Workshop on the One Health Joint Plan of Action (OH JPA)

Manama, Bahrain 14-16 October 2025

1. **PROVNA: a project with a global reach, built on an adaptable eco-region concept**
2. **Rabies Control in North Africa: WOAH-Led Initiatives and Regional Impact [part 1]**

Francesco Valentini

Programme Officer

WOAH Sub-Regional Representation for North Africa

World Organisation for Animal Health | Organisation mondiale de la santé animale | Organización Mundial de Sanidad Animal

وزارة شؤون البلديات والزراعة

Ministry of Municipalities Affairs and Agriculture

Case Studies: Action Tracks 3 & 4

Action Track 1. Enhancing One Health capacities to strengthen health systems

Action Track 6. Integrating the Environment into One Health

Action Track 2. Reducing the risks from emerging and re-emerging zoonotic epidemics and pandemics

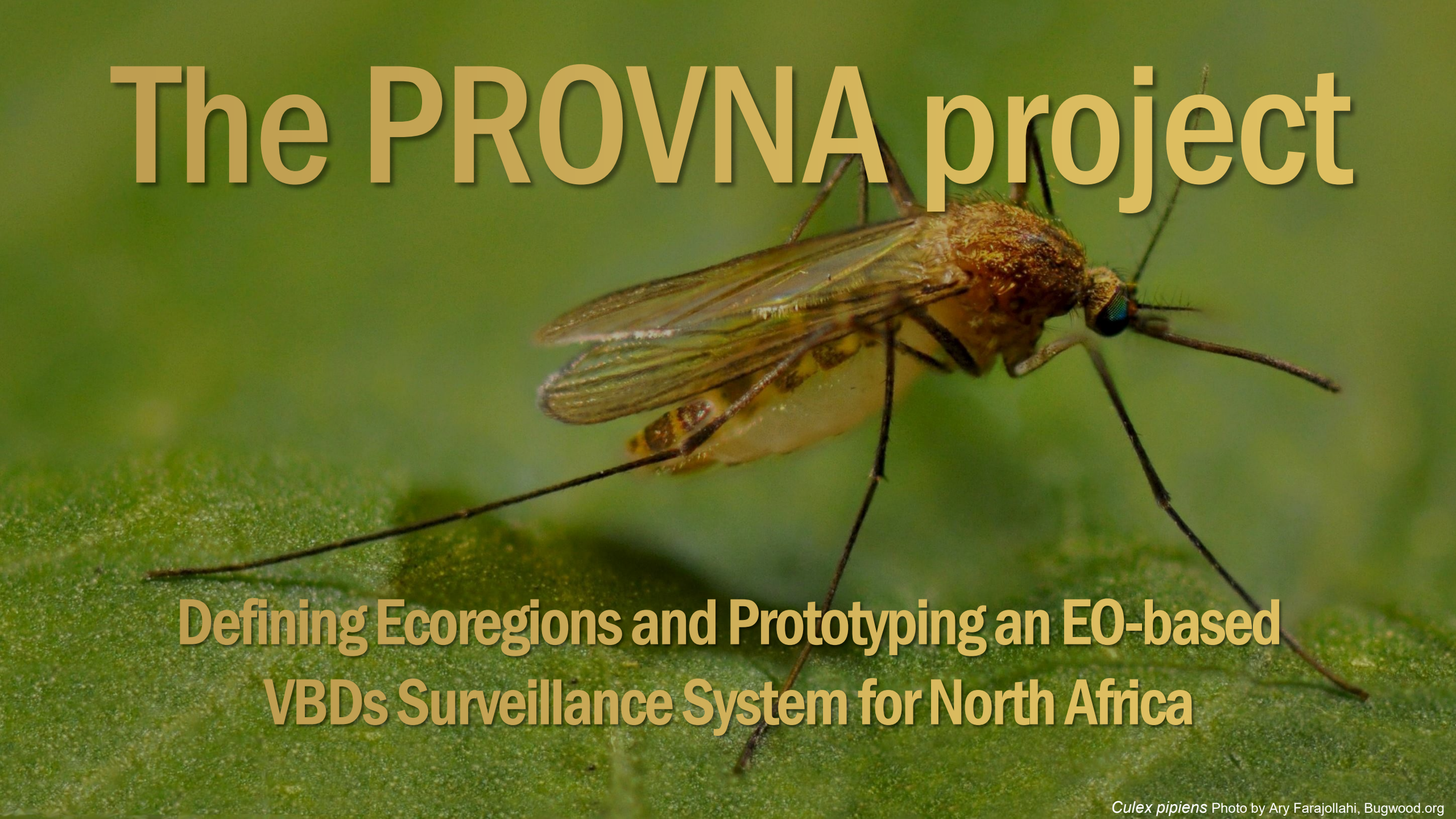
Action Track 5. Curbing the silent pandemic of Antimicrobial Resistance (AMR)

Action Track 3. Controlling and eliminating endemic zoonotic, neglected tropical and vector-borne diseases

