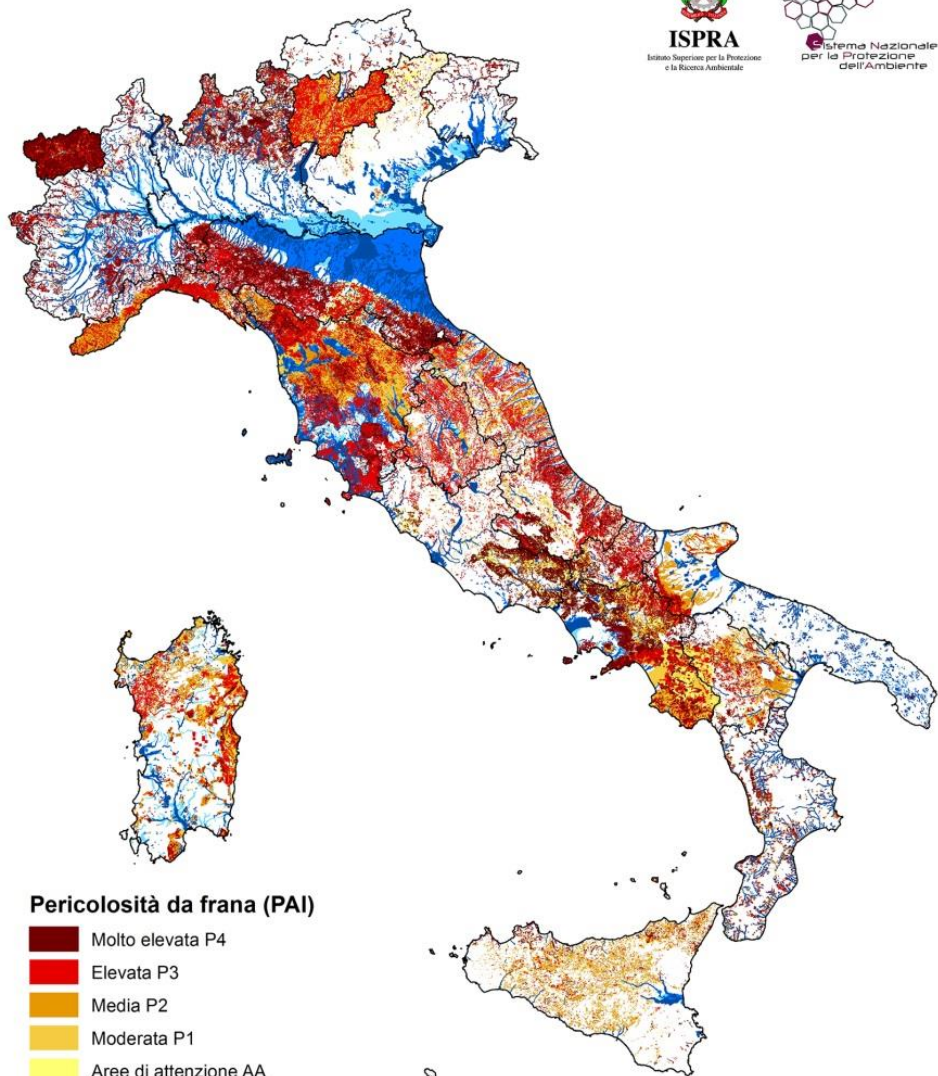


VETERINARY PUBLIC HEALTH IN FLOODS

THE ITALIAN EXPERIENCE

Marco Leonardi

marco.leonardi@protezionecivile.it



0 25 50 100
km

2017: 91% of Italian municipalities are exposed to flooding and/or landslide hazard (ISPRA)

The new civil protection legislation in Italy (Decreto Legislativo 1/2018)

The National Civil Protection Service is the system which exercises the civil protection function, consisting of all the competences and activities that are designed to protect the life, the physical integrity, the goods, the settlements, **animals** and the environment from damage or danger of damage arising from disastrous events of natural origin or arising from human activity.

WHAT IS CIVIL PROTECTION?

