



# State of the art on contingency planning for the management of animal welfare issues during floods with Libya

## National experiences in animal assistance during emergencies in North Africa, Libyan experience

17-18/01/2024, Lisbon

Faraj Bakkar / Technical advisor of the CVO of Libya, National Centre for Animal Health



World  
Organisation  
for Animal  
Health

Organisation  
mondiale  
de la santé  
animale

Organización  
Mundial  
de Sanidad  
Animal



Floods are natural disasters and occur when an overflow of water and submerged with land. That leads to general damage and losses.

There are 3 common types of floods:

- a) Flash floods are caused by rapid and excessive rainfall that raises water heights quickly, and rivers, streams, channels, or roads may be overtaken.
- b) River floods are caused when consistent rain or snow melt forces a river to exceed capacity.
- c) Coastal floods are caused by storm surges associated with tropical cyclones and tsunamis.





# Effect of flood

**Primary effect**

Due to direct contact of flood water

**Physical damage**

**Secondary effect**

Due to the result of primary effect

**Disruption of essential services**

**Tertiary effect**

Due to combined primary and secondary effects

**Long term effects**

Operating environment, potential logistic constraints, and complementarity with other stakeholders:

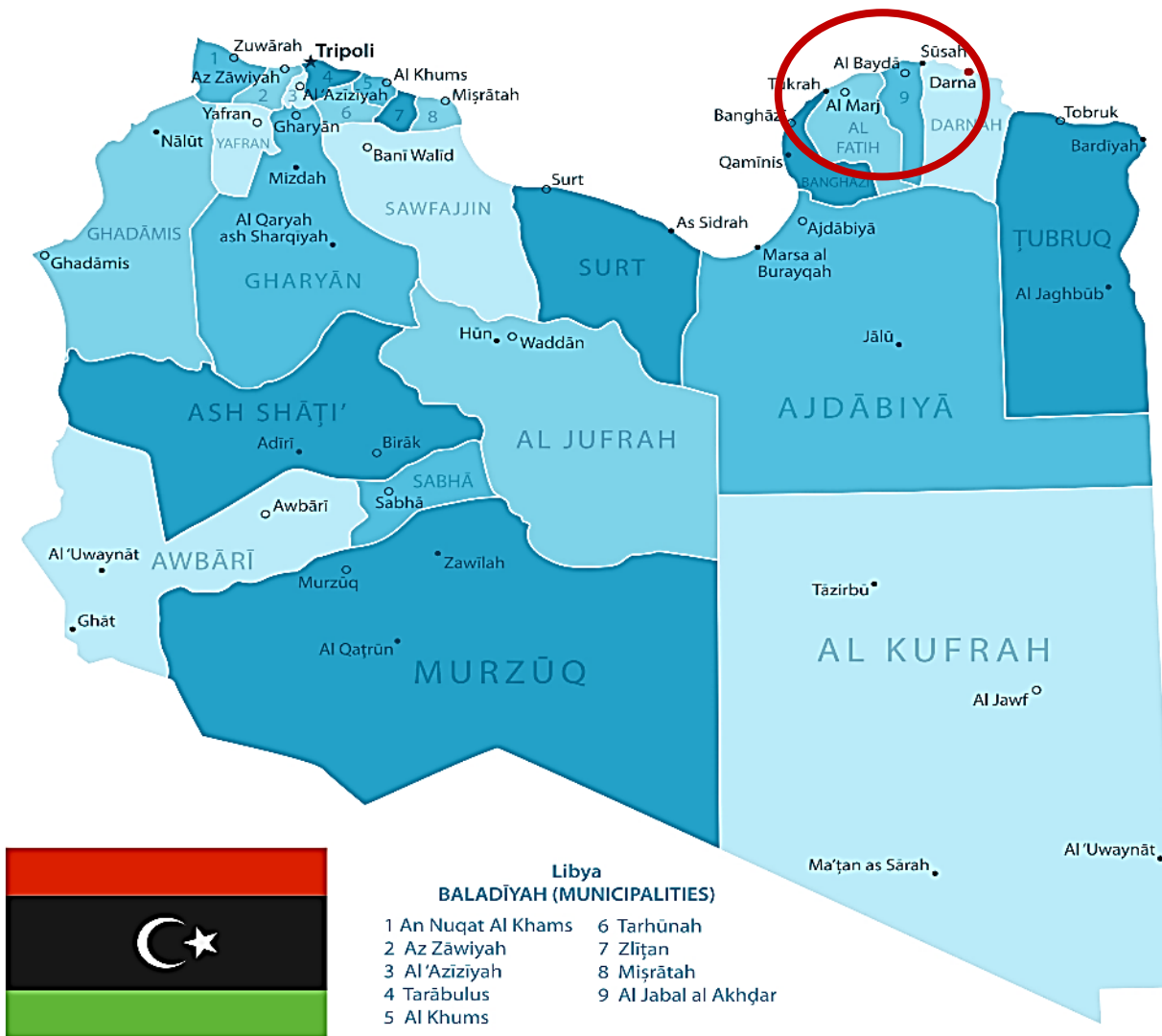
- *What happened?*
- *When did it happen?*
- *Where did it happen?*
- *Why/How did it happen?*



The catastrophic event occurred in September 10th, triggered by the powerful Mediterranean storm named Daniel, hitting eastern Libya, particularly devastating Derna.