Action Track 4. Strengthening the assessment and management of food safety risks

The PROVNA project

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



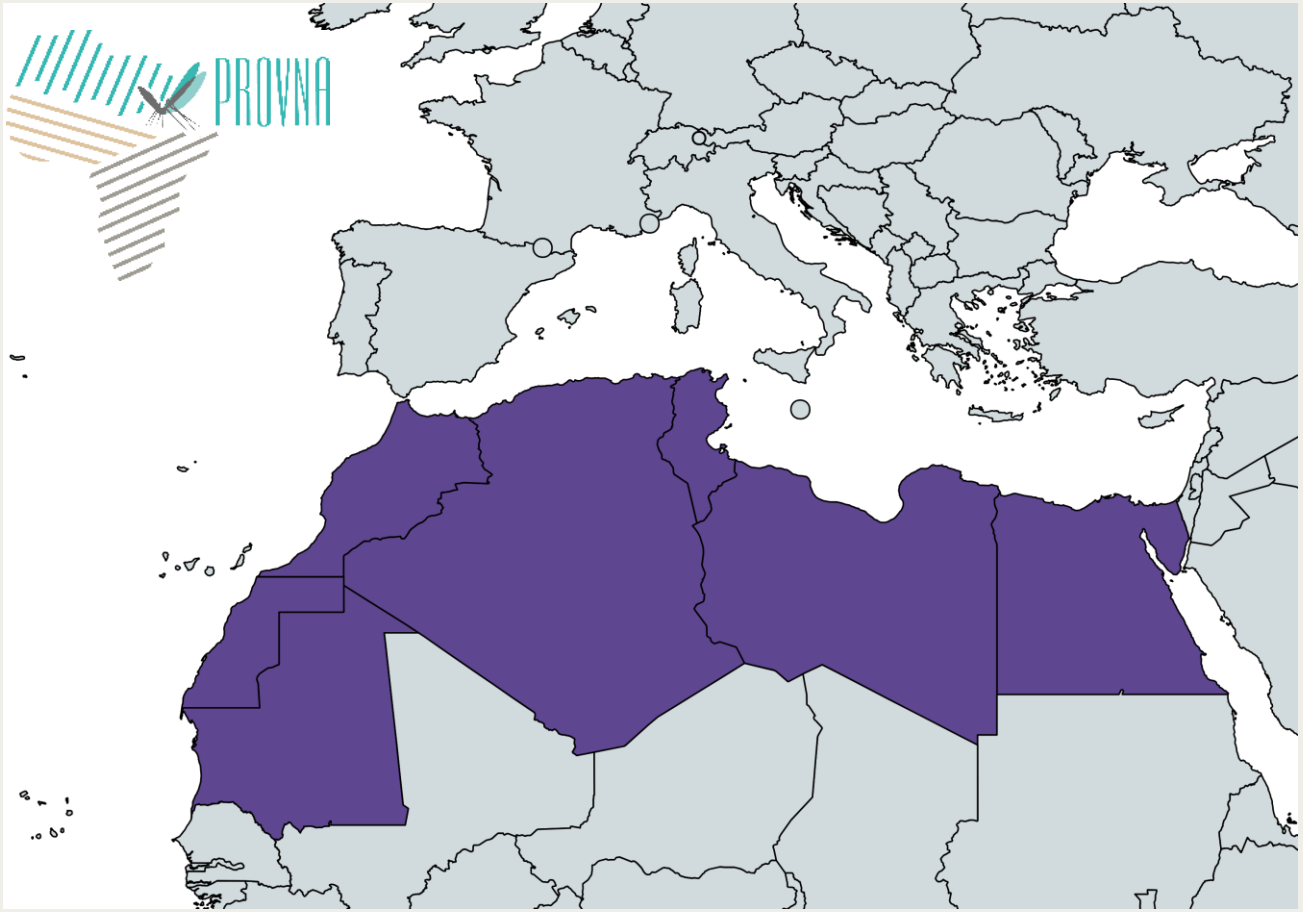
Culex pipiens Photo by Ary Farajollahi, Bugwood.org

Overview – “phase 1”

World Organisation for Animal Health
Founded as OIE

IZS TERAMO
ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELL'ABRUZZO 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

Objectives – “phase 1”

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:

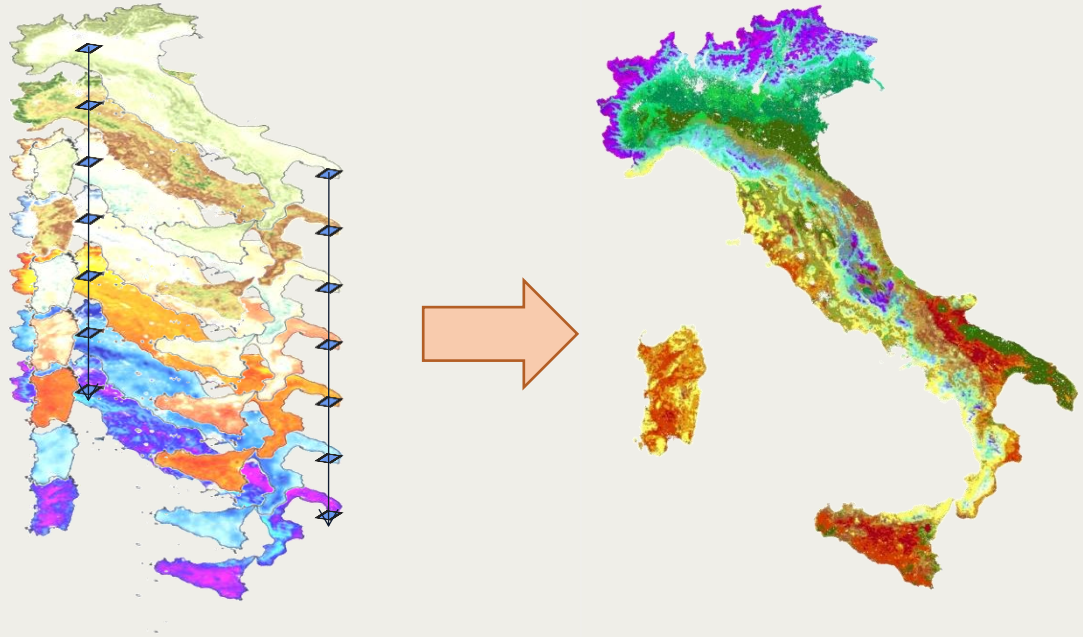
→ To define the “ecoregions” of the North African territory, characterized by distinct environmental and climatic factors

→ To build a customised prototype application to identify areas at risk for VBDs in North Africa region.

