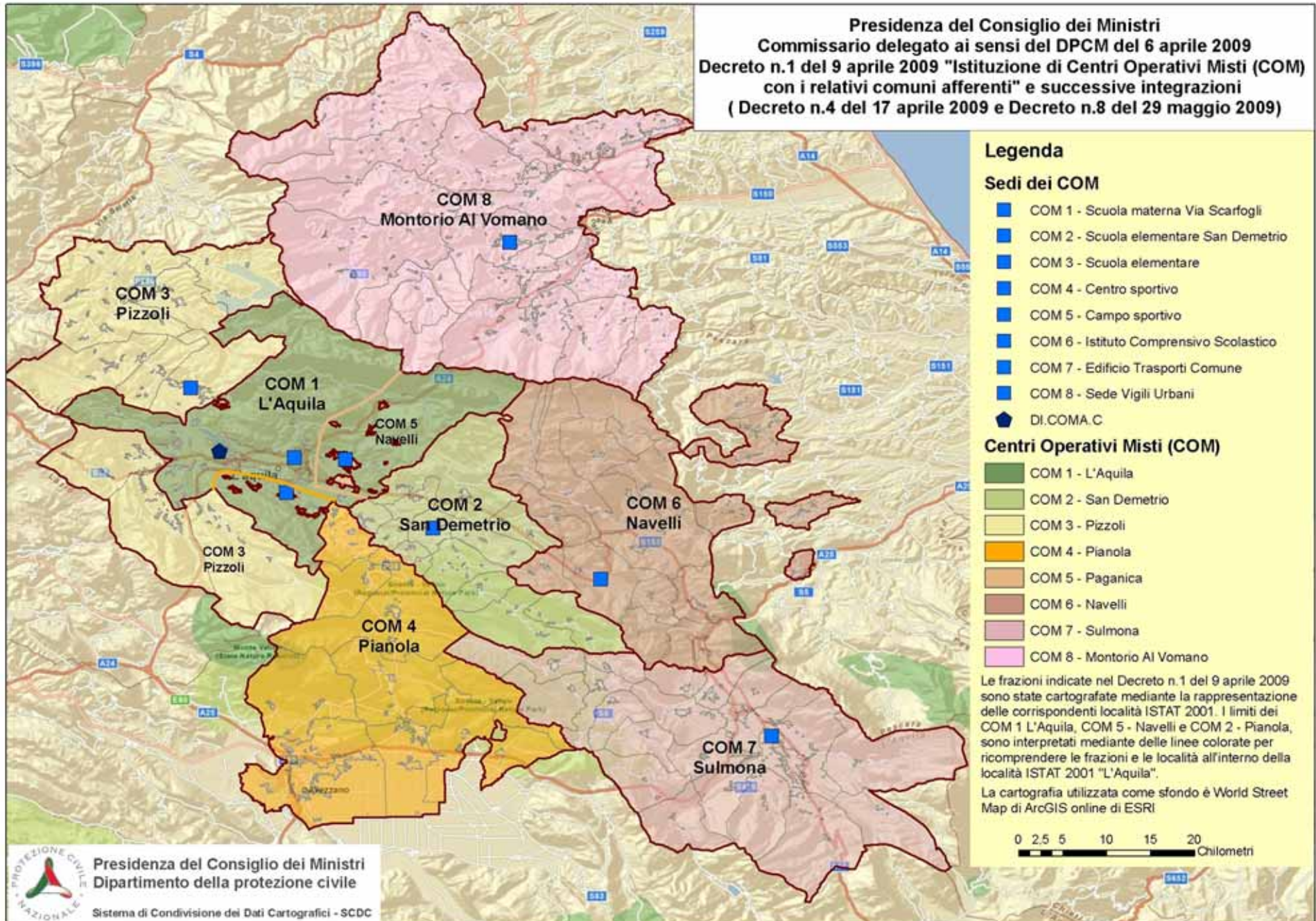
## Food Safety in natural disaster: the experience of L'Aquila earthquake