Civil protection activities are forecast, prevention and mitigation of risks, emergency management and recovery



The Italian civil protection service (established in 1992)

National, regional, local administrations

Fire Brigades

Armed Forces

Police

Scientific institutes

National Health Service (including veterinary services)

Volunteers' organizations, Italian Red Cross, Alpine and speleological rescue service

National Environmental protection system

Meteorological services

Professional organizations

How do we work?

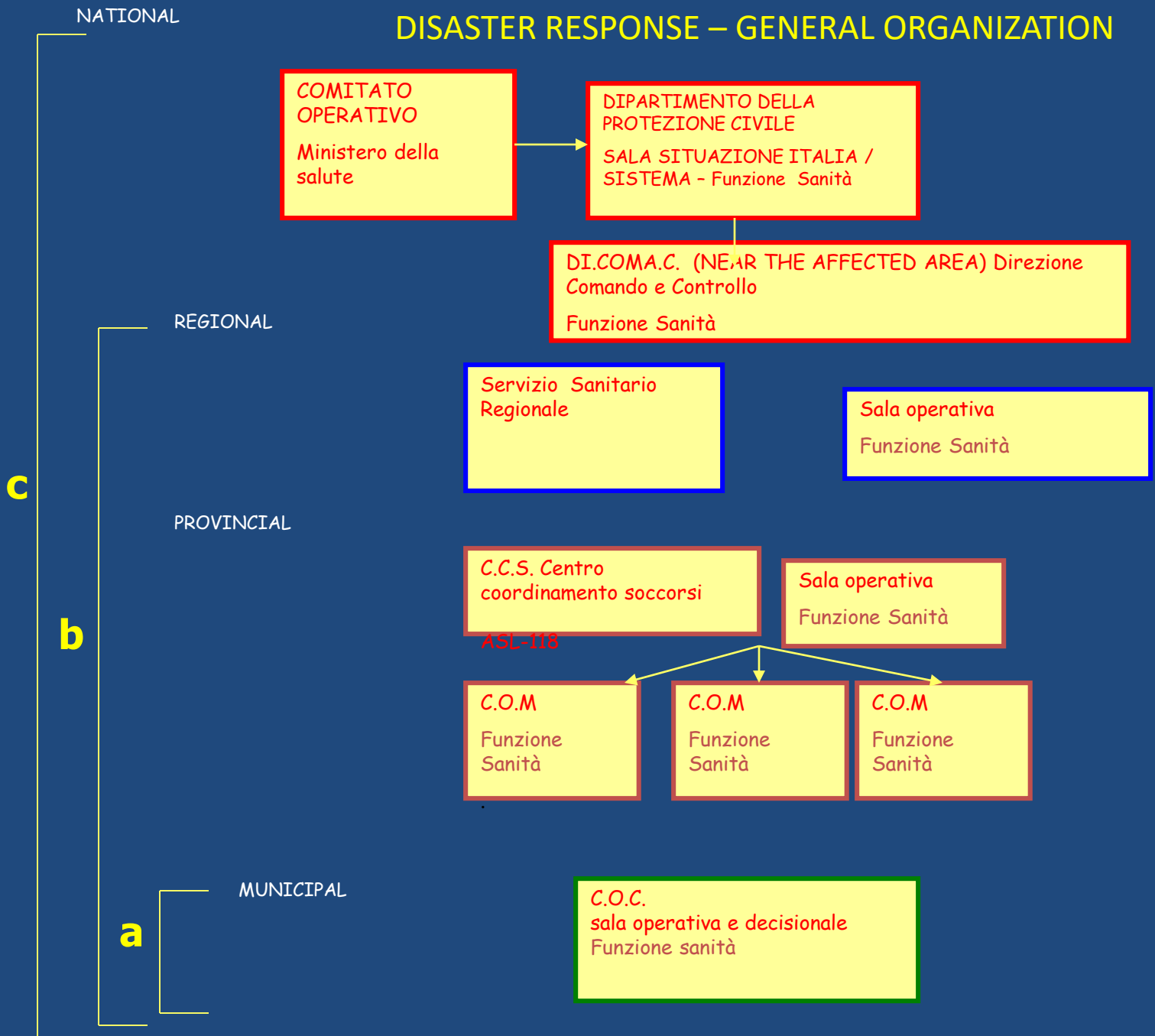
Funzioni di supporto (Operational functions): organisation of the response articulated into different sectors (e.g. planning, health, mass media, telecommunications, volunteers). For each Function a coordinator is appointed by the civil protection authority. The number and the tasks of the functions are flexible and can be adapted to the contingency situation.