Other affected areas are Benghazi, Al Marj, Al Bayda and Sousa.

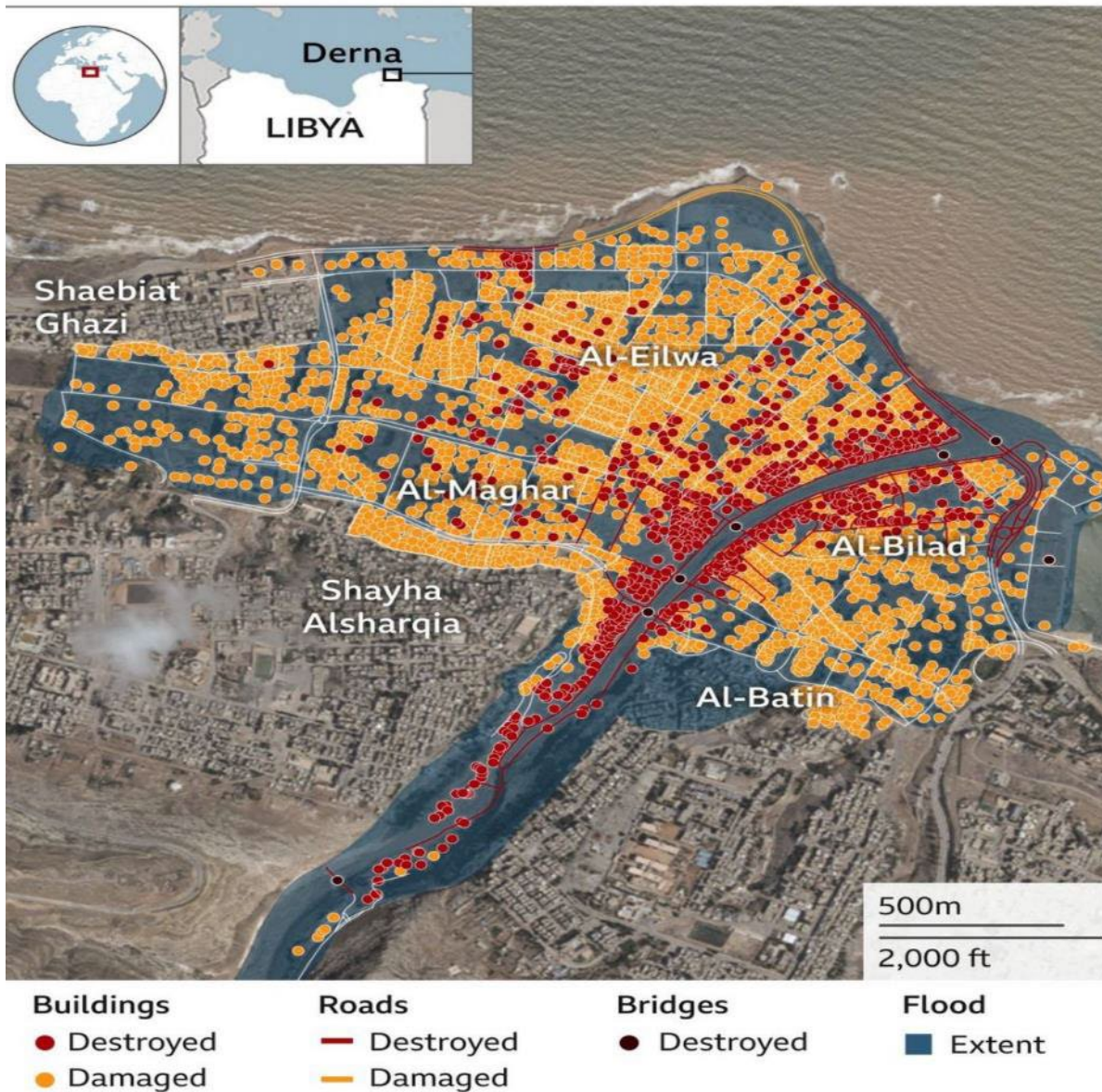
The strong winds and heavy rainfall led to the collapse of two dams south of Derna and subsequent catastrophic flooding, which destroyed homes, hospitals, roads, power lines, phone networks and even farms.







## Damage and destruction in Derna



## ***How has the emergency impacted the environment, and what are the implications for animal management?***

- ***What is the impact on access to feed and grazing?***

The warehouse of feed destroyed by approximately 20 thousand of feed.

40% of grazing was damaged

- ***What is the impact on access to water?***

- Lack of clean water resources and groundwater merged with sewage water

- Seller kiosks were the main source of drinking water

- ***What is the impact on daily/seasonal movements and trade?***

The logistics had been affected due to unsafe routes and damaged roads so, the movement is minimal.

- ***What is the impact on animals for slaughtering?***

Reduction of livestock and poultry meat due to 40% loss of animal were affected.

According to the EBS, farmers noticed cases of diarrhea, abortion, and LSD.

Lack of healthy animals to be slaughtered for human consumption.

