

Emergency Preparedness and Health Security Threats

Francesco Valentini
Programme Officer
WOAH (Tunis)

Ian Peter Busuulwa
Project Officer – Biological Threat Reduction
WOAH (Nairobi)

26th Conference of the Regional Commission for Africa (RC26)
4 – 7 February 2025
Addis Ababa, Ethiopia



World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

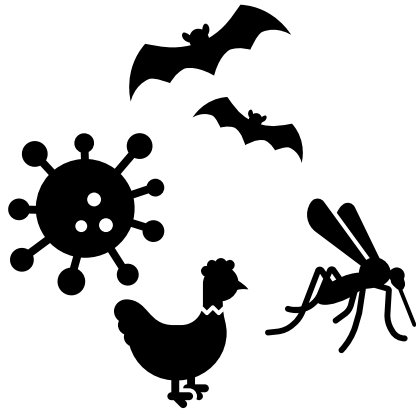
Organización
Mundial
de Sanidad
Animal



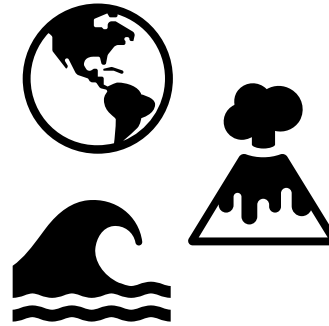
**An ever-changing hazard
landscape for Veterinary
Services**



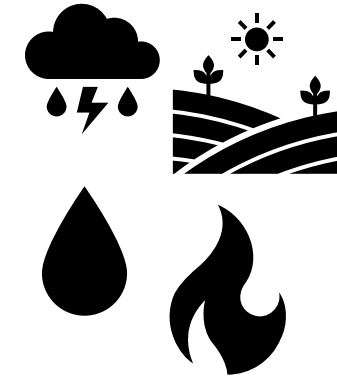
Hazards relevant to Veterinary and Aquatic Health Services that may trigger National Emergencies



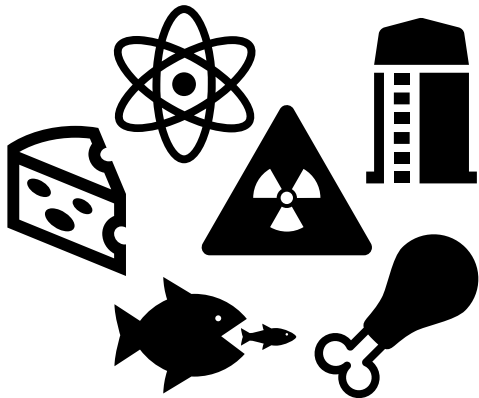
Infectious diseases, including emerging zoonoses and vector-borne pathogens



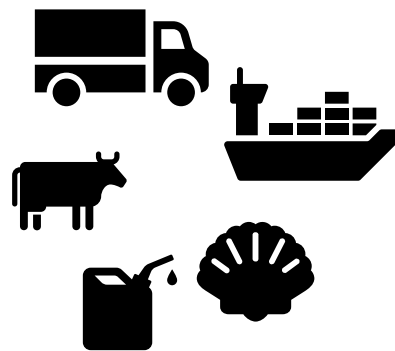
Geological events: earthquakes, volcanoes and tsunami



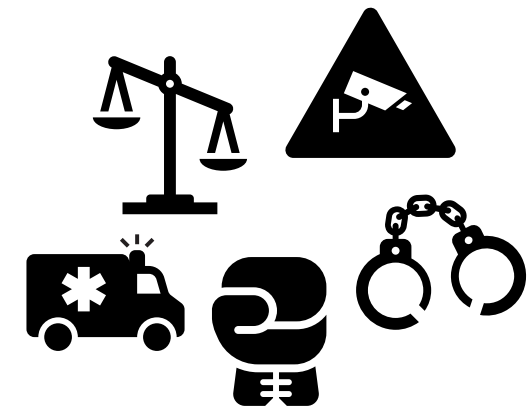
Adverse weather and climatic events: storms, floods, fire and drought



Technological disasters and contamination of food and feed chains



Transport and maritime accidents, including oil spills



Agro-crime, agro-terrorism, cybersecurity, conflict, refugees



Impact of Emergencies

Los Angeles

At Least 13,000



SRI LANKA: A neighborhood in Colombo, the capital, lies in the island nation, and as many as 200,000 homes were destroyed.

The

Wave of



Undersea earthquake
Tsunami leaves

78,000

cattle

52,000

goats

1,500,000

chickens

16,000

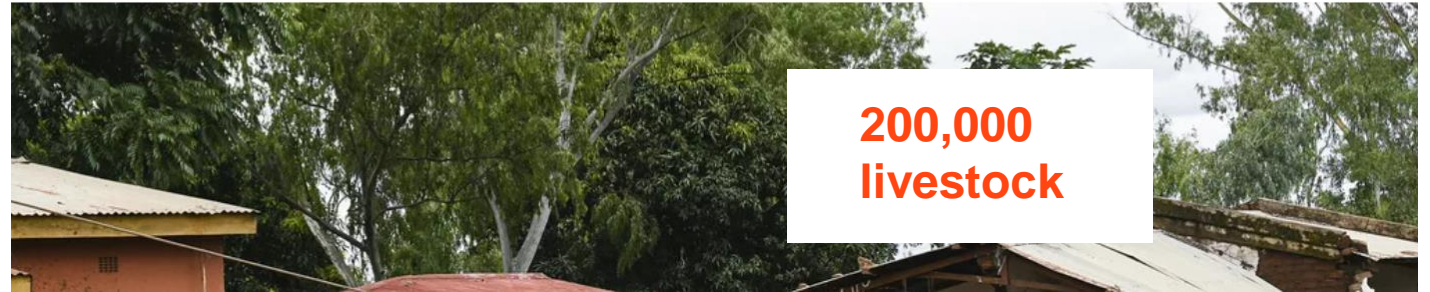
sheep

61,000

buffalos



Malawi: Cyclone Freddy's death toll rises to 1,200



World health

60%

of pathogens that cause human diseases originate from domestic animals or wildlife.

75%

of emerging infectious human diseases have an animal origin.

80%

of pathogens that are of bioterrorism concern originate in animals.