Civil protection preparedness – Funzione «Sanità, assistenza sociale e veterinaria (health and social care, veterinary public health) According to «National criteria on the organisation of health services in disasters», 2001

- Extra-hospital emergency health care
- Intra-hospital emergency health care
- Health aspects connected to victim identification
- Recovery of basic health care services
- Drug supply, recovery of pharmaceutical service
- Public health in displaced camps
- Food safety
- Disposal of dead animals and food waste
- Water sanitation
- **Animal health and welfare**
- Psychological support
- Social care

DISASTER RESPONSE – GENERAL ORGANIZATION



The Regional Contact for health emergencies

(RSR) Decree of the PCM 24 June, 2016

Integration of the Regional Civil Protection System and the Regional Health Service for all the health aspects connected with a disaster;

Communication with the Regional and National Civil Protection to inform on the ongoing current situation, the intervention priorities and the resources needed to ensure health care to the affected population;

Connection with the competent structures of the local health service, as well as with the Regional Civil Protection Structure;

Participation of the Regional health service to disaster preparedness activities.

What about the animals?

Uragano Harvey, 25enne texano morto per salvare il gatto: la Peta lo celebra

Era stato folgorato da una scarica elettrica mentre cercava di liberare l'animale della sorella che era rimasto intrappolato. Ora gli dedicheranno una targhetta d'oro con l'incisione: "Amante degli animali ed eroe"

Un ragazzo di 25 anni di Houston (Texas) è morto il 29 agosto scorso mentre stava cercando di salvare il gatto della sorella durante l'uragano Harvey. Secondo quanto raccontato dalla famiglia il giovane è rimasto folgorato da una scarica elettrica nel tentativo di liberare l'animale che era rimasto intrappolato. Ora l'organizzazione statunitense Peta realizzerà in suo ricordo una targhetta d'oro.

CORRELATI

- GESTO D'AMORE: Foggia, 28enne si getta sui binari per recuperare il suo cane: muore travolta da un treno
- HA COMMOSO TUTTI: Morta cercando un disperso, Amatrice dedica una statua al cane-eroe Camilla

I PIÙ VISTI DI MONDO

1. Un pilota Etihad muore in volo, atterraggio d'emergenza in Kuwait

Una nazione di animale domestici: in Italia sono 60milioni - Osserva Consumi - Repubblica.it - Internet Explorer

ECONOMIA & Finanza

OSSERVA ITALIA

Una nazione di animale domestici: in Italia sono 60milioni

Cani, gatti, uccelli, criceti, tartarughe, pesci ormai fanno parte integrante delle famiglie italiane. E alimentano un business sempre più importante

Cani, gatti, uccelli, criceti, tartarughe, pesci.

OSSEVA ITALIA
Il rapporto sui consumi
Un'iniziativa di Affari & Finanza
in collaborazione con Conad e Nielsen

CONAD

I NUMERI
Settimana
Mese
Trimestre



PO AND TANARO RIVER FLOOD
1994- PROVINCE OF ALESSANDRIA

Dead animals :
1845 cattle
25 horses
150 pigs
1700 farmyard animals
30 small ruminants
10 dogs



Floods: Impact on animal health/welfare

Effect	Impact on animal health / welfare
Flooding of buildings/facilities where animals are sheltered	Drowning, electrocution Need for temporary shelters Unattended animals Damage to feed
Interruption of electric power	Discomfort Disruption of water/feed supply
Disruption of water distribution	Disruption of water supply
Interruption of roads/transport	Interruption of feed supply Limited/no access of caregivers/veterinarians
Flooding of facilities where chemicals are stored	Environmental pollution
Flooding of polluted waters	Environmental pollution Spread of water-borne diseases
Suitable habitat for vectors	Spread of vector-borne diseases

Veterinary disaster response

Is coordinated at local level by the Veterinary services

(Local health agencies)

Other actors concur to the activities
(practitioners, police, volunteers, etc.)