- 1) Not all people can afford it, or access selling points of water. Based on the location, people draw drinking water from public and private boreholes, water trucks, public tap-stands, springs, household rainwater, and surface water, many of which are damaged, unprotected, or untested.
- 2) Key informants are concerned about contaminated water, increases in stagnant water, and livestock or animal feces in public areas. Key informants in all locations voiced concern about the presence of disaster waste, improper waste disposal practices, and soil contamination
- 3) Airports in Albayda and Tobruk are opened for humanitarian cargo but were not used by partners. Roads, including coastal roads, were being cleared and becoming more accessible



# Impact of Floods on logistic in Derna

## Legend

Ports, Aerodromes

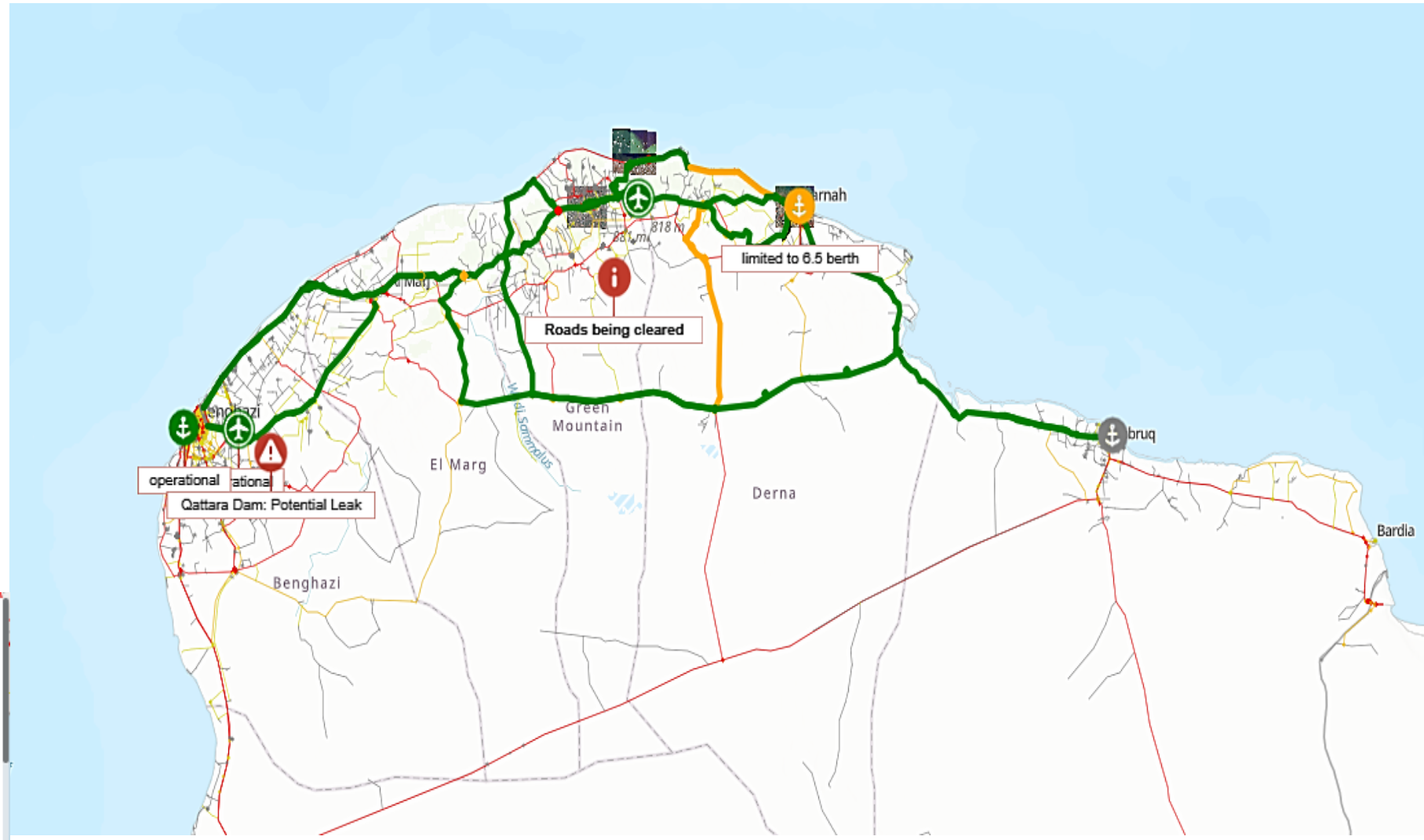
- Ports (Anchor icon)
- International Airport (Airplane icon)
- Open (Green circle)
- Restricted (Yellow circle)