WOAH's Work



Biological Threat Reduction Strategy

Biological Threat Reduction Strategy

Maintaining scientific expertise and setting standards, and guidelines



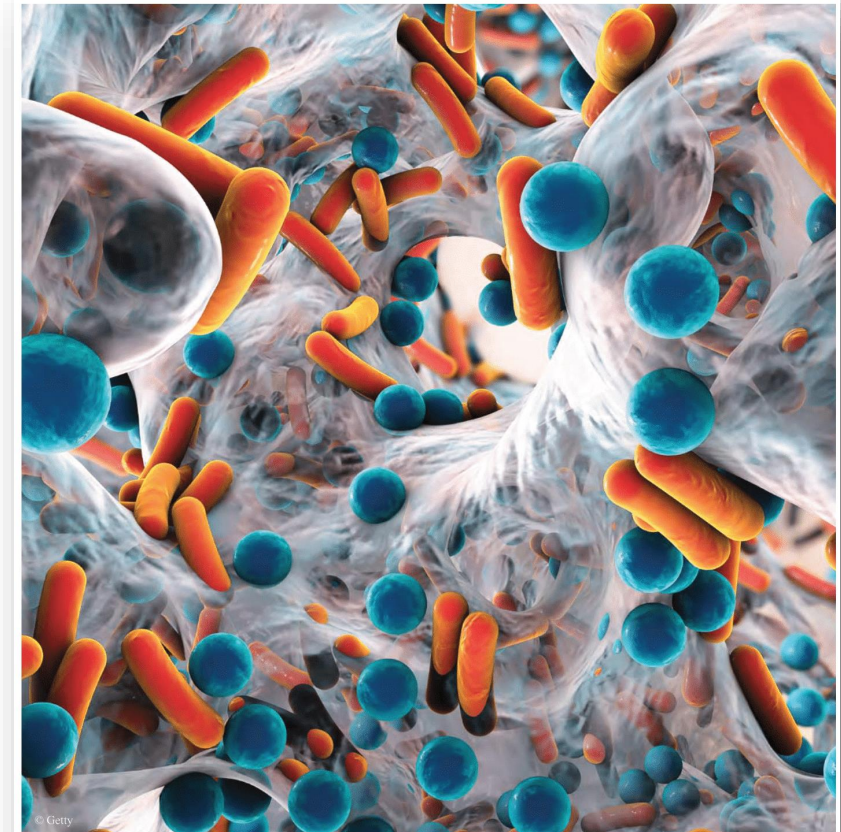
Good governance, capacity-building and implementation of the One Health concept



Global disease intelligence and updates on the latest methods for disease prevention and control

International cooperation and solidarity between countries

Advocacy and communication



Biological threat reduction strategy

Strengthening global biological security



International Standards



**Biosafety and biosecurity:
Standard for managing biological
risk in the veterinary laboratory
and animal facilities (version
adopted in May 2015)**

Guidelines



Guidelines for investigation of suspicious biological events
For National Veterinary Services



Biological threat reduction



Guidelines for Simulation Exercises

A consistent set of good practices for preparing, delivering, and learning from animal health and welfare and veterinary public health simulation exercises for Veterinary Services



Emergency Management



Guidelines for responsible conduct in veterinary research

Identifying, assessing and managing dual use



Biological threat reduction



Emergency Management



Performance of Veterinary Services



- PVS – Sustainable Laboratories
- Veterinary Legislation Support Program (focus areas: biothreat reduction, wildlife, AMR)
- National Bridging Workshops

Capacity Building

- Laboratory Twinning
- EBOSURSY
- ZOOSURSY
- FIRABioT
- PROVNA

Partnerships

- African Union (Africa CDC, AU-PANVAC & AU-IBAR)
- Quadripartite organisations (with FAO, WHO & UNEP)
- INTERPOL
- Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GPWMD)

FIRABioT



Fortifying Institutional Resilience against Biological Threats (FIRABioT) : [2023 – 2026]

Funded by the Weapons Threat Reduction Program of Global Affairs Canada in support of the Global Partnership **Signature Initiative to Mitigate Biological threats in Africa**

Beneficiary countries in Africa include; **Algeria, Congo (Republic), Kenya, Madagascar, Malawi, Morocco, Namibia, Tanzania, and Zimbabwe.**



Objectives

- Improve WOAHA's ability to anticipate, respond and recover from emergencies and ensure business continuity
- Strengthen WOAHA Members' abilities and capacities to respond to emergencies, particularly in Africa
- Demonstrate value of WOAHA as a partner for security organisations

Focus areas; epidemic intelligence, emergency management, veterinary legislation and sustainable laboratories



Fortifying Institutional Resilience against Biological Threats (FIRABioT)

Completed Activities

- National biosafety and biosecurity trainings (Madagascar, Malawi, Morocco, Tanzania and Zimbabwe)
- Diagnostics training (Kenya)
- Regional trainings on biological waste management, bioinformatics and data management, risk and crisis communication for animal health emergencies



Fortifying Institutional Resilience against Biological Threats (FIRABioT)

Ongoing Activities

- Development of contingency plans for zoonotic diseases (Madagascar, Malawi, Namibia and Zimbabwe)
- Laboratory twinning (Tanzania/South Africa and Algeria/Italy)
- Drafting biosafety protocols (Malawi and Kenya)
- Drafting risk communication strategy (Tanzania)



Upcoming Activities

- Regional training on conducting disease simulation exercises
- Forensic training for vets (Kenya and Zimbabwe)
- Diagnostics Training (Congo)
- Regional awareness workshop on agrocrime/agroterrorism
- **Global Conference on Biological Threat Reduction (Oct 2025)**





FIRABioT Activities

Gaps identified/Lessons learnt

- Limited number of animal health experts on the topics in Africa
- Lack of integration of animal health in broader emergency frameworks at national and regional level
- Long term sustainability (i.e. donor dependent)
- Duplication of activities with other organisations and over proliferation of tools
- Many labs lack a proper biorisk management system and only have a quality management system
- Technical understanding of WOAHA standards lost in translation
- Country-specific approach to capacity building appreciated

Proposed next steps by countries

- Cascading training to sub-national levels
- Conducting laboratory biorisk assessments
- Drafting biosafety/biosecurity manuals and protocols
- Improving biorisk mitigation measures at national level
- Application for WOAHA laboratory twinning
- Implementation of biological waste management programs at national level

Establishing Incident Management System (IMS)