### □ Building of the organizational structure

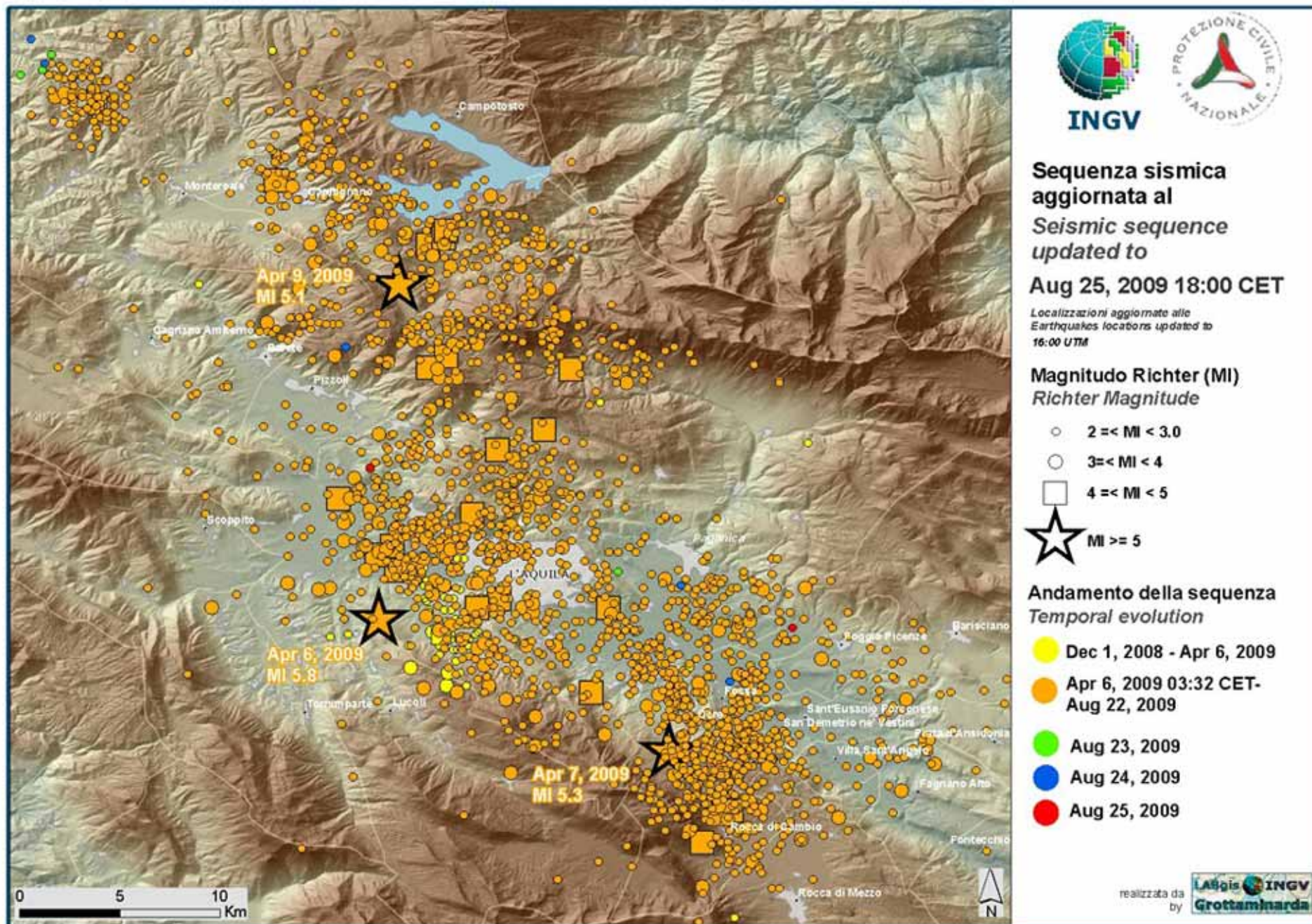
- Nomination of the coordinator for veterinary activities;
- Definition of the geographical area of intervention;
- General objective;
- Involved organizations;
- Installation of communication tools and computer instruments and systems.