River buffer 500m



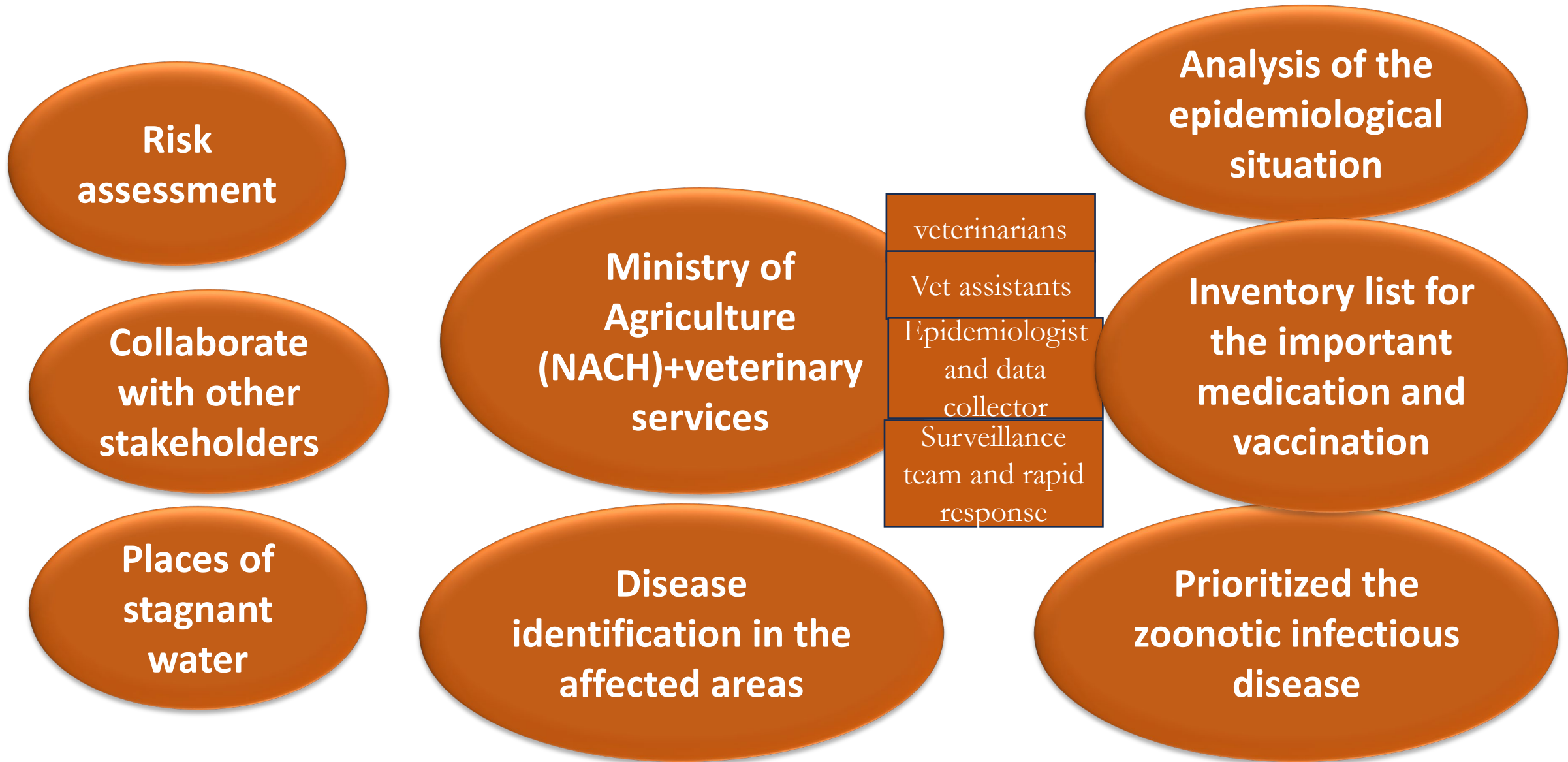
Roads

- Unknown/unclassified (Grey line)
- Primary (Red line)
- Secondary (Yellow line)





## and what are the lessons learned (home-taken message)





- *What is the history of veterinary emergency response in the affected area, and what are the lessons learned?*
  - *No near history in dealing with such a disaster.*
- *What is the importance of disaster preparedness for practice?*
  - Everyone realized the importance of preparing for such a disaster.
- *And what is the rapid response in this case?*
  - Actually the rapid response was not sufficient.



- Which stage has the emergency reached (*immediate aftermath/early recovery/recovery*)? Recovery Reaction time (*approximate number of days/weeks*)

after 2 weeks of Daniel Strome.

- *Who are the key stakeholders in the affected area, and what they are doing?*

Emergency unit crises belonging to the Ministry of Health

- *Are any stakeholders playing a coordination role?*

NACH Ministry of Agriculture, Ministry of Environment, local governess (environment sanitization), and Ministry of Health.

- *How are communications functioning?*

Lack of communication because the one health concept isn't implemented in Libya.

They communicate personally by exchanging the reports if exist. OR by phone, and/or text message.

