

# One Health Sustainability partnership between EU-AFRICA for food security



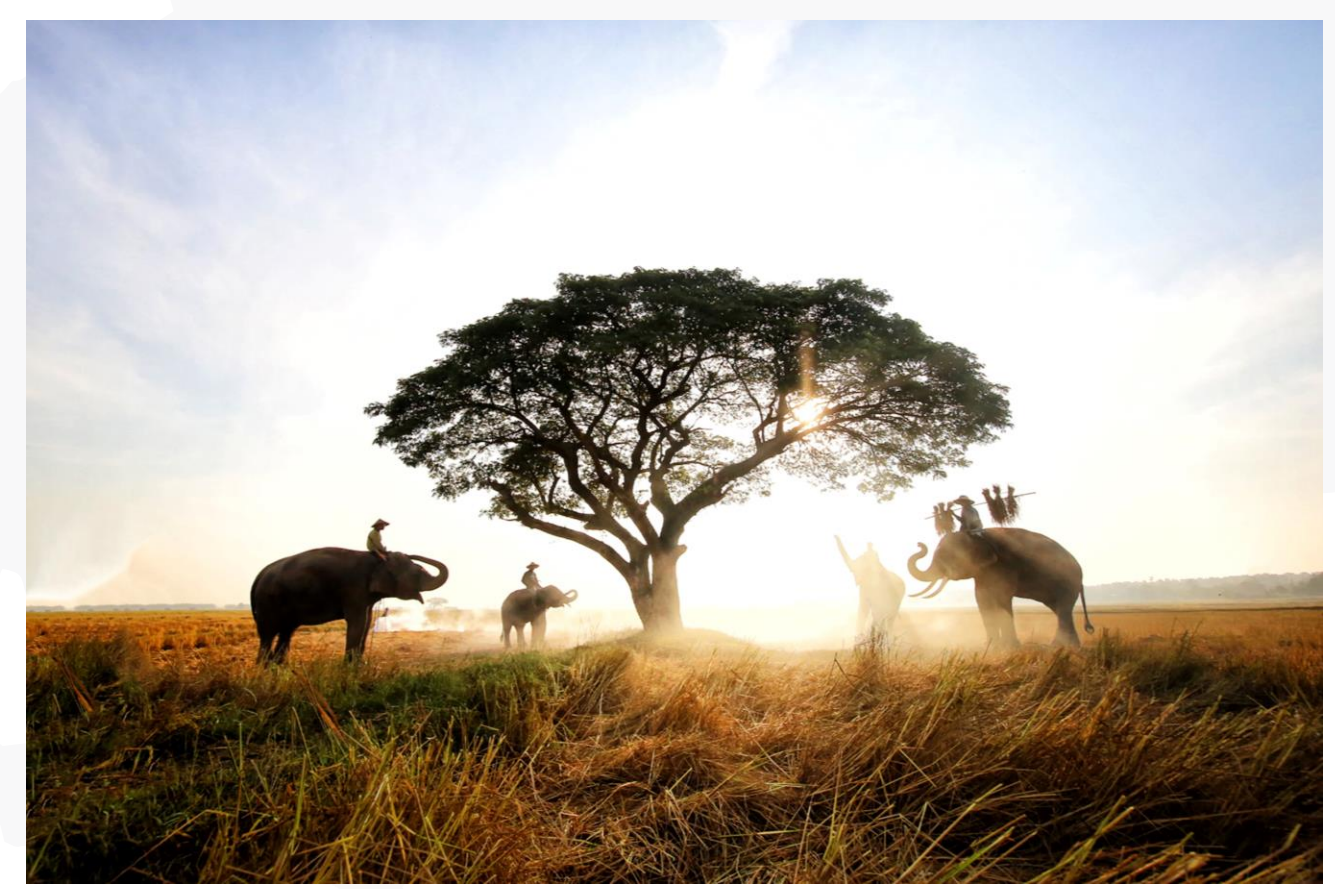
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