# Seismic crater

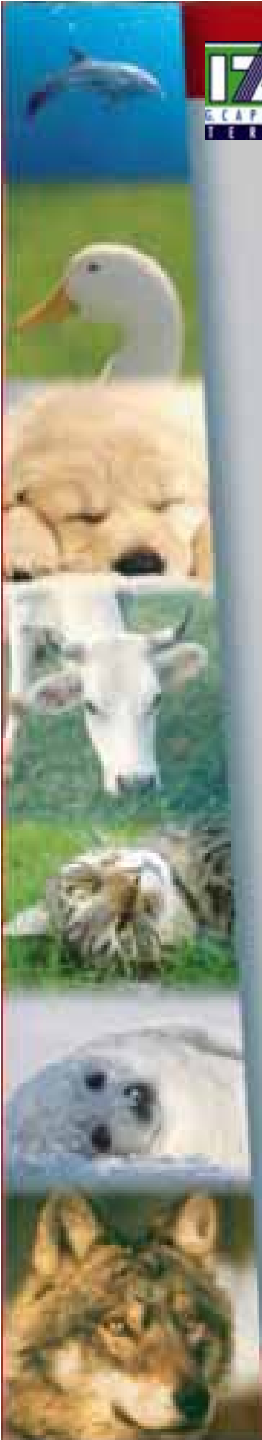


# Seismic sequence



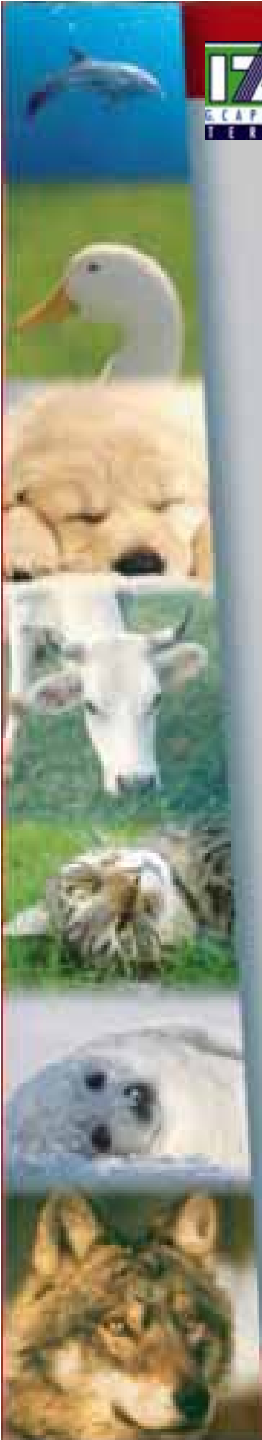
# General objective

To coordinate Administrations activities in order to assure the monitoring of food safety aspects, of animal health and welfare, as well as to guarantee logistic and professional support to restoration and re-activation of Veterinary Services activities in territories hit by the earthquake.



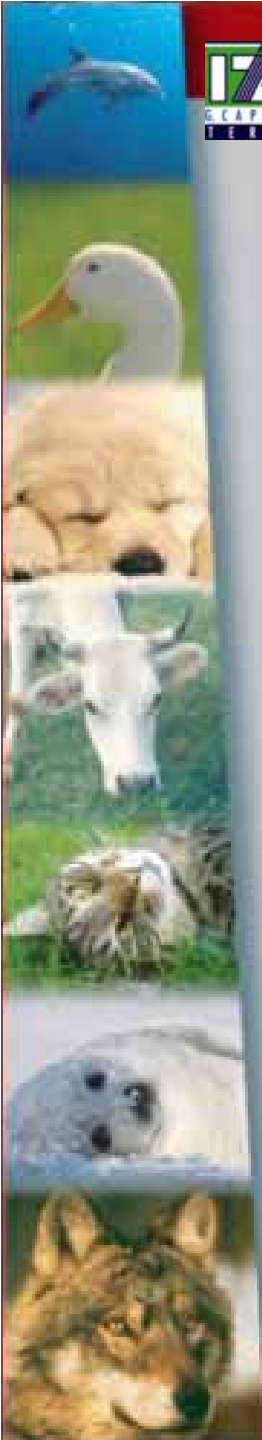
# Involved Organizations

- ❖ Veterinary Services of L'Aquila Local Health Unit
- ❖ Other Abruzzi Region Veterinary Services
- ❖ Abruzzi Region Veterinary Services
- ❖ Veterinary Services of Emilia Romagna, Molise and Toscana regions
- ❖ Pescara Anti-Adulteration Carabinieri Unit
- ❖ Istituto Zooprofilattico Sperimentale "G. Caporale"
- ❖ Regional Breeders Association
- ❖ Abruzzi Regional Agency for Agricultural Development Services
- ❖ Veterinary Medical Association of L'Aquila Province
- ❖ Others provincial and national associations
- ❖ University of Teramo, Faculty of Veterinary Medicine
- ❖ Animal Protection Associations
- ❖ Voluntary animal protection guards and voluntary associations



# Installation of communication and computer instruments

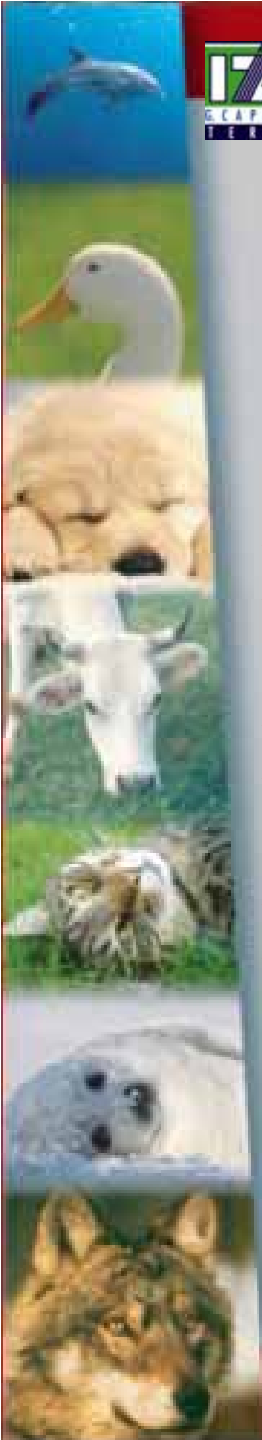
Computers with Internet connection, mailbox activation for the emergency ([terremotovet@izs.it](mailto:terremotovet@izs.it)), phones, mobile phones, fax, photocopier, satellite GPS ...