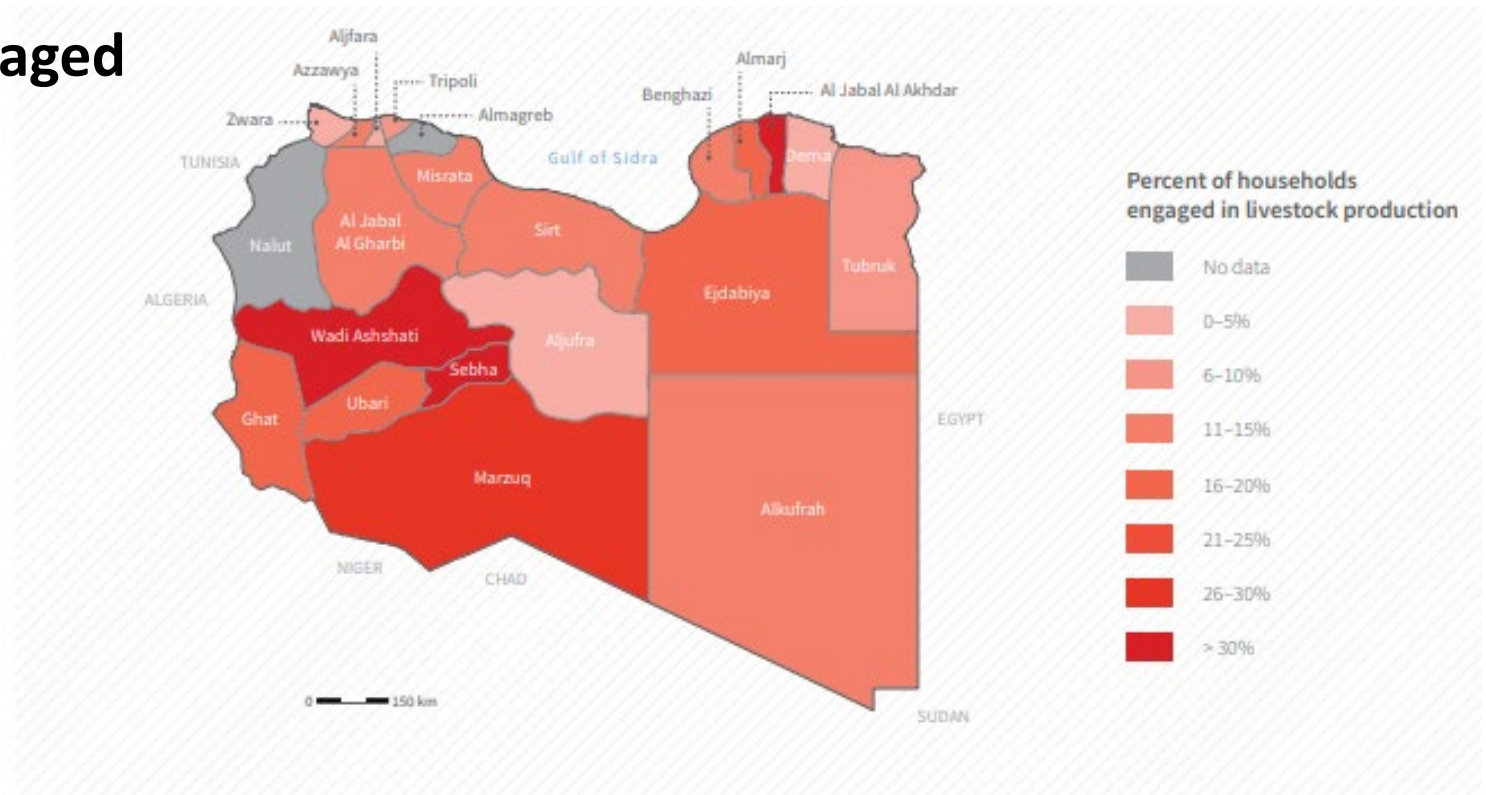
- *What is the current infrastructure, such as roads and transport?*

Very limited such as I mentioned above



Type of damage	Flood impact
Surface of the area affected and farms	83 farms 304 privet farms, 17 chicken coops (total of 85000 poultry death)
Epidemiological situation of the most relevant animal diseases in Libya	LSD, RVF, FMD, WNV, BTV, PPR
What diseases would you, as the VS, like to monitor more closely following the floods?	Intestinal parasitic disease, black leg, plant poisoning in livestock, Botulism, leptospirosis and vector borne diseases
Human population	The population in Derna was around 90,000. After floods more than 4,000 were died, while 8,000 were missing.
Are there any relocation camps for the human population?	About 42,000 of IDP. They moved to the west and east area of Libya