Background

- Build on experiences of implementing WOAHS IMS during COVID-19 and other incidents (e.g. ASF introduction in the Caribbean)
- Recommendation from emergency management technical item resolution of the 2022 General Session
- Lessons identified from joint simulation exercises with FAO, INTERPOL and WHO

Objective: improve WOAHS's ability to anticipate, respond and recover from emergencies and ensure business continuity

How it is triggered: Early warning and alert systems, and requests for assistance from members and RR/SRRs, followed by internal assessments



Developing Emergency Management Standards

- Mandated by Members in 2022 WOAHA General Session Technical Item Resolution
- Proposal accepted by TAHSC in February 2024
- *Ad hoc* Group convened
 - Terrestrial Code reviewed
 - Recommended developing a chapter on emergency management
 - Chapter outline drafted
- Report presented to TAHSC and AAHC in September 2024
- Report and draft chapter to be reviewed by TAHSC in February 2025





Global Conference on Biological Threat Reduction

Location: Geneva, Switzerland, (hosted by WOAHA)

Date: 28 - 30 October 2025



Objectives

- Reflect on historical experiences and current challenges and anticipate future threats
- Strengthen international efforts in biological threat reduction
- Foster multi-sectoral partnerships in global health security
- Identify innovative strategies

Financial support from: Global Affairs Canada, UK Ministry of Defense, EU Commission, Swiss Federal Department of Foreign Affairs

The PROVNA project



Defining Ecoregions and Prototyping an EO-based
VBDs Surveillance System for North Africa



Overview – “phase 1”



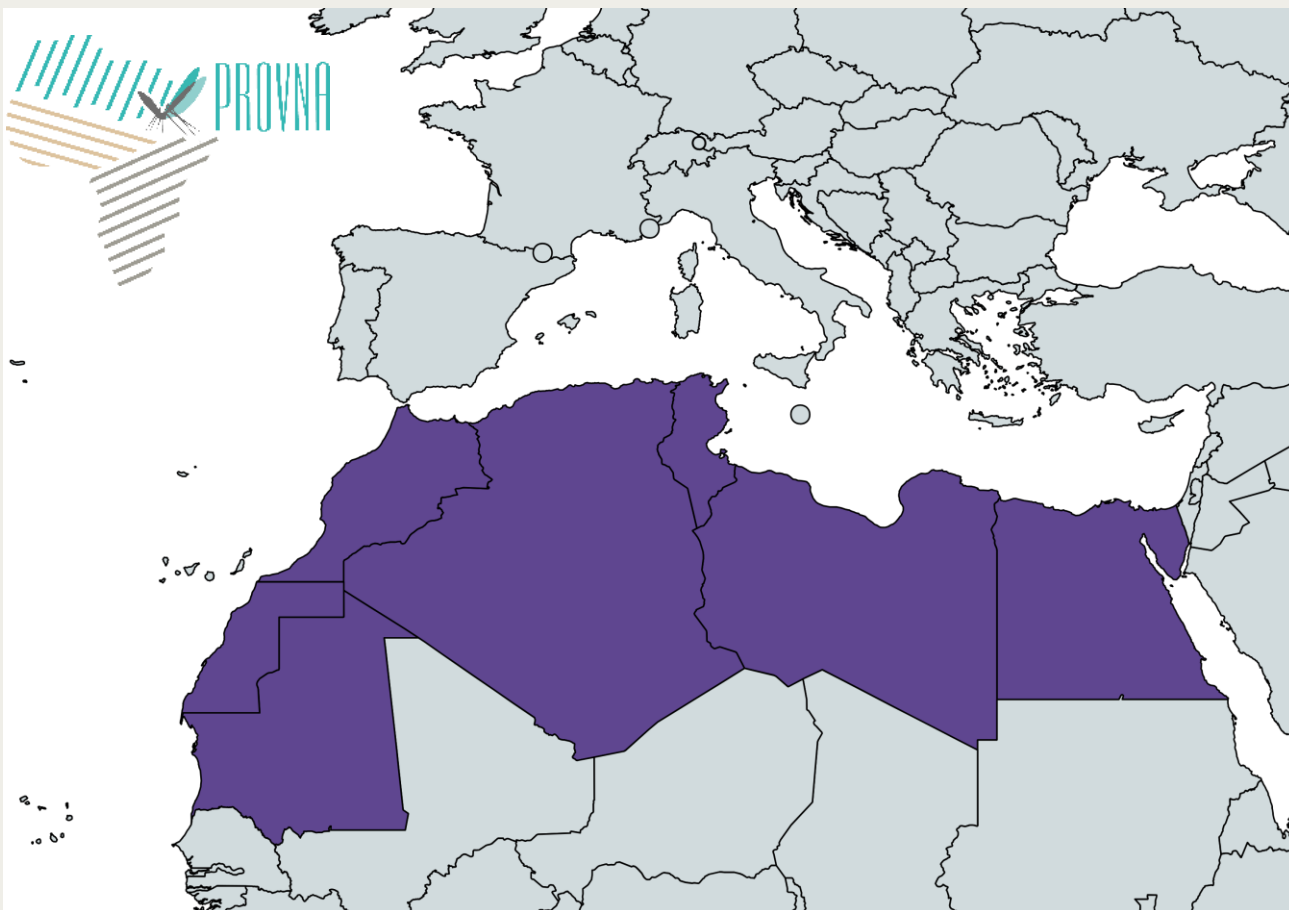
World Organisation
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ISTITUTO
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SPERIMENTALE
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E DEL MOLISE
"G. CAPORALE"



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE



START: 26/04/2022 (proposal 17/02/2022)

END: 31/10/2023 – 18 months

No cost extension: 30/06/2024

Total budget: ≈ 160.000 €



PC-TAD



Federal Ministry
for Economic Cooperation
and Development

BMZ



General objective:

Supporting the local competent authorities in North Africa for the identification of specific areas on which to carry out entomological/serological surveillance for vector-borne diseases.