RVF

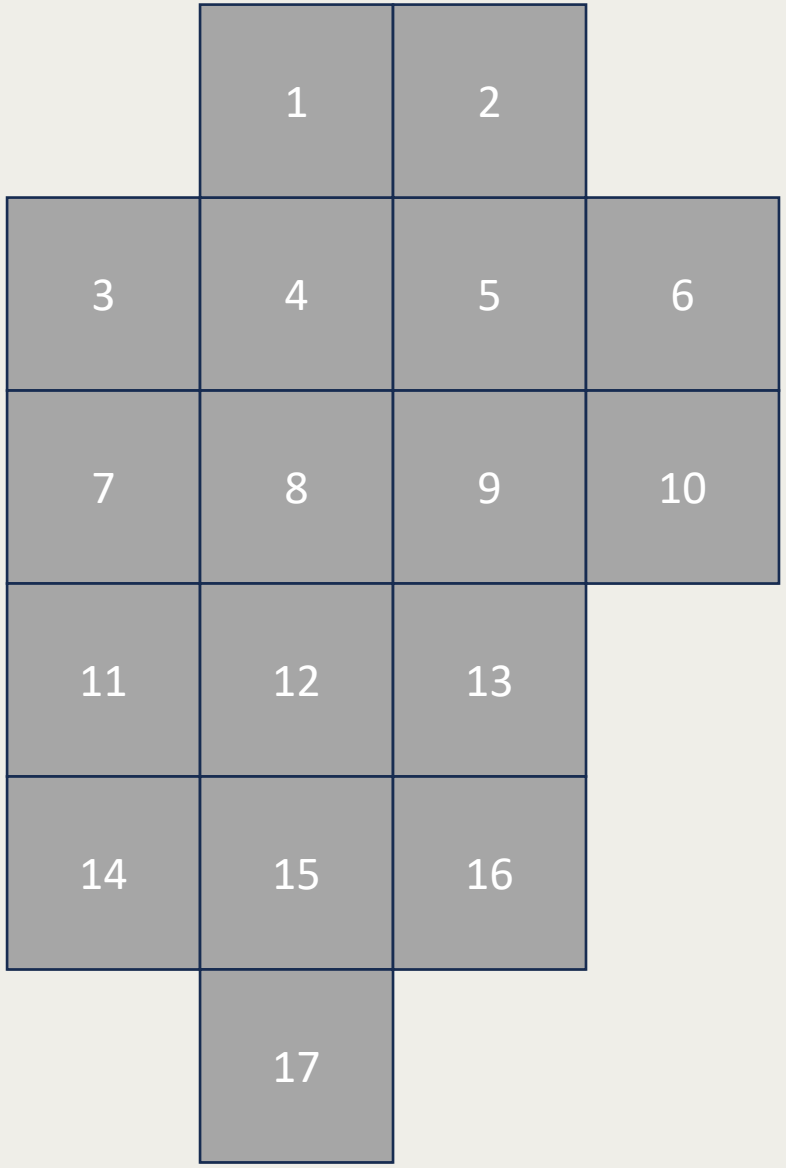
Ecoregionalization

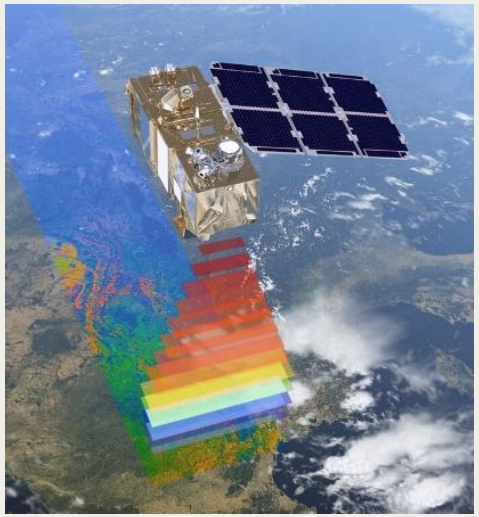
The process through which a territory is classified into similar areas (“ecoregions”) according to specific environmental and climatic factors (e.g., elevation, vegetation, rainfall, temperature).