## The Proportion of households engaged in livestock production in Libya



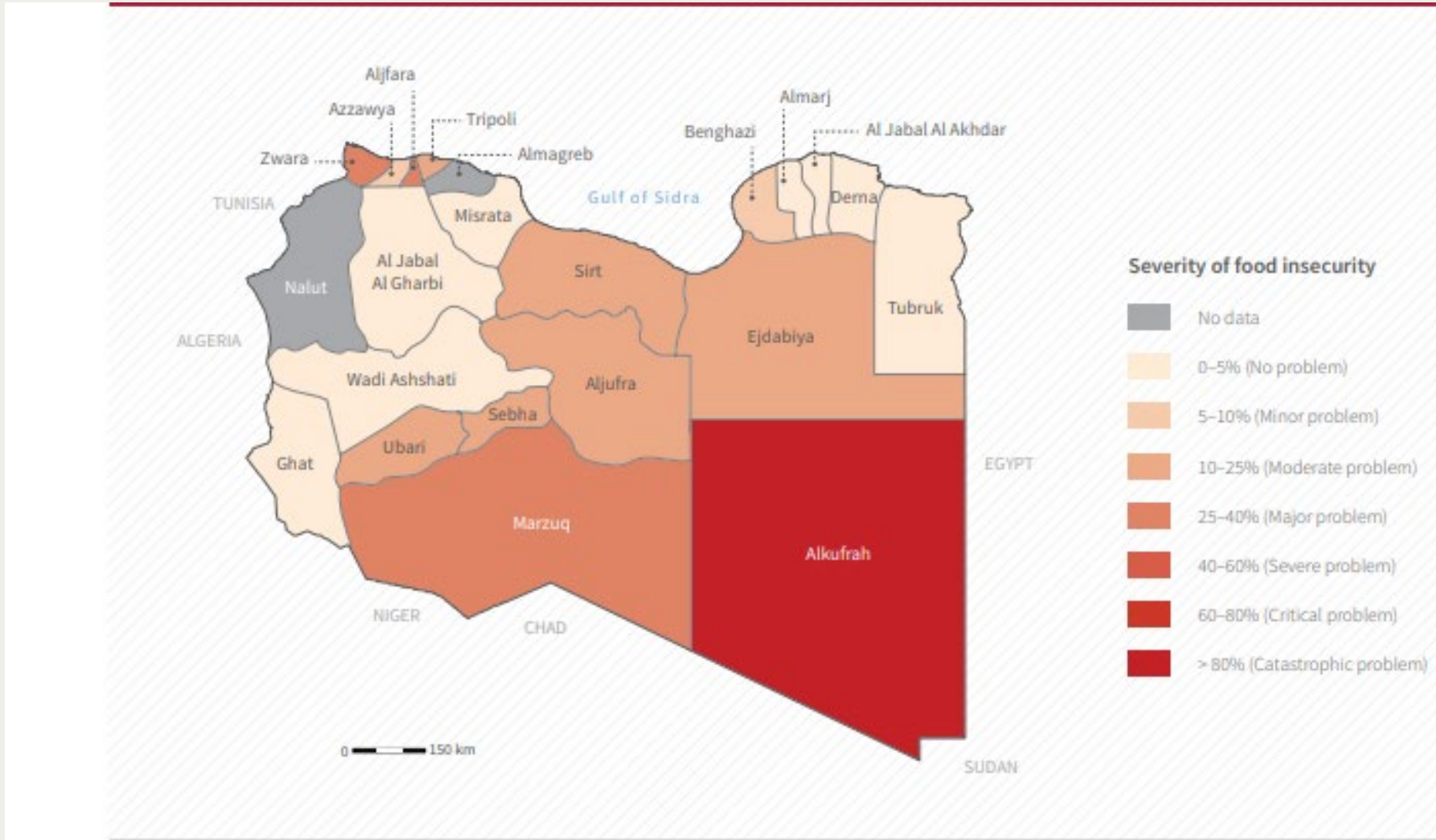
Source: FAO, 2018

The majority of households involved in livestock production owned fewer than 10 small ruminants (sheep and goats), although larger herd sizes (more than 50 animals) were common in Al Jabal Al Akhdar (for both sheep and goats).  
. cattle holdings were significant in Al Jabal Al Akhdar,.





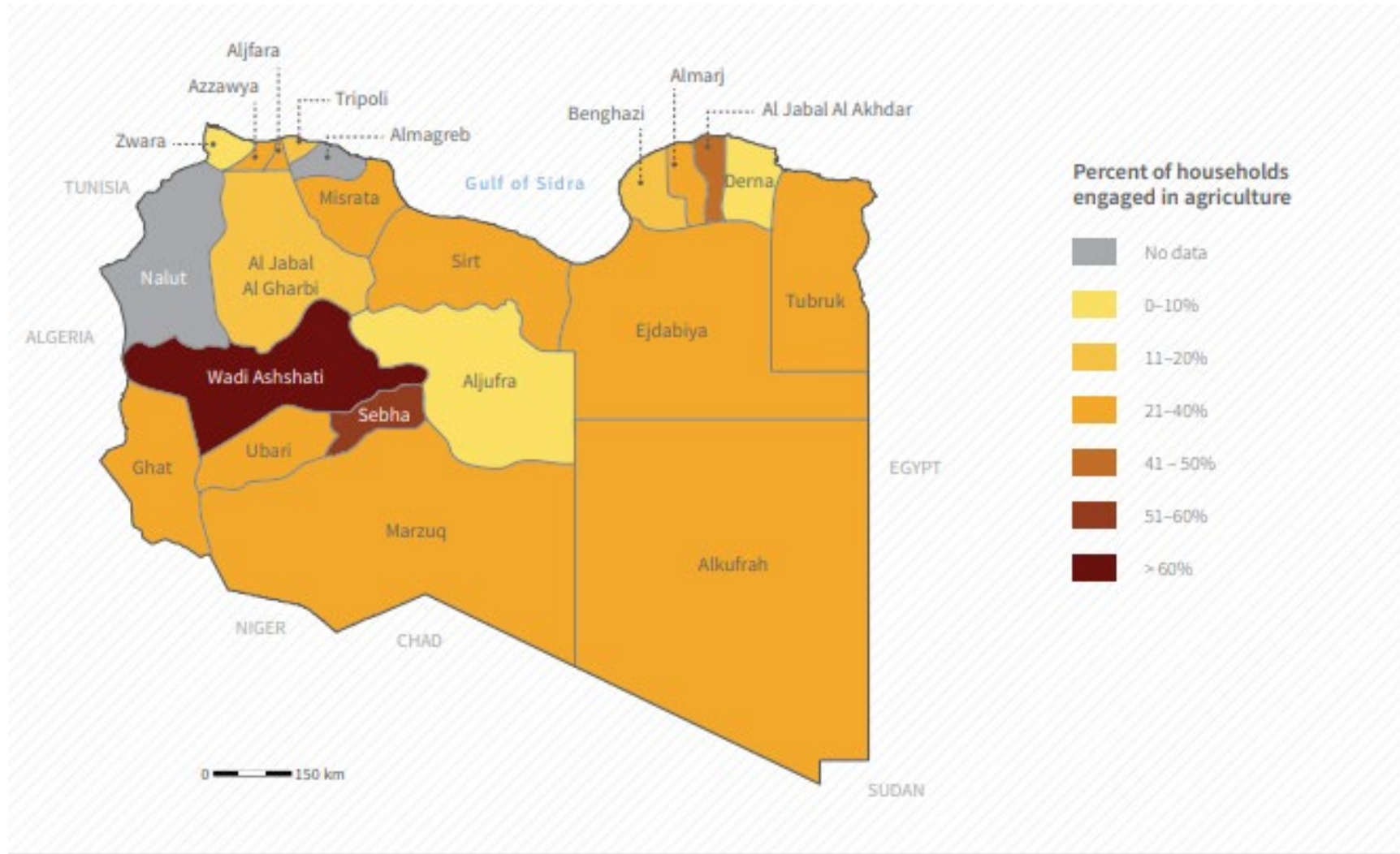
# Prevalence of household food insecurity