## Definition of activity areas

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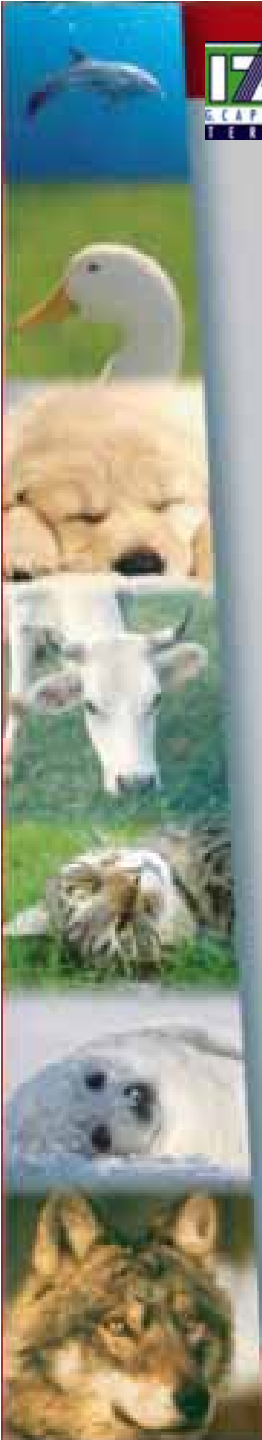
- Livestock health and welfare
- Pets health and welfare
- Food safety





## Employed tools

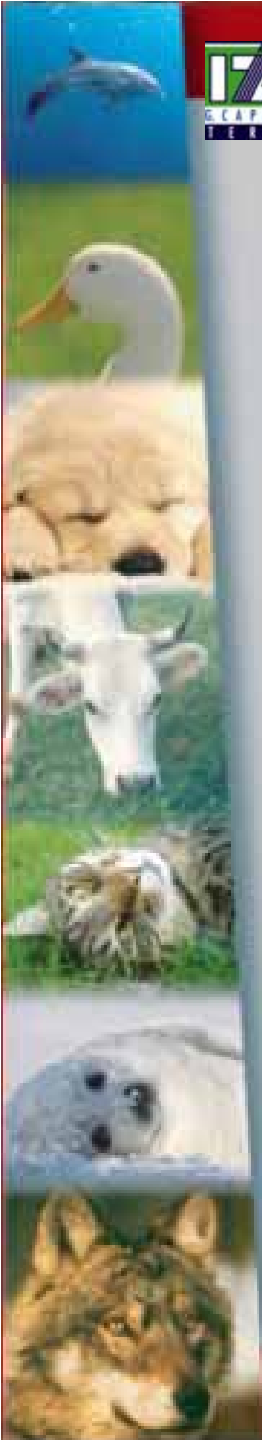
Help desk activation and development of a web application for the management of all intervention requests connected to the emergency. Every communication received by the management center for the Veterinary Emergency is recorded by the program so that it is possible to display it, to monitor and record interventions results.



## Requests summary

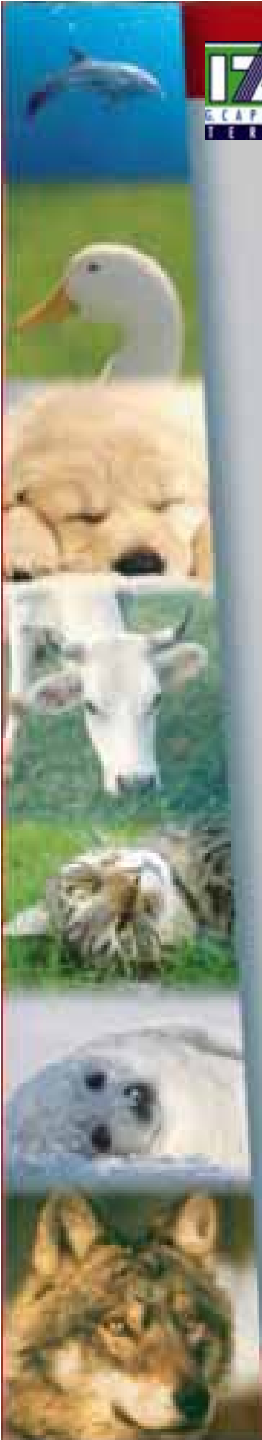
- ❖ SIGHTING OR RETRIEVAL OF ABANDONED ANIMALS (270)
- ❖ PETS ADOPTION OR TEMPORARY ADOPTION (116)
- ❖ VOLUNTARY WORK (16)
- ❖ OFFERING OF FEEDS OR PRODUCTS FOR ANIMALS (19)
- ❖ DONATIONS (14)
- ❖ ANIMAL FEED REQUESTS (112)
- ❖ ANIMAL DOCUMENTS REQUESTS (18)
- ❖ SANITARY INTERVENTION OR MEDICATIONS REQUESTS (429)
- ❖ DETERIORATED FOOD DISPOSAL REQUESTS (17)
- ❖ INFORMATION REQUESTS (131)
- ❖ MISSED ANIMALS RETRIEVAL REQUESTS (80)
- ❖ COMMUNICATION OF ORGANIZATIONAL PROBLEMS (9)