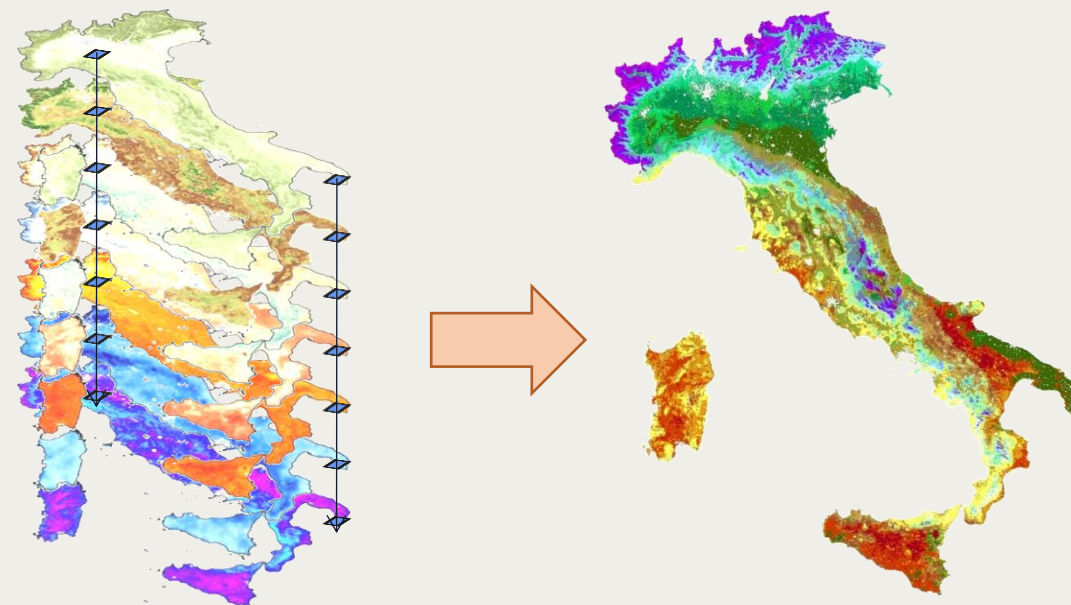
2 Specific objectives:

- To define the “**ecoregions**” of the North African territory, characterized by distinct environmental and climatic factors
- To build a **customised prototype application** to identify areas at risk for VBDs in North Africa region.

RVF

Ecoregionalization

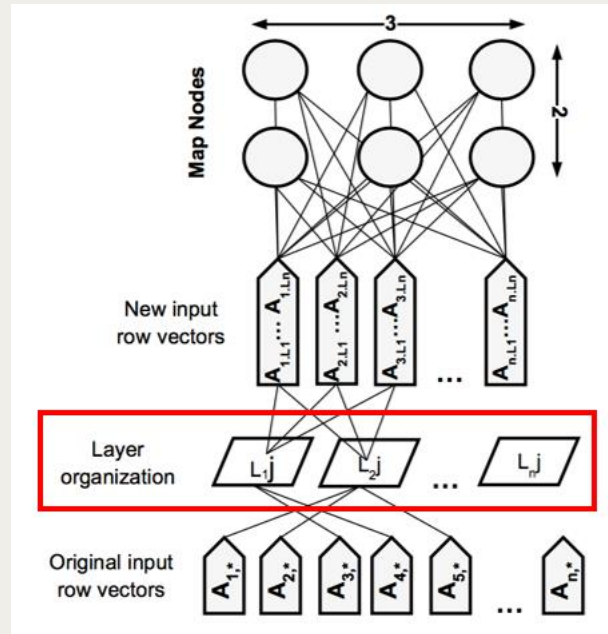