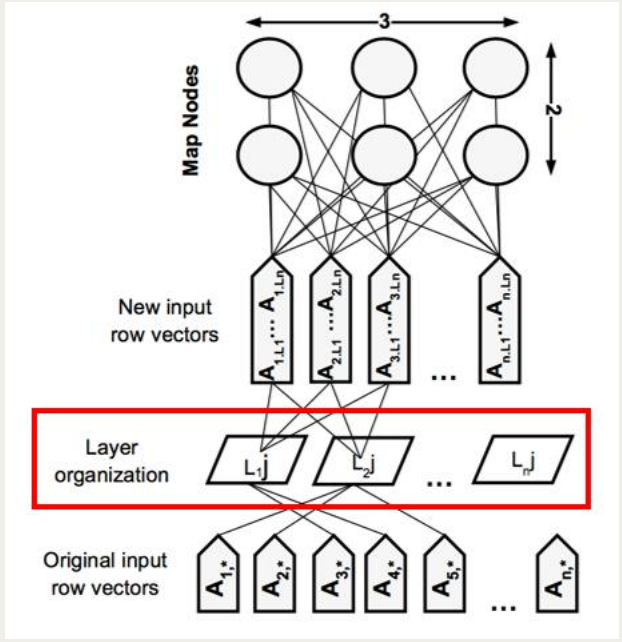


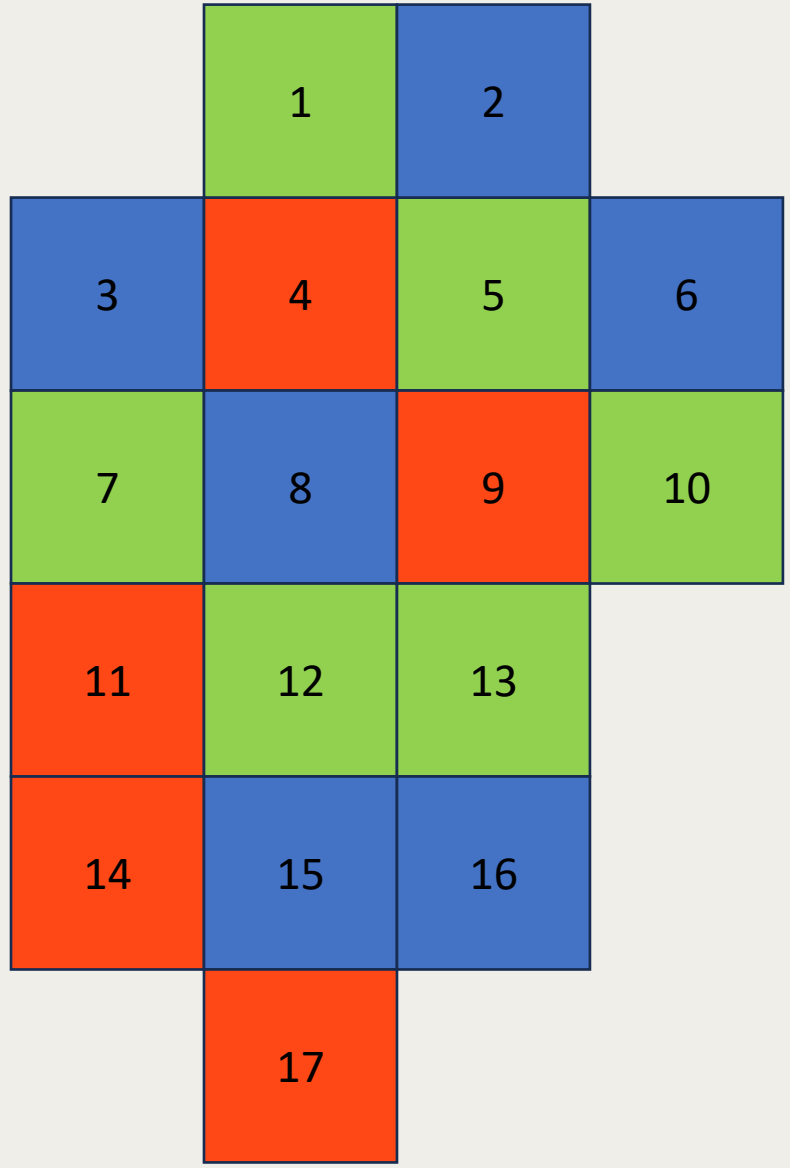
Ippoliti et al, 2019. PLoS ONE 14(7): e0219072

Objective 1. ECOREGIONALIZATION in North Africa

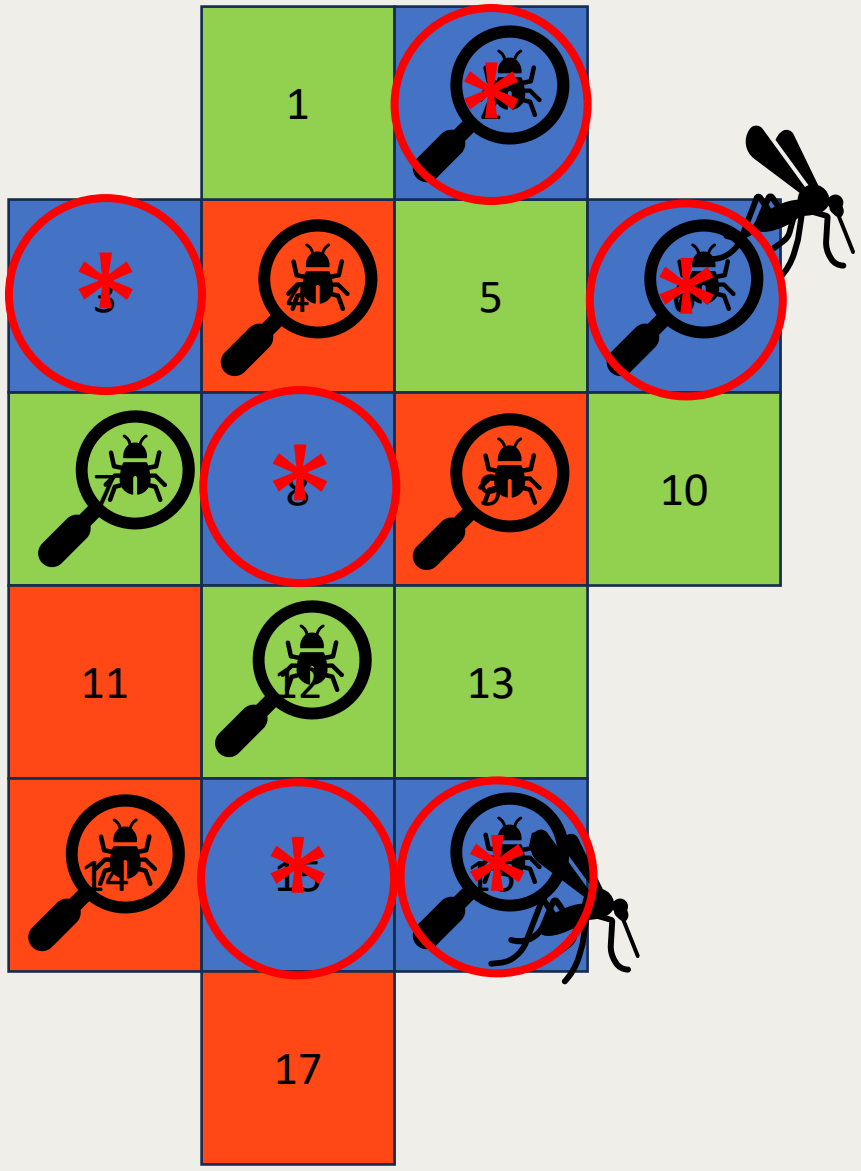








Why Ecoregions?