**TOTAL 1,231 AT 14/09/2009**



## Food safety – objectives

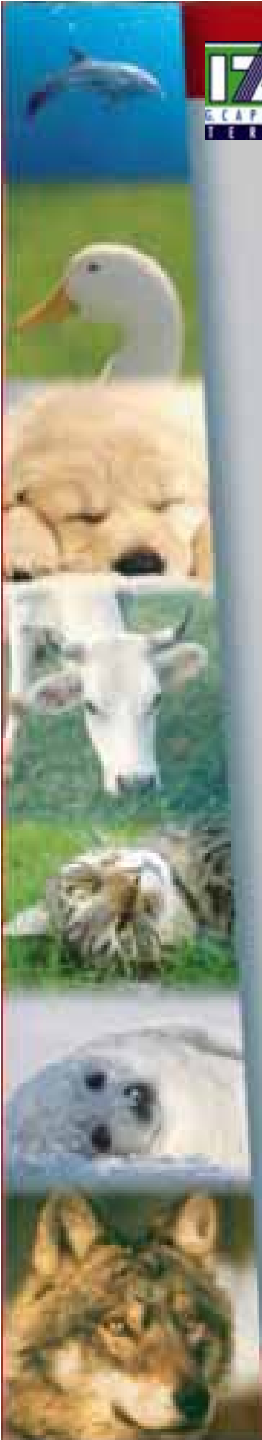
- **Survey of field kitchens in tent camps** (camp localization, responsibilities identification, number of people present, water, electricity and gas supply, presence of depuration systems, waste management, availability of hygienic services and specific aspects such as the presence of *in loco* kitchens and their management from the hygienic-sanitary point of view – namely the preparation and the distribution of meals – camp kitchens critical points)
- **Training of operators** in charge of preparation and distribution of meals (transfer of hygienic-sanitary knowledge and correct operative procedures in food preparation)



## Food safety– objectives

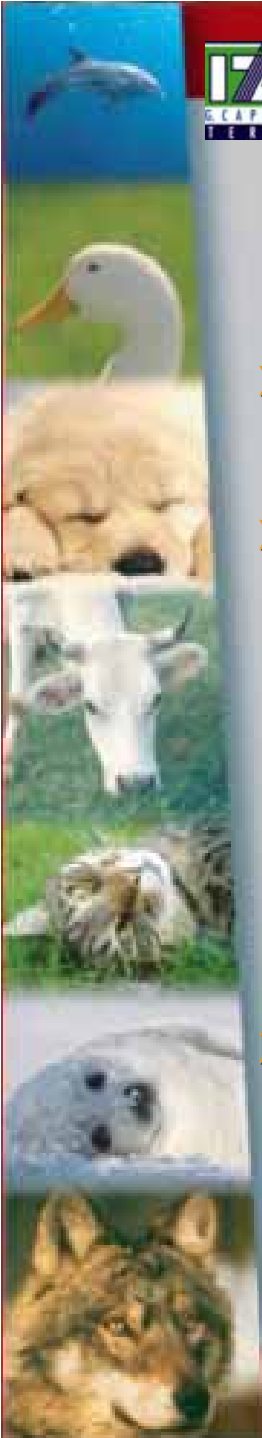
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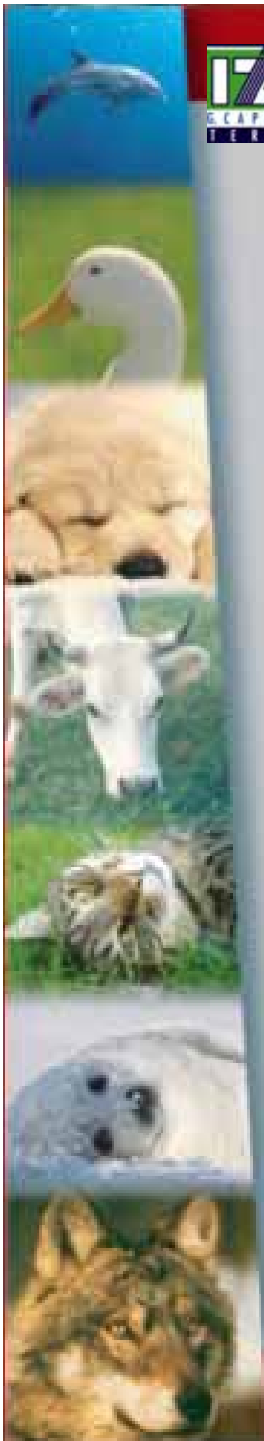
- **Verification of guidelines application** of the correct hygienic procedures in tent camp kitchens and in the hotels on the coast accommodating victims of the quake
- **Monitoring and surveillance of mobile and/or temporary structures** selling or distributing food products
- **Management of the disposal of deteriorated foodstuffs**