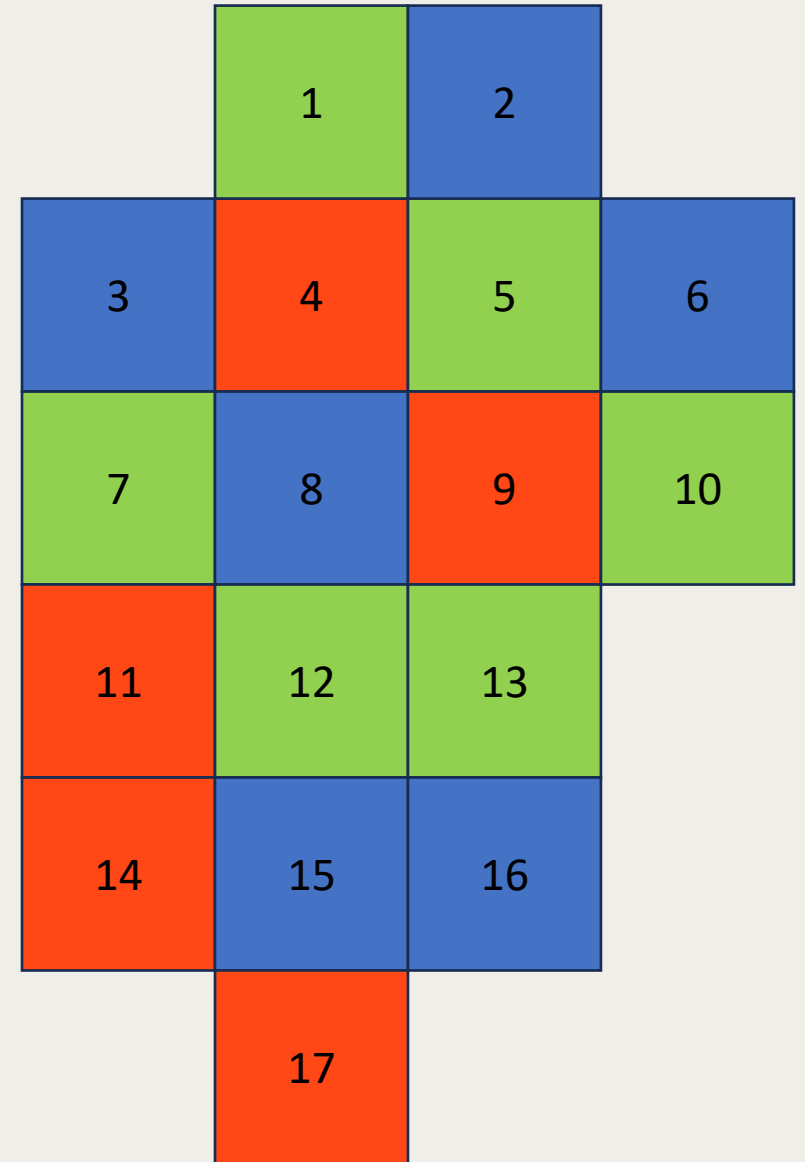
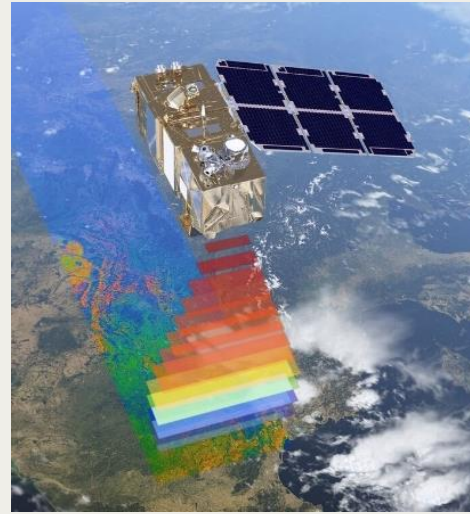
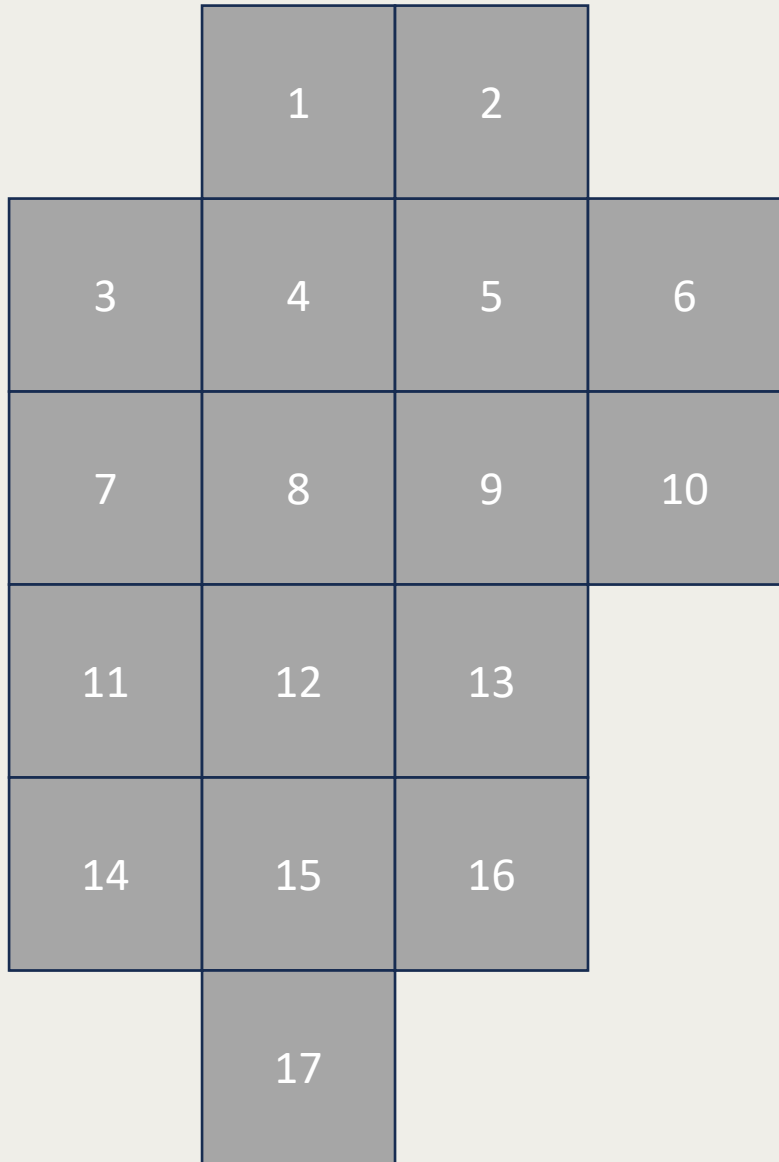
The process through which a territory is classified into similar areas (“**ecoregions**”) according to specific environmental and climatic factors (e.g., elevation, vegetation, rainfall, temperature).