Source: FAO, 2018



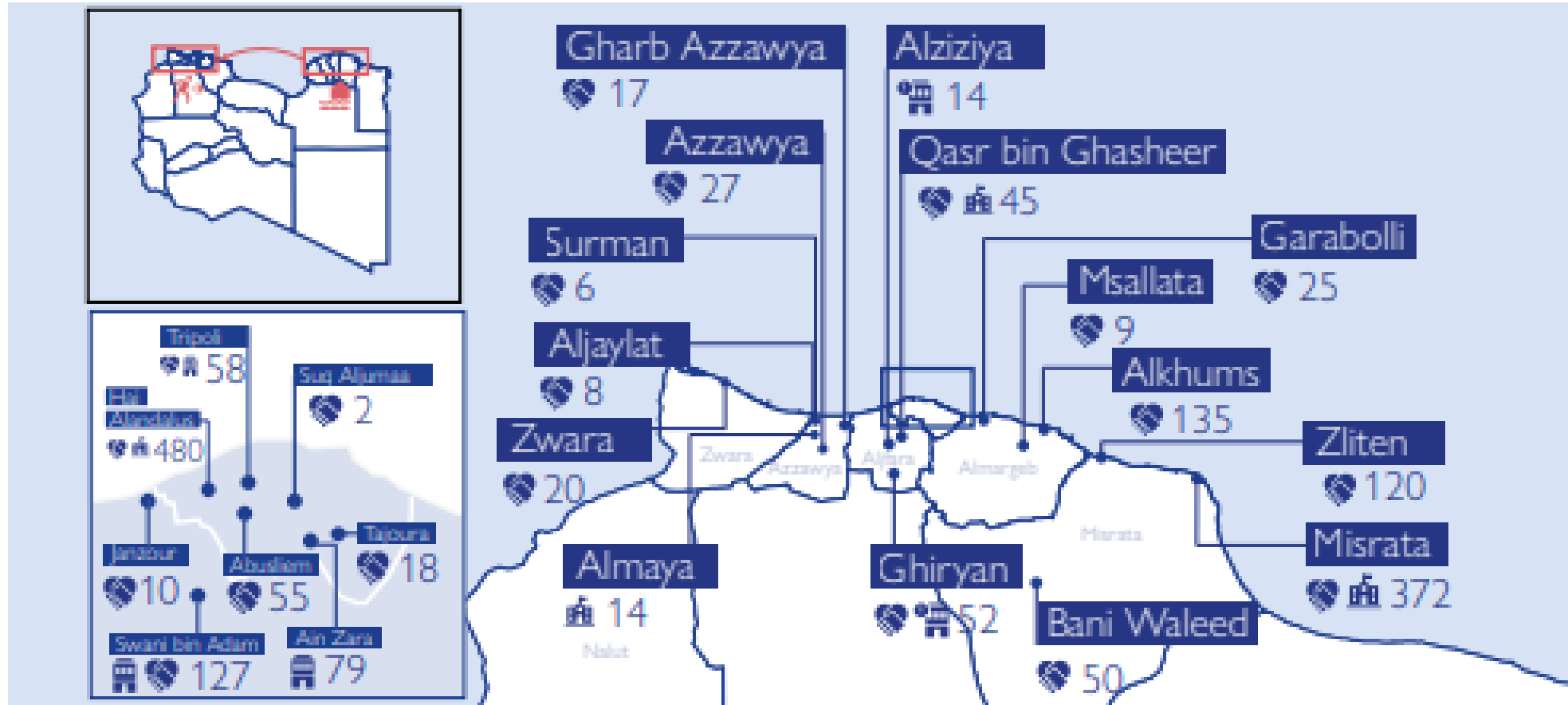
# Percentage of households engaged in agriculture



Source: FAO, 2018



## MAP 1: LOCATIONS IN WESTERN LIBYA WHERE DISPLACED INDIVIDUALS HAVE RELOCATED AND TYPES OF ACCOMMODATION





# Structure and composition of animal populations

Category	Approximate number of animals in the affected area	Approximate number of animals in need of assistance
<i>Domestic animals (including Livestock + working animals like horses etc.)</i>	Approximate 100,000 death	800,000
<i>Wild animals</i>	No data	No data
<i>Companion animals</i>	-	-
<i>Laboratory animals</i>	-	-
<i>Zoos and exotic animals etc.</i>		

- **Type of farming systems (intensive/backyard/pastoralism)**

Category	Approximate %
Intensive	Less than 3%
Backyard	More than 60%
Pastoralism	30%





# General characteristics of the Libyan system



- **Legal mandate of veterinary services**

- All domestic animals (including Livestock + working animals like horses etc.), however wild, companion, laboratory, zoo animals are not under the mandate of VS.