# Food safety – employed tools

- **Check list to record structural and hygienic-sanitary conditions** of tent camps kitchens and web application for the data management
- **Check list for the control of guidelines application** for the correct hygienic procedures in the kitchens of tent camps and web application for data management of **Surveillance of meal preparation and distribution areas in tent camps** (the system allows to program pre-filled check lists with camp data and surveys carried out in the previous visits, to harmonize assessment/training activities in the kitchens of tent camps. Collected data can be retrieved by Municipality, COM, date or tent camp. The access level is established by criteria based on competence and responsibility level)
- **Educational material** (operators guidelines – catering and meals distribution in the sheltering areas -; posters – tips for kitchen operators and for hosted victims– meals hygiene)

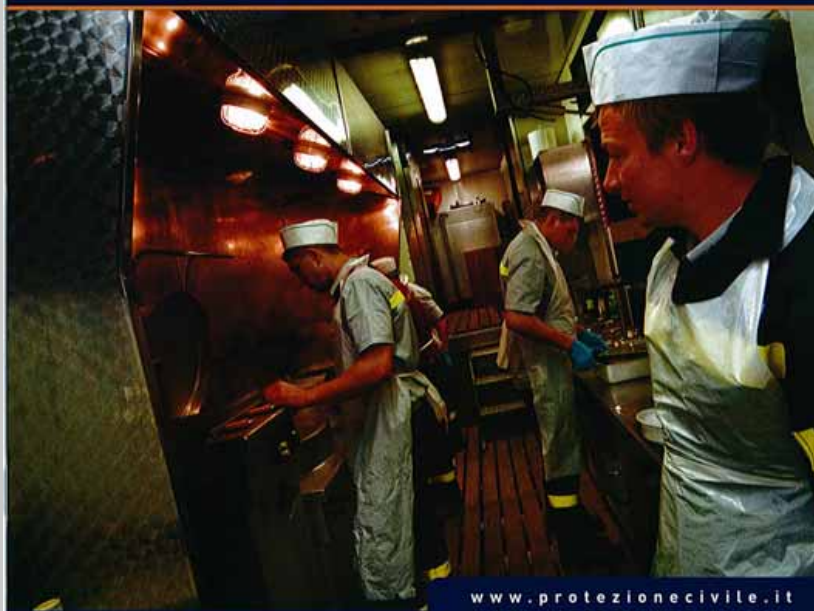




EMERGENZA TERREMOTO ABRUZZO

Linee guida per gli operatori

## Ristorazione collettiva nelle aree di accoglienza



[www.protezionecivile.it](http://www.protezionecivile.it)



## CONSIGLI PER GLI OPERATORI in cucina.

### L'IGIENE INNANZITUTTO

- 1. Indossa** sempre guanti e indumenti protettivi puliti.
- 2. Ricordati** di lavare le mani molto spesso.

### CIBI IN SALVO!

- 3. Acqua** e bibite hanno bisogno di ombra.
- 4. Conserva** gli alimenti non deperibili in zone dedicate, separandoli da frutta e verdura.
- 5. L'etichetta** è importante! Verifica le modalità di conservazione degli alimenti tenendo presente la data di scadenza.
- 6. Ma che freddo fa?** La catena del freddo non va mai interrotta per i surgelati e i prodotti in frigo vanno mantenuti al di sotto dei 5° C.

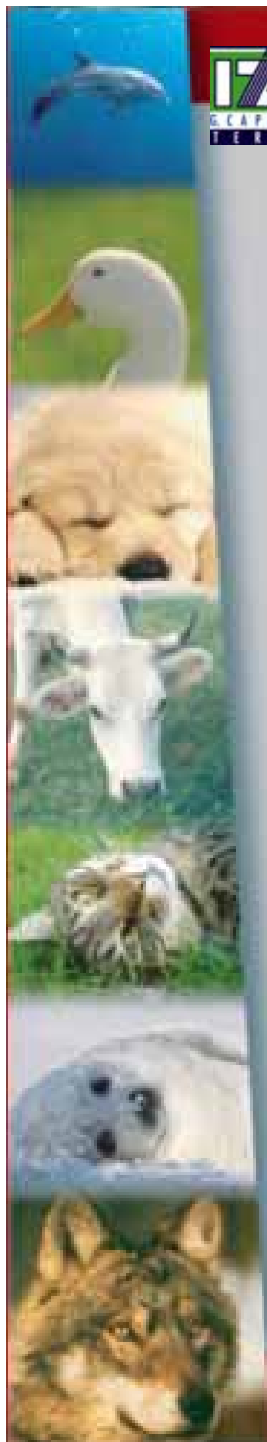
- 7. Tieni in frigorifero** gli alimenti deperibili e separa quelli confezionati da quelli non protetti.

- 8. La carne** cruda va sempre in frigorifero: utilizza dei contenitori chiusi per conservarla evitando il contatto con altri cibi.

### PER EVITARE CATTIVE SORPRESE...

- 9. Lava** sempre con acqua potabile le stoviglie e le attrezzature usando detersivi o disinfettanti, dopo ogni utilizzo.
- 10. Una cottura** prolungata garantisce cibi più sicuri.
- 11. Se non stai bene** evita di toccare il cibo e avverti il tuo coordinatore.
- 12. Proteggi** sempre gli alimenti: insetti e roditori sono ospiti indesiderati.

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CONSIGLI PER GLI OSPITI

# igiene ai pasti.

- 1. Prima** di andare a mensa... hai lavato le mani?
- 2. I piatti** distribuiti sono sicuri, non aggiungere condimenti o alimenti preparati da te.
- 3. Tavoli e sedili:** è importante tenerli puliti.
- 4. Non lasciare** le stoviglie sul tavolo dopo i pasti.
- 5. Se hai problemi** gastrointestinali o malesseri avvisa il responsabile del campo.
- 6. Alimenti sospetti?** Consegnali al personale della mensa o del campo.
- 7. Alimenti deperibili?** Consumali solo a mensa.
- 8. Non conservare** cibo in tenda: insetti e roditori sono ospiti indesiderati.
- 9. Getta i rifiuti** soltanto negli appositi contenitori.
- 10. È potabile?** Bevi solo acqua confezionata o garantita dal responsabile del campo.

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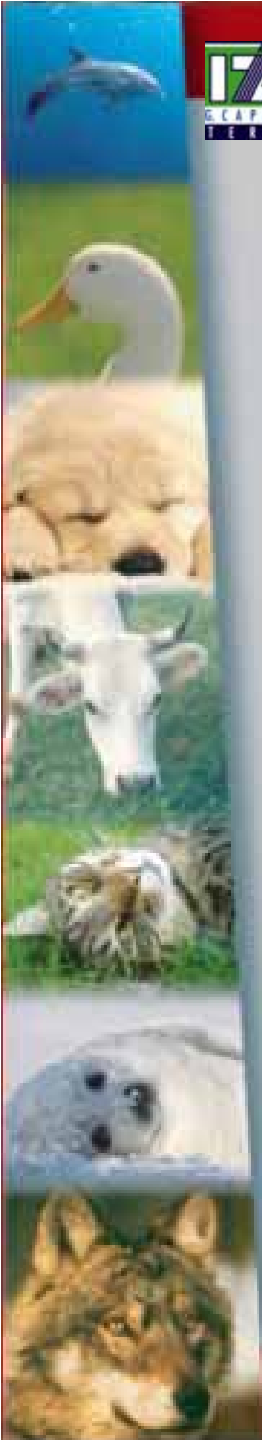
# Food safety – methodology and results

## Survey

103 visits in tent camp kitchens for data collection and management of their hygienic-sanitary problems. Four teams, composed by 2 operators (Local Health Unit veterinarians, IZS A&M veterinarians, Carabinieri Anti-Adulteration officials).

## Training

118 training sessions in tent camp kitchens. Two teams, composed by 3 operators (Carabinieri Anti-Adulteration officials, IZS A&M veterinarians and DPC sanitary staff)



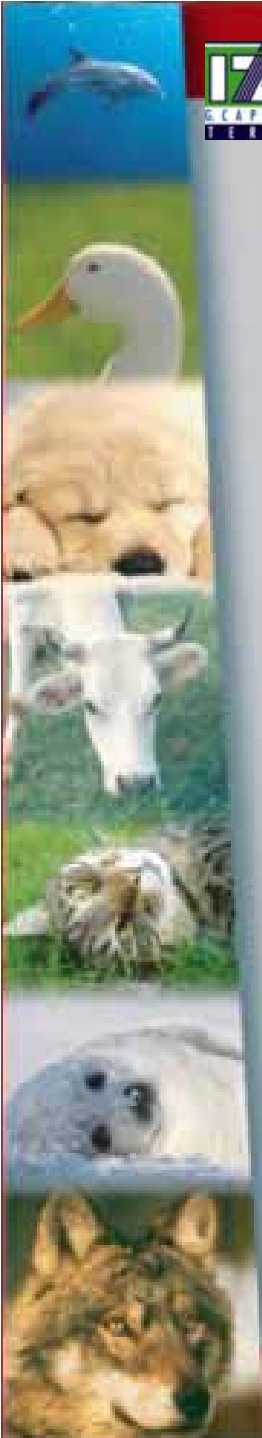
# Food safety – methodology and results

## Surveillance of meals preparation and distribution areas in tent camps

352 interventions. Weekly frequency or at every shift of personnel in the kitchens.

Identified problems discussed *in loco* with concerned personnel, immediately instructed on corrective measures to be applied.

Four teams, composed by 2 operators (Local Health Unit veterinarians, IZS A&M Veterinarians, Carabinieri Anti-Adulteration officials)

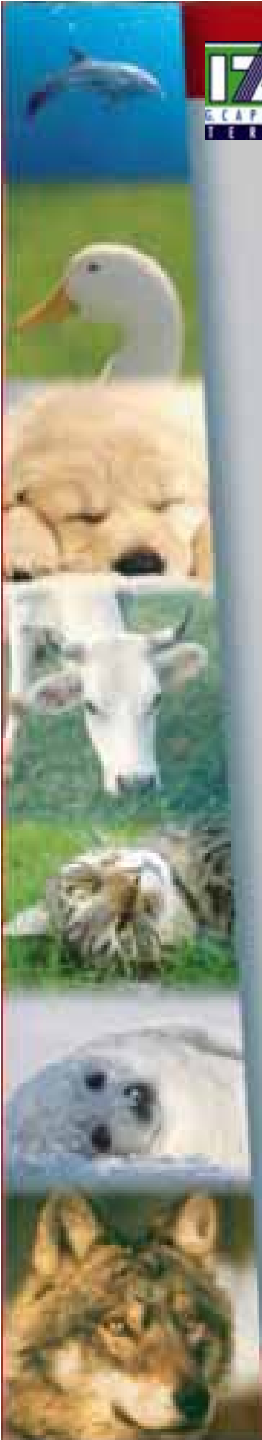


# Food safety – methodology and results

## Surveillance of mobile and temporary structures selling/distributing foodstuffs

8 interventions carried out only on the weekend, on structures also outside the territory hit by the quake by one team composed by 2 operators (IZS A&M Veterinarians, Carabinieri Anti-Adulteration officials).

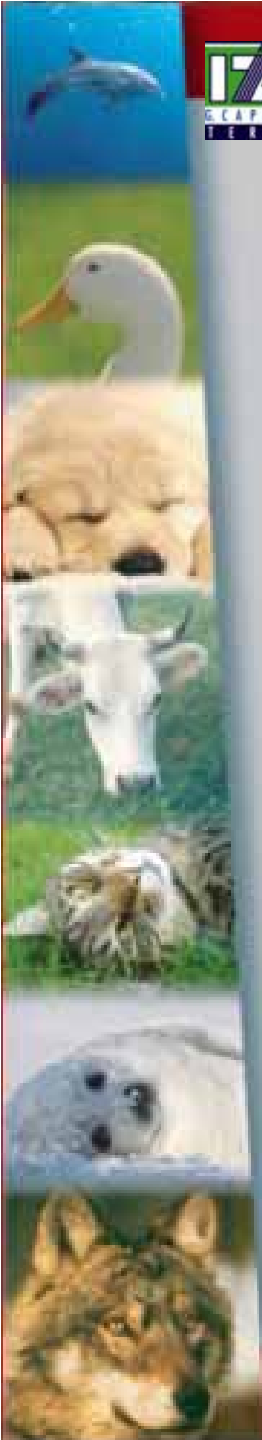
In case of unfavorable result, non-conformity were reported to concerned Authorities for the application of proper measures



# Food safety – methodology and results

## Damaged foodstuffs disposal

Up to July 23<sup>rd</sup>, a quantity of 152,792.85 kg of foodstuffs of animal origin has been destroyed. After the notification by production establishments and commercial enterprises, the Official Veterinarian carries out, following an operative procedure, the inspection and certification of the disposal of damaged animal origin food, which, according to Regulation (CE) 1774/2002 must be managed as special waste

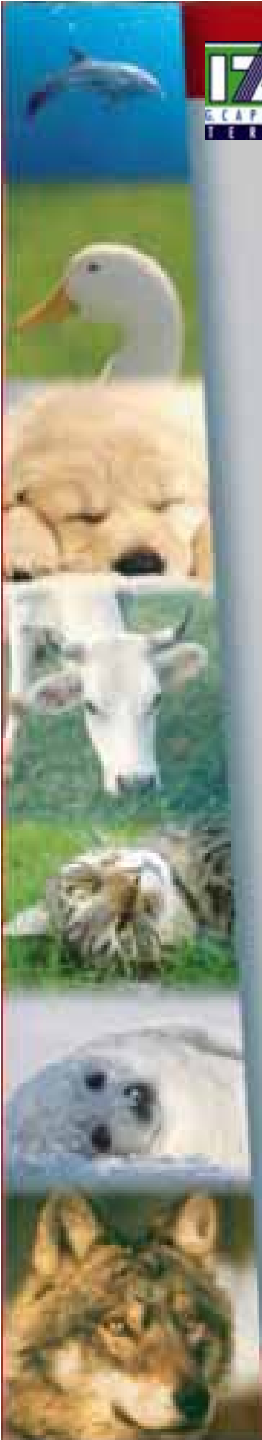


# Food safety – methodology and results

## Surveillance in kitchens of hotels on the coast

81 interventions. During the inspections, water samples were collected for *Legionella* detection tests. In case of drinking water stored in tanks, samples were collected to verify potability.

Two teams, composed by 2 operators (IZS A&M Veterinarians and Carabinieri Anti-Adulteration officials)



# Conclusions

It is fundamental to have available an effective and efficient emergency managing system, in order to contain, as much as possible, the consequences of these tragic events on animals and men health and welfare and on the social tissue of areas hit by natural disasters.

The acquired experience represents a significant opportunity for the future planning and design of codified and harmonized intervention procedures which, supported by continuous training, would allow an efficient and flexible health activities management in disaster situations.