Ippoliti et al, 2019. PLoS ONE 14(7): e0219072

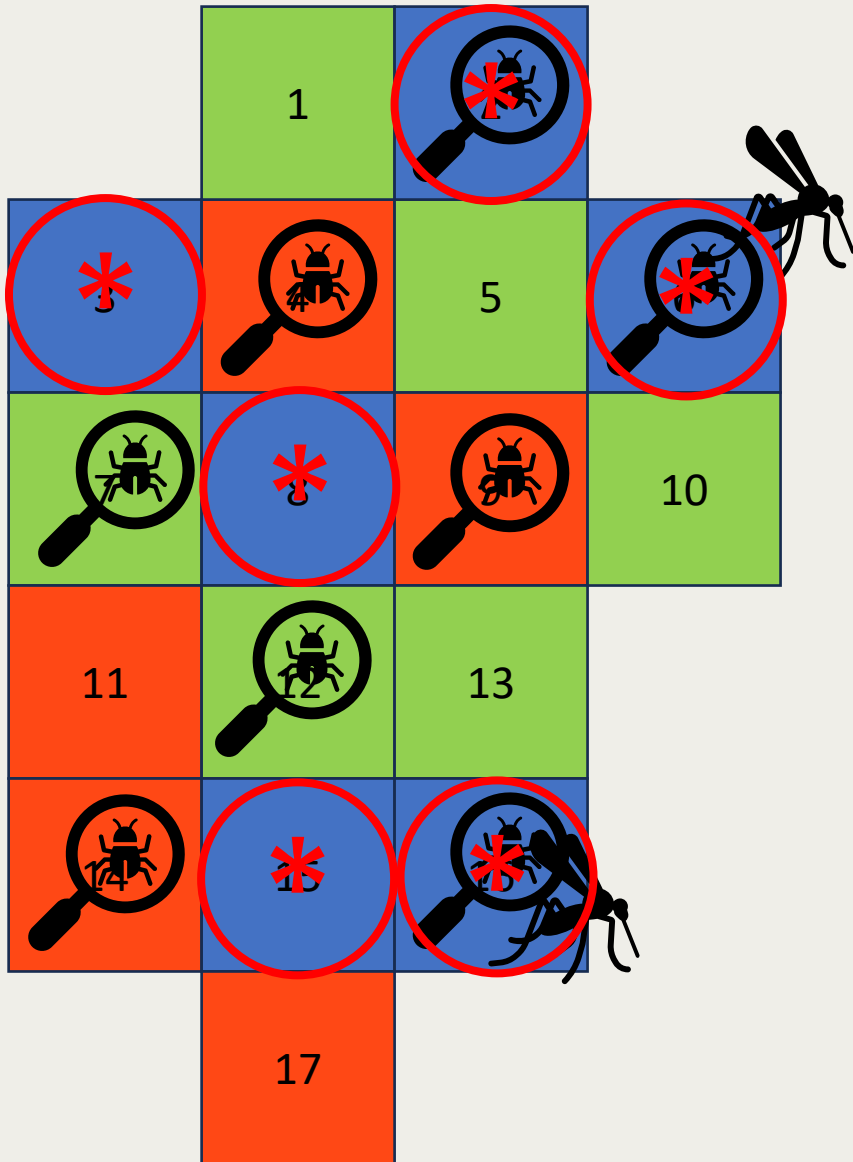


Objective 1. ECOREGIONALIZATION in North Africa





Why Ecoregions?



... on the assumption that similar areas (in space and/or time) are subject to similar diseases (especially vector-borne diseases)...
ecoregion maps can be the first step towards targeted surveillance

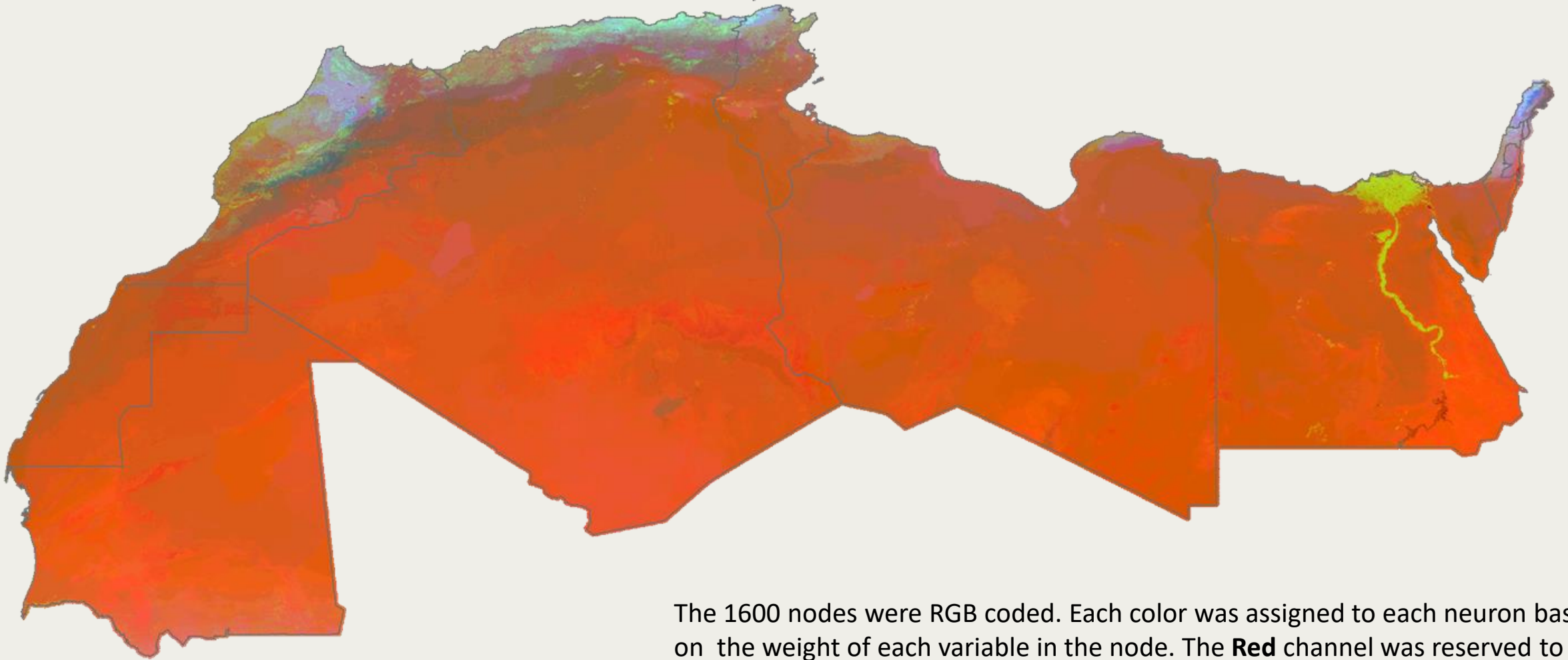
In Italy this approach is part of the surveillance process for West Nile

However, ecoregion maps alone

- are NOT a risk model
- are NOT an early detection tool (+ PS. are NOT specific for a disease)