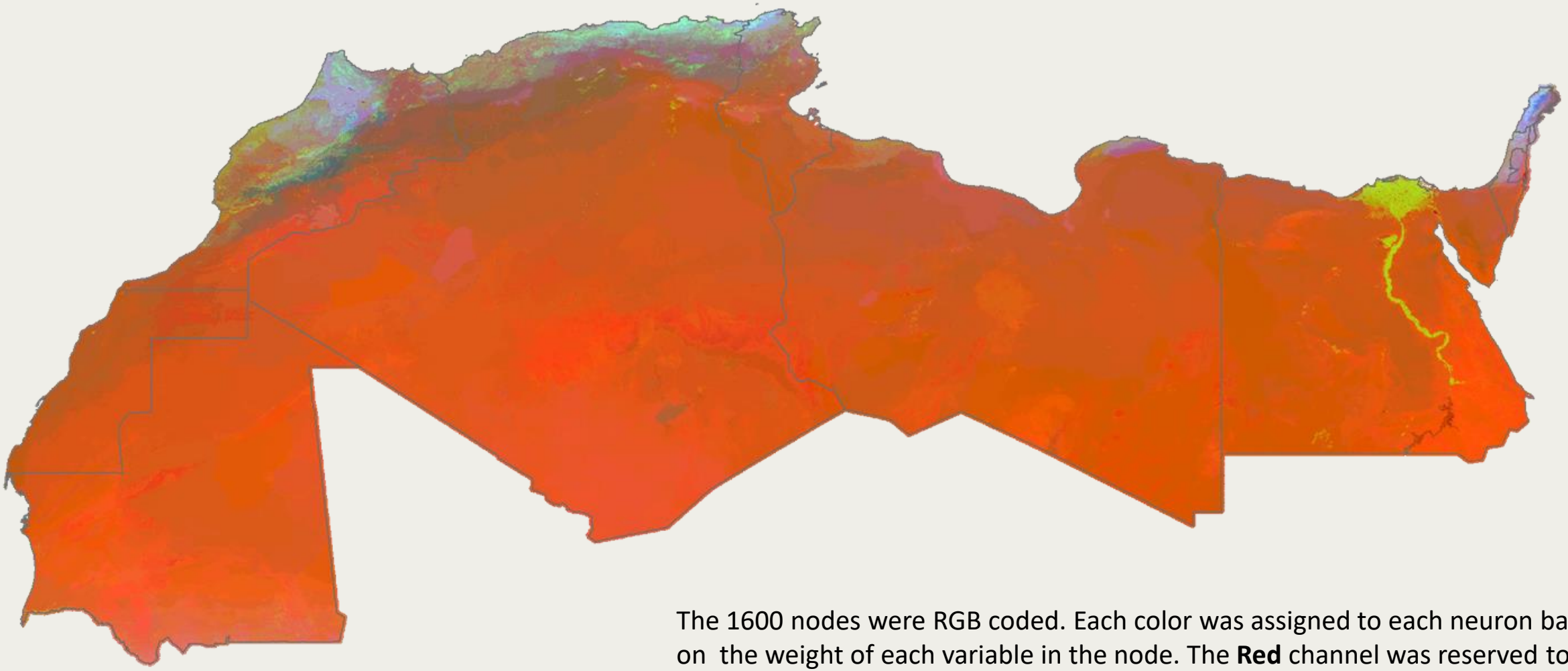
… on the assumption that similar areas (in space and/or time) are subject to similar diseases (especially vector-borne diseases)…
ecoregion maps can be the first step towards targeted surveillance

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

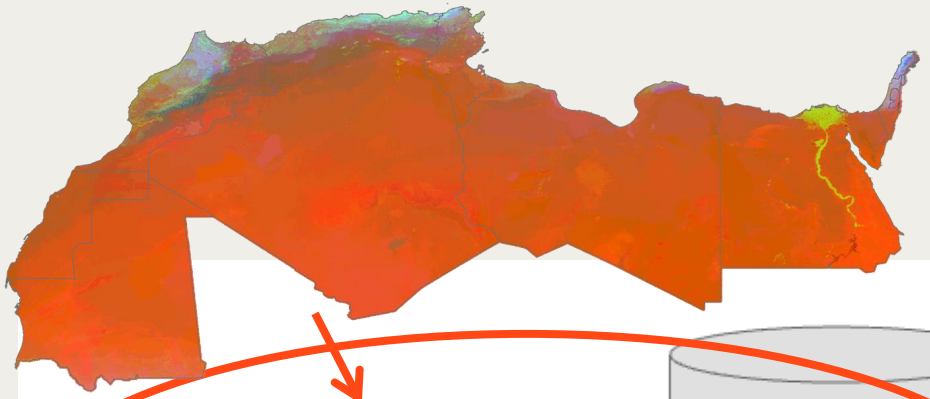
(+ PS. are NOT specific for a disease)

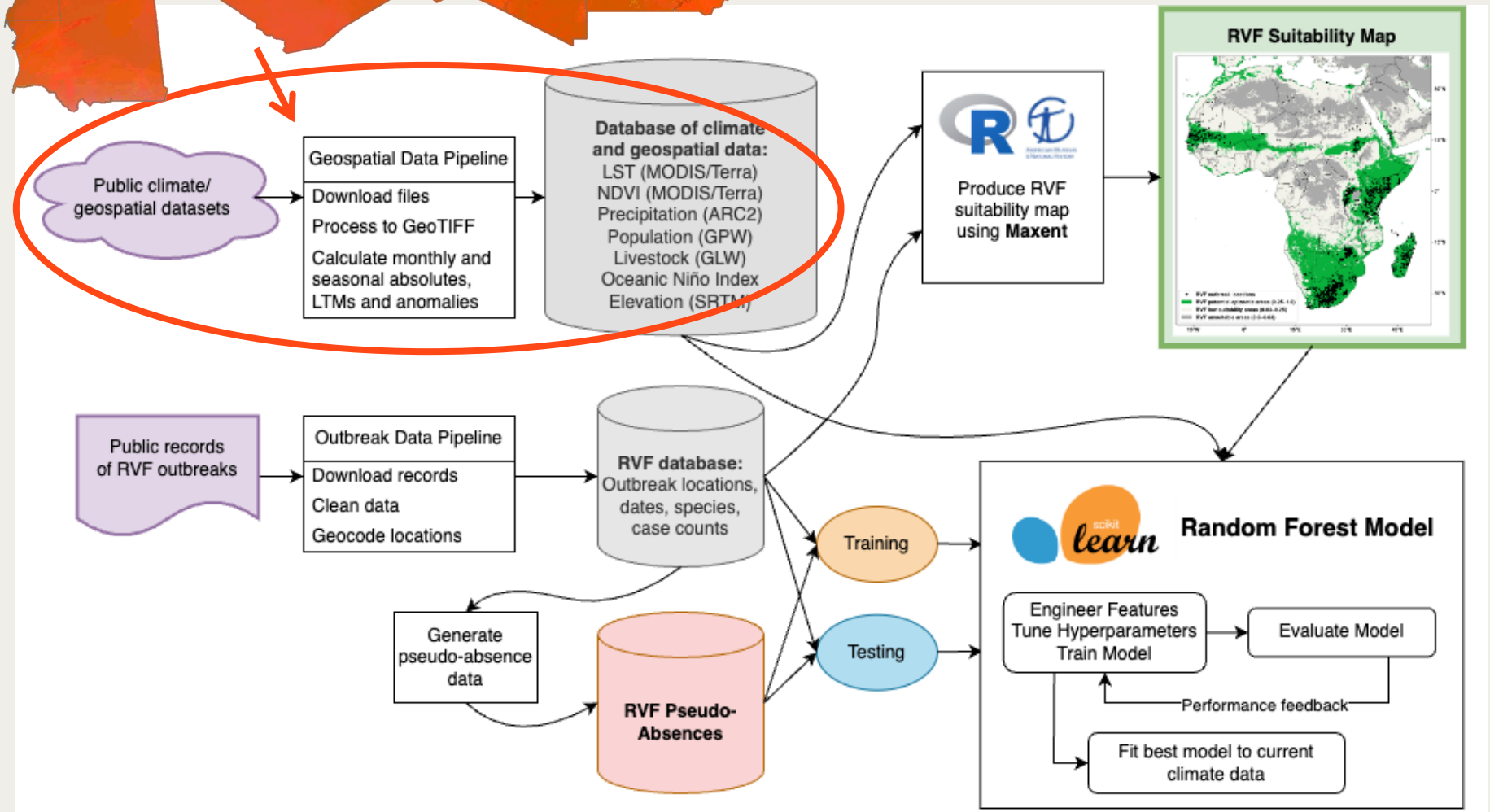
Objective 1. ECOREGIONALIZATION in North Africa



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

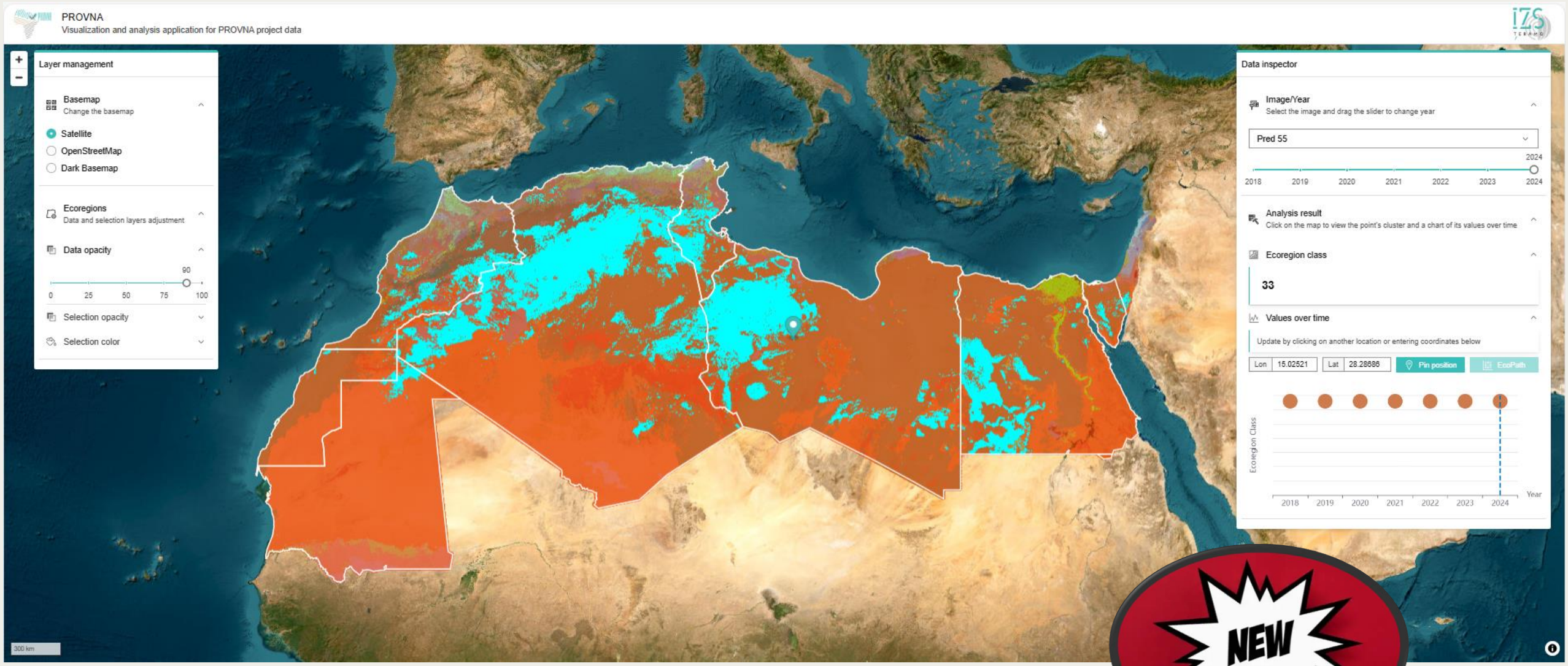




The tool developed by the project will support Veterinary Services in:

- 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



NEW

Closing of Phase 1

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
***Session 1** - Results of the "phase 1" of the PROVNA project and outcomes of the online meetings*		
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	***Coffee Break and Group photo***	
11:00-11:30	Outcomes of the ad-hoc bilateral online meetings	Laura Amato, IZS Teramo
11:30-12:30	*Discussion*	
12:30-14:00	***Lunch break***	
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	*Discussion*	
***Session 2** – Presentation of the proposal for the "phase 2" of PROVNA project for discussion and approval*		
15:00-15:30	PROVNA Phase 2 project proposal presentation	Francesco Valentini, WOAH Laura Amato, IZS Teramo
15:30-16:00	***Coffee break***	
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 Wrap up of the day – closing remarks	WOAH
After 19:30	***WOAH dinner (Vestigius Restaurant & Bar)***	

PROVNA

WOAH workshop on PROVNA project and Foresight

2›3 July 2024

LISBOA

DAY 2		
Session 3 - Foresight methods to explore challenges and opportunities for Animal Health Surveillance in REMESA network		
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 • 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? • Introduction to 'mega-trends' and discussion on implications on policies, actions, collaboration on animal health surveillance.	Facilitators
11:00-11:15	***Coffee Break***	
11:15 – 11:25	Megatrends, what are they and why are they useful? • Plenary discussion	Facilitators and participants
11:25-12:15 45 minutes	Prioritising trends • Introduction to the prioritisation matrix to determine what is important and uncertain for REMESA	Facilitators
12:00-12:30	Plenary • Open sharing from the groups on the prioritisation exercise	Facilitators and participants
12:30-13:00	Reflections - outcomes and way forward Closing remarks	Facilitators and participants
13:00-14:00	***Lunch break***	

modes vs reality

Sitting, standing or lying down?

Overview and objectives – “phase 2”

World Organisation for Animal Health
Founded as OIE

ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELL'ABRUZZO E DEL MOLISE "G. CAPORALE" TERAMO

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

USDA APHIS

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.

RVF

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.

Activity Plan – “phase 2”

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 → 09-13 February
  2. Entomology: analysis of captures / vector identification → 10-14, 17-21 November
  3. Virology: molecular biology on collected samples

Outils pour la mise en œuvre d'un programme harmonisé de contrôle de la rage canine en Afrique du Nord

3 years (2025-2028)

Approx. 500.000 euros
(Italian Min of Health)

Tools to implement a harmonized canine rabies control program in the Northern African region

RABTOOL project

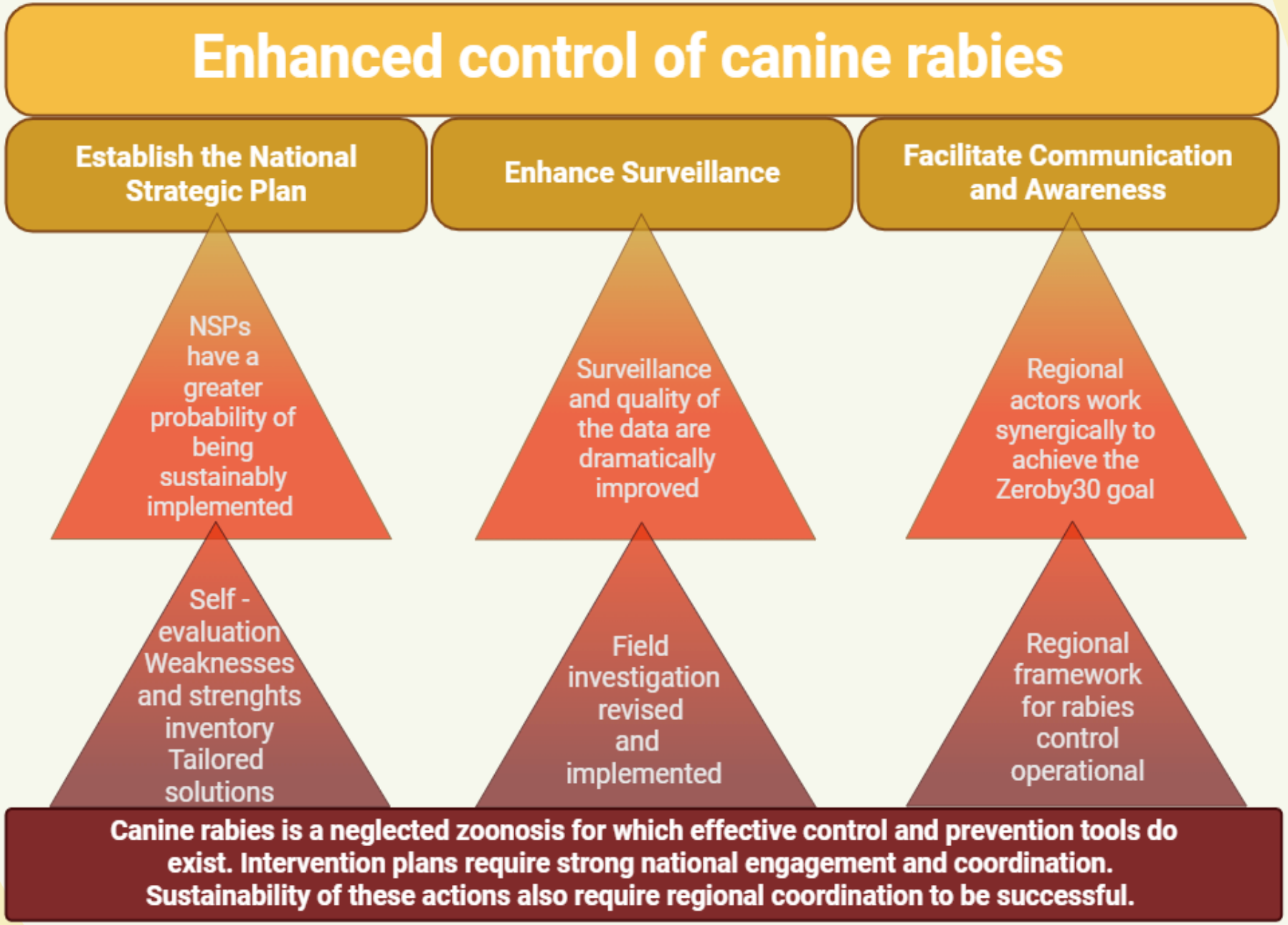


World Organisation for Animal Health
Founded as OIE

Istituto Zooprofilattico Sperimentale delle Venezie

GARC
RABIES ALLIANCE

Theory of Change



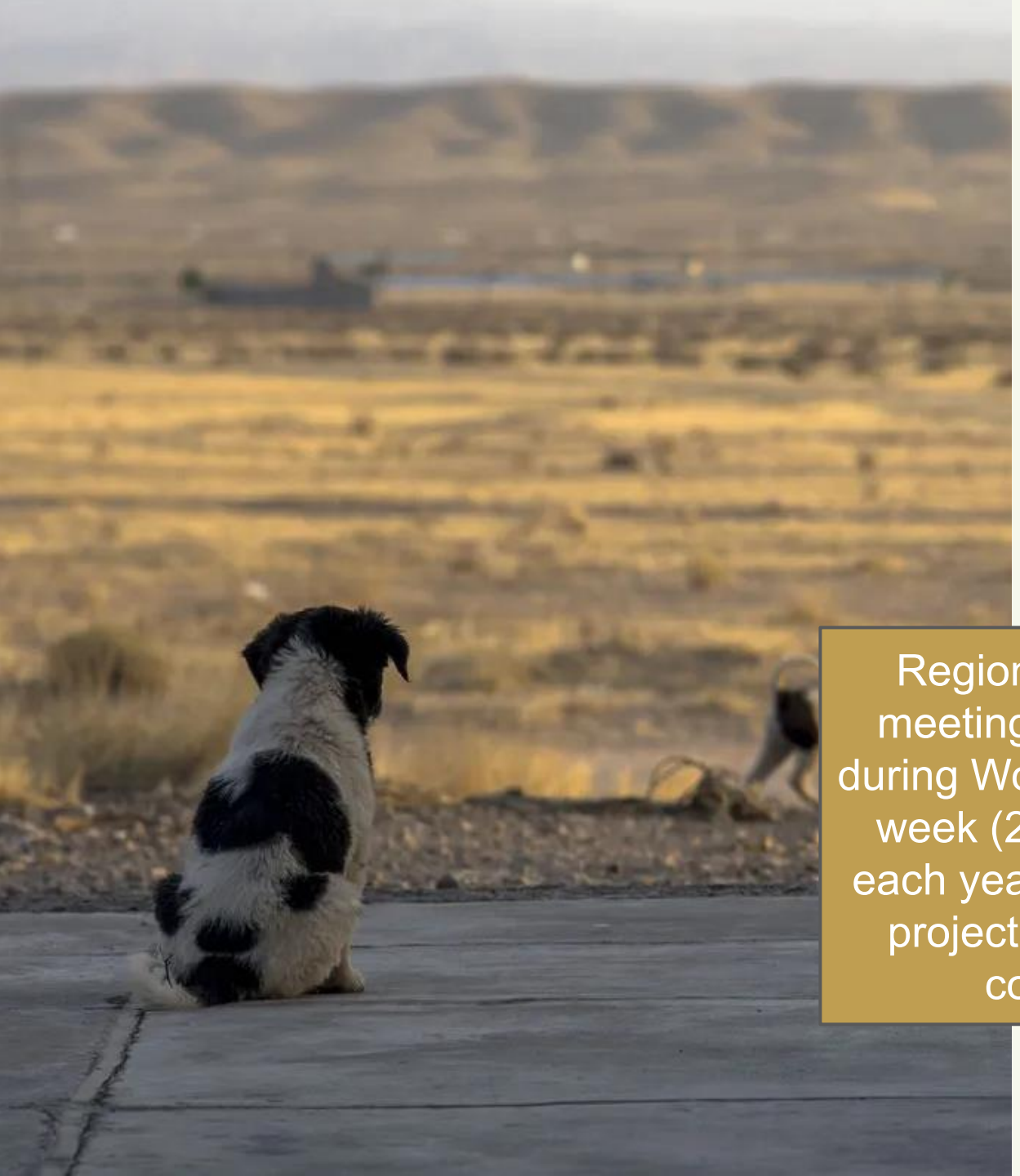
WP1 - National strategic plan to eliminate rabies

- **Task 1.1** Self-evaluation
  - SARE self-assessment (GARC)
- **Task 1.2** Ad-hoc field missions
  - laboratory diagnostic capacities and surveillance infrastructures; data collection and data analysis; legislation and multi-sectorial interaction.
- **Task 1.3** National Strategic Plan
  - Review/update
  - Support in preparing the dossier for validation of the official programme for the control of rabies transmitted by dogs by the OMSA

WP2 - Enhanced Surveillance and Investigation

- **Task 2.1** Enhanced surveillance
- **Task 2.2** Enhanced epidemiological investigation
- **Task 2.3** Strain Characterization, Phylogeny, and Phylogeography

- 3 training courses on laboratory diagnosis on-site
- 3 training courses on field surveillance (1 per country)
- 1 training course on NGS for 6 people in Italy



WP3 - Management, communication and dissemination

- **Task 3.1** Establishment of a project coordination group and meetings organization
- **Task 3.2** Dissemination

Regional in-person meetings will be held during World Rabies Day week (28/09), hosted each year by one of the project's beneficiary countries.

To be continued

2. Rabies Control in North Africa: WOAH-Led Initiatives and Regional Impact [part 2] – Dr Nadia Brik

Thank you
شكرا
Merci beaucoup

Francesco Valentini

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