- **Access to holdings**

In some places, animals and farms cannot be reached due to waterlogging, and many animals have died due to either the floods themselves or due to lack of access to fodder.

- **Control of animal movements**

As for the movement of animals, it could not be controlled even before the disaster, and the loss of control extended to vast areas of the affected area

- **Evacuation and relocation of animals**

The evacuation process did not take place in the affected areas due to the difficulty of working in the area, the loss of human lives, the loss of communications, and the lack of an integrated national plan for disaster management.



- **Temporary sheltering of animals**

In these circumstances, reliance is placed on animal breeders arranging temporary pens to house their animals, and the government has not provided anything in this regard due to the lack of a national plan for crisis management, as we mentioned.

- **Culling of animals**

This process did not take place due to waterlogging

- **Slaughter of animals**

Sometimes, we resorted to slaughtering animals that survived the floods due to the difficulty of transporting them to other places, and some of them were marketed as meat.

- **Collection and destruction of carcasses**

In fact, the animal corpses remained discarded for a long time, and many decomposed corpses appeared after the floods ended. The corpses were not disposed of as required.





- **Compensation procedures**

Unfortunately, the compensation policy has not been applied in recent years in Libya, which has caused many problems when implementing disease elimination policies. However, in the recent flood crisis, some financial compensation was provided to animal breeders who lost their animals due to the floods

- **Restocking procedures**

No actions have been taken by the government regarding this restocking.

- **Personnel**

In this regard, the government has granted an additional monthly salary to all employees in the affected areas, including workers in the field of livestock, such as veterinarians and livestock breeders.

- **Equipment and consumable items**

The private veterinary sector played a role in providing some equipment, disinfectants, pesticides, and veterinary medicines to help breeders and animal owners withstand the disaster, but this support remains insufficient due to its limitations.

- **Collection and destruction of carcasses**

All efforts to dispose of the bodies were carried out individually and voluntarily, and the government did not intervene except to inventory the damage and prepare lists showing the number of dead animals for each breeder. The government's efforts were focused on human rescue efforts.

- **Compensation**

As we mentioned previously, the compensation policy remains unclear due to the agricultural sector's inability to organize itself. However, the army has distributed some financial aid to animal breeders.

- **Donations**

- Budget to perform support activities (food, feed, water, drugs/vaccines)
  - Standard budget; feed not included in this budget.
  - Emergency budget; not existed

In fact, the National Center for Animal Health has been suffering for a long time from the absence of animal vaccines and veterinary medicines, so this situation contributes to worsening the current situation. The efforts of the national veterinary services have been limited to providing veterinary advice and guidance.



- Who leads the EM activities? (E.g., Ministry of Interior)

The efforts were led by a central committee called the Crisis and Emergency Committee

- What's the Chain of command ?

It was not established in a new way, as the work of crisis management seemed to be led randomly

- What's the level of integration of VS in the Incident Management System?

Veterinary services were not fully involved in the crisis, but some interventions took place at the local or municipal levels

- Do we have a contingency plan for animal diseases? Some emergency plans for some animal diseases are existed such as avian influenza, Rift Valley fever and foot-and-mouth disease.

- Do we have a contingency plan for natural disasters?

There is no natural disaster plan in animal health

- Do we have protocols/operational procedures *[instructions for staff and other stakeholders on how to undertake specific tasks required by the response or contingency plan]* ?

In fact, we do not have a special protocol for managing veterinary services in such situations, but there are a set of instructions and directives that are issued from time to time which contribute to some extent to stabilizing the situation in the targeted areas.



# Resources required to address the disaster situation <sup>27</sup>

---

Do we have...

- Trained and experienced personnel ? (yes/no)

No

- Farms/animals databases or other sources of information to locate the holdings/animals ? (yes/no)

No

- Vehicles (availability and other means of transport)? (yes/no)

No





# Resources required to address the disaster situation

---

28

- Personal supplies? (yes/no)

Yes

- Culling, collection and disposal of carcasses, incl. rendering plant capacities ? (yes/no)

No

- Relocation of animals (list of shelters; transportation means, biosecurity measures) ? (yes/no)

No

- Supplies for holding operations (water and feed, mobile milking devices, power generators) ? (yes/no)

No

Do we have partnerships with...

- Meteorological institutions and other data / analysis providers ? (yes/no)

No

- Farmers organisations ? (yes/no)

Yes but not very well organised

- Animal welfare NGOs ? (yes/no)

Yes

- Private veterinarians ? (yes/no)

Yes

- Between regions and between neighbouring countries ? NO



# ... other relevant aspects

---

Do we have...

- Expert groups/advising group for Emergency Management response? (yes/no)

Yes

- Early warning systems? (yes/no)

Not very well established

Do we have any training on Emergency Management? (yes/no)

- Frequency
- Topics
- Trainers and Trainees



# Thank you

---

**Faraj Bakkar**

Technical Advisor to the Chairman of the Board of Directors of NCAH (CVO)

National Centre for Animal Health - NCAH

Ministry of Agriculture, Livestock Resources - Libya

Gotashsha'al street, Tripoli

GSM: +218914099921 | GSM: +218926414974

Email: farag\_bakkar@yahoo.com