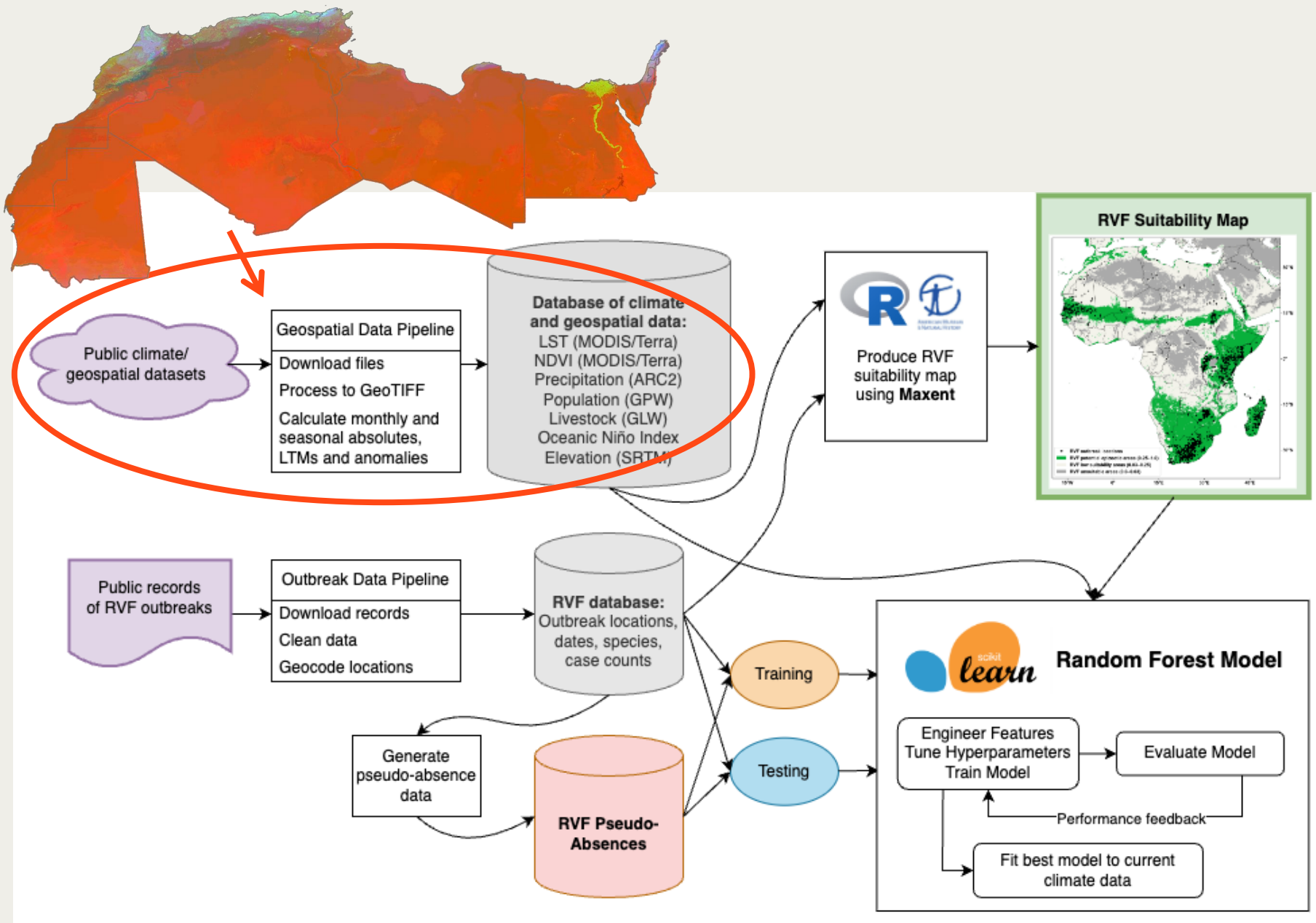
Objective 1. ECOREGIONALIZATION in North Africa



The 1600 nodes were RGB coded. Each color was assigned to each neuron based on the weight of each variable in the node. The **Red** channel was reserved to the highest weight of LSTD and LSTN, the **Green** to NDVI and NDWI and **Blue** to rainfall and soil moisture



Objective 2. RVF risk model in North Africa

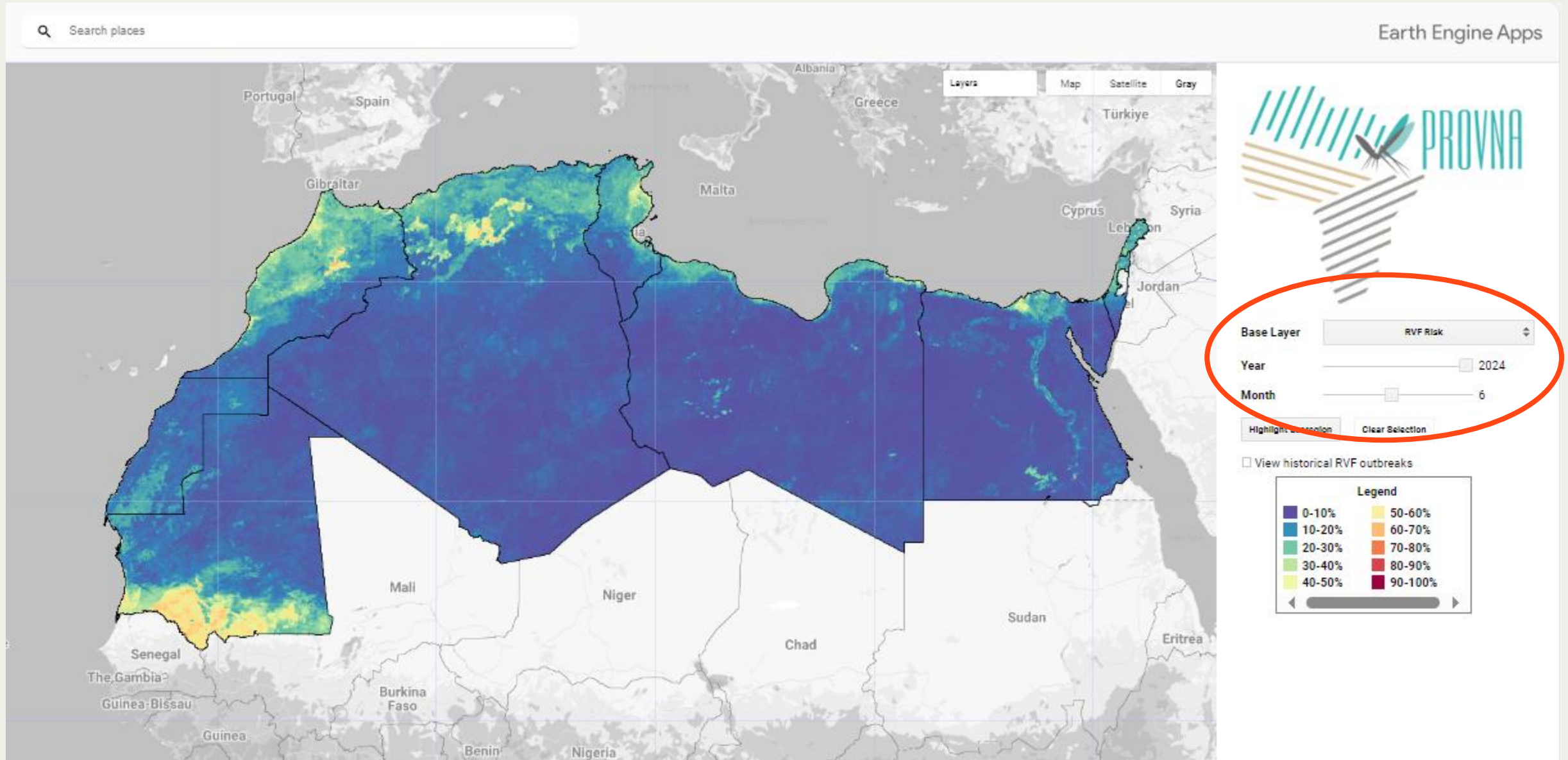


The tool developed by the project will support Veterinary Services in:

- Improving the risk-based targeted surveillance of VBDs (introduction and persistence)
- Optimizing financial and human resources through strategic planning.