Forecast and prevention – Umbria

Umbria Region is heavily exposed to hydraulic and hydro-geological hazard.

In the framework of a collaboration between the Regional civil protection and «Istituto Zoorofilattico Sperimentale» (IZS) the regional GIS on hydraulic and hydro-geological hazard has been integrated with the data concerning farms based on livestock and farm anagraphical records

Every year a training course for veterinarians on non epidemic emergencies, including an exercise on the field, is organised jointly by the IZS and Regional civil protection

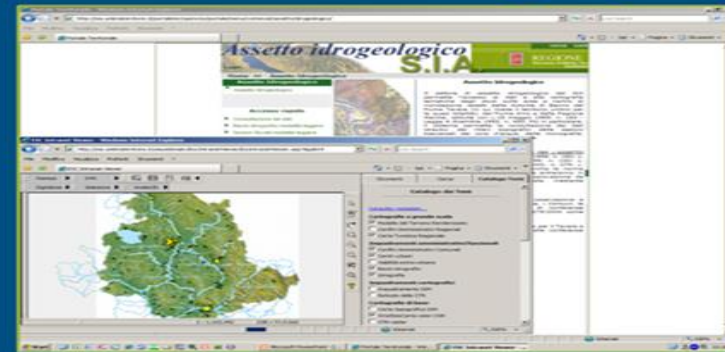
CASO STUDIO: ALLEVAMENTI UMBRI A RISCHIO ESONDAZIONE - dataset

Allevamenti	Reticolo Principale															Tot
	Fascia A					Fascia B					Fascia C					
	A.S.L.				Tot.	A.S.L.				Tot.	A.S.L.				Tot.	
Città di Castello	Foligno	Perugia	Terni	Città di Castello		Foligno	Perugia	Terni	Città di Castello		Foligno	Perugia	Terni			
Sutini	0	2	4	5	11	4	0	0	3	7	8	0	2	0	10	28
Ovini/Caprini	0	1	3	3	7	1	0	1	4	6	4	0	2	1	7	20
Equini	0	0	6	4	10	0	0	6	2	8	2	0	4	2	8	26
Bovini	0	2	6	11	19	2	0	4	7	13	7	0	6	4	17	49
Tot.	0	5	19	23	47	7	0	11	16	34	21	0	14	7	42	123

Allevamenti	Reticolo Secondario															Tot
	Fascia A					Fascia B					Fascia C					
	A.S.L.				Tot.	A.S.L.				Tot.	A.S.L.				Tot.	
Città di Castello	Foligno	Perugia	Terni	Città di Castello		Foligno	Perugia	Terni	Città di Castello		Foligno	Perugia	Terni			
Sutini	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ovini/Caprini	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Equini	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bovini	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tot.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Sito web S.I.A. Assetto Idrogeologico

<http://sia.umbriaterritorio.it>



Allevamenti	Reticolo Principale															Tot
	Fascia A					Fascia B					Fascia C					
	A.S.L.				Tot.	A.S.L.				Tot.	A.S.L.				Tot.	
Città di Castello	Foligno	Perugia	Terni	Città di Castello		Foligno	Perugia	Terni	Città di Castello		Foligno	Perugia	Terni			
Sutini	61	8	3	72	138	25	4	9	38	107	79	12	4	97	228	
Ovini/Caprini	65	13	12	150	236	230	37	28	317	689						

«Gestione dati epidemiologici per la costruzione di mappe di rischio»

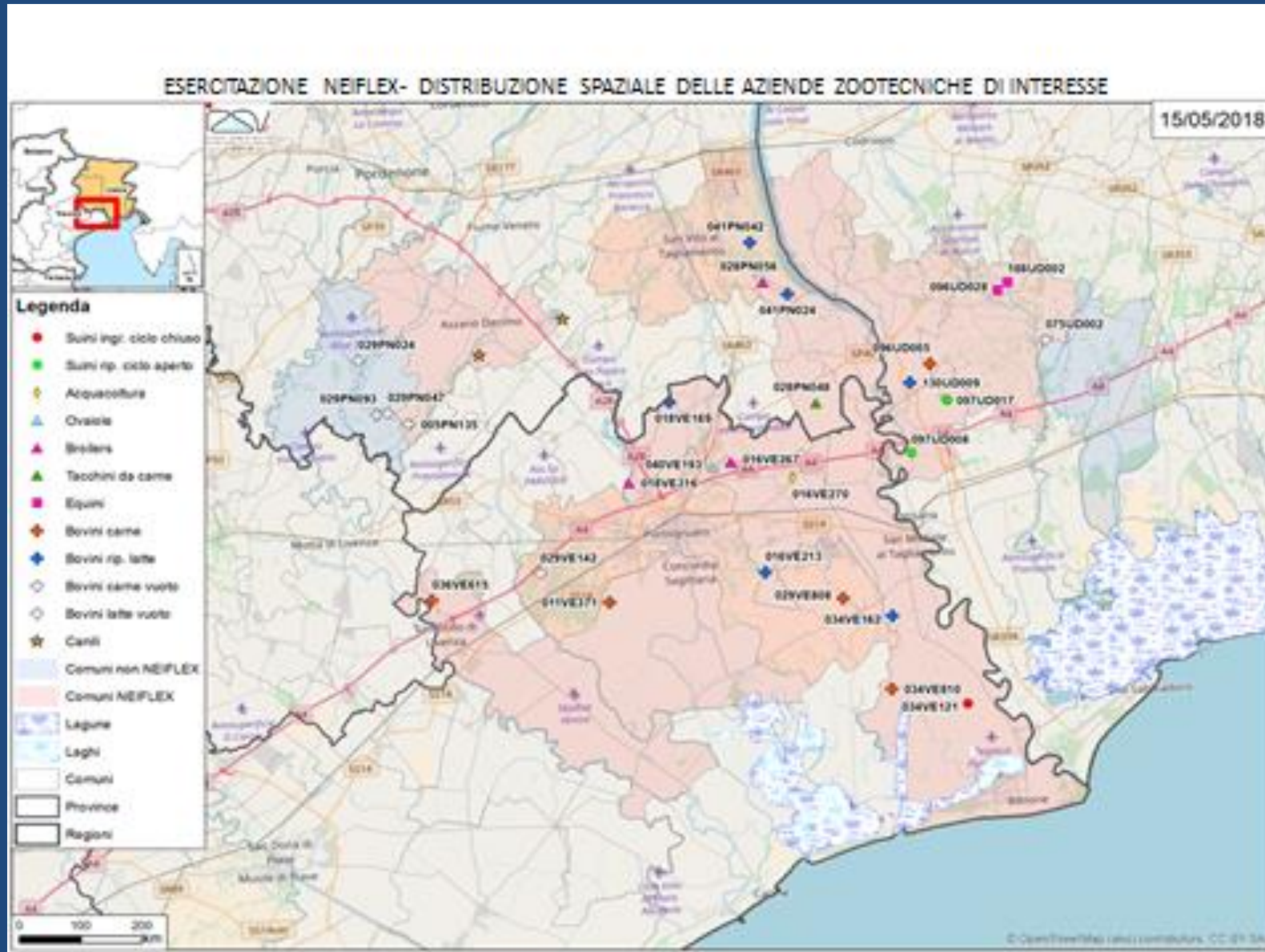
Gina Biasini (a), Raffaello A. Morgante (a), Carmen Maresca (a), Telemaco Cenci (a), Nicola Berni (b), Federico Governatori Leonardi (b)

(a) Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche - Perugia

(b) Regione Umbria, Centro Funzionale del Servizio Protezione Civile - Foligno (PG)

NEIFLEX – North Eastern Italy Flood Exercise

Tabletop exercise on veterinary public health



Critical points

- Short notice alert – how much time for preventive measures?
- Animal - related issues are not considered in local emergency plans
- Veterinary services are not integrated to the same extent into local civil protection systems
- Lack of specific logistic resources to deal with animal-related issues
- Involvement of practitioners and relevant stakeholders in preparedness and response (e.g. farmers, animal rights NGOs)

Memorandum of understandings with animal rights NGOs





THANK YOU