Objective 2. RVF risk model in North Africa





WOAH workshop on PROVNA project and Foresight

Lisbon, Portugal
2-3 July 2024

AGENDA of the meeting

DAY 1		
8:30-9:00	Registration of participants	
9:00-9:30	Welcoming remarks	Susana Pombo, CVO of Portugal Rachid Bouguedour, WOAH
9:30-9:45	Presentation of the OH Joint Plan of Action and where the PROVNA project fits into its implementation	Chadia Wannous, WOAH
<i>Session 1 - Results of the "phase 1" of the PROVNA project and outcomes of the online meetings</i>		
9:45-10:00	Project presentation and main objectives	Francesco Valentini, WOAH
10:00-10:30	Ecoregions results	Annamaria Conte, IZS Teramo
10:30-11:00	<i>Coffee Break and Group photo</i>	
11:00-11:30	Outcomes of the ad-hoc bilateral online meetings	Laura Amato, IZS Teramo
11:30-12:30	<i>Discussion</i>	
12:30-14:00	<i>Lunch break</i>	
14:00-14:30	Presentation of the results and demonstration of the RVF risk model	Assaf Anyamba, UTK Heidi Tubbs, UTK
14:30-15:00	<i>Discussion</i>	
<i>Session 2 - Presentation of the proposal for the "phase 2" of PROVNA project for discussion and approval</i>		
15:00-15:30	PROVNA Phase 2 project proposal presentation	Francesco Valentini, WOAH Laura Amato, IZS Teramo
15:30-16:00	<i>Coffee break</i>	
16:00-17:00	Working groups –SWOT analysis of the phase 2 project proposal	Facilitators: WOAH, IZS Teramo
17:00-17:30	Plenary discussion	Facilitators: WOAH, IZS Teramo
17:30-18:00	Final recommendations	WOAH
18:00-18:30	Wrap up of the day – closing remarks	WOAH
After 19:30	<i>WOAH dinner (Vestigius Restaurant & Bar)</i>	



WOAH workshop on PROVNA project and Foresight

2-3 July 2024

LISBOA



DAY 2		
<i>Session 3 - Foresight methods to explore challenges and opportunities for Animal Health Surveillance in REMESA network</i>		
9:00-9:30	Opening Session	Rachid Bouguedour, WOAH Tianna Brand, WOAH and Jordi Serra del Pino, Center for Postnormal Policy and Futures Studies
9:30-10:00	Reflecting on where we are and what is on the horizon <ul style="list-style-type: none"> Timeline of REMESA - Discussion on the significant events that have influenced disease surveillance and control for REMESA until today Beyond today, what is on the horizon that will influence collaboration and actions for REMESA – social, technological, economic, environmental, political drivers of change 	Jordi and Tianna (facilitators)
10:00 – 11:00	Megatrends, what are they and why are they useful? <ul style="list-style-type: none"> Introduction to 'mega-trends' and discussion on implications on policies, actions, collaboration on animal health surveillance. 	Facilitators
11:00-11:15	<i>Coffee Break</i>	
11:15 – 11:25	Megatrends, what are they and why are they useful? <ul style="list-style-type: none"> Plenary discussion 	Facilitators and participants
11:25-12:15 45 minutes	Prioritising trends <ul style="list-style-type: none"> Introduction to the prioritisation matrix to determine what is important and uncertain for REMESA 	Facilitators
12:00-12:30	Plenary <ul style="list-style-type: none"> Open sharing from the groups on the prioritisation exercise 	Facilitators and participants
12:30-13:00	Reflections - outcomes and way forward	Facilitators and participants
13:00-14:00	Closing remarks	Facilitators and participants
<i>Lunch break</i>		





Overview and objectives – “phase 2”



World Organisation
for Animal Health
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ISTITUTO
ZOOPROFILATTICO
SPERIMENTALE
DELL'ABRUZZO
E DEL MOLISE
"G. CAPORALE"

START: September 2024
END: January-May 2026
Total budget: ≈ 400.000 USD



General objective:

To establish a risk-based surveillance system across North Africa, using the eco-regionalization method, to monitor the emergence and spread of key animal and zoonotic diseases transmitted by mosquitoes.



Specific objectives:

- • To **strengthen the capacity** of National Veterinary Authorities in North Africa for monitoring mosquito-borne diseases.
- • To **develop standardised protocols** for the **diagnosis** and **surveillance** at national level of mosquito-borne diseases in North African countries.
- • To **promote the use of a risk-based approach** in the surveillance of mosquito-borne diseases in North Africa.
- • To **provide** the National Veterinary Authorities of North African countries with **decision-support tools** capable of integrating satellite data characterising the various eco-regions with data collected through in- field surveillance activities.



Project activities will be carried out by 6 work packages :

- WP0 - Coordination, networking, dissemination
- WP1 - Gap analysis and needs assessment
- **WP2 - Definition of surveillance protocols**
- **WP3 - Capacity building activities**
- **WP4 - In-field monitoring**
- WP5 - Modelling

➤ Country-specific on-field surveillance activities

- Entomological/Serological
- Disease present/absent

Ad-hoc online meetings + field missions

➤ Material

- Mosquito traps
- Laboratory reagents
- Samples shipment

➤ Trainings

- Online
 1. Epidemiology: use of satellite data
 2. Entomology: sampling/use of traps
 3. Virology:
 - Sequencing
 - Sampling/shipment
- In-person
 1. Epidemiology: GIS
 2. Entomology: analysis of captures / vector identification
 3. Virology: molecular biology on collected samples

Conclusions

- As the global animal health authority, WOAHA's mandate covers all-hazards relevant to animal health – including biological threats
- Remain agile to respond and deliver activities for Members upon request
- Active engagement with Membership and partners
- Foster collaboration



Thank you Merci beaucoup Muchas Gracias

12, rue de Prony, 75017 Paris, France

T. +33 (0)1 44 15 19 49

F. +33 (0)1 42 67 09 87

woah@woah.org

www.woah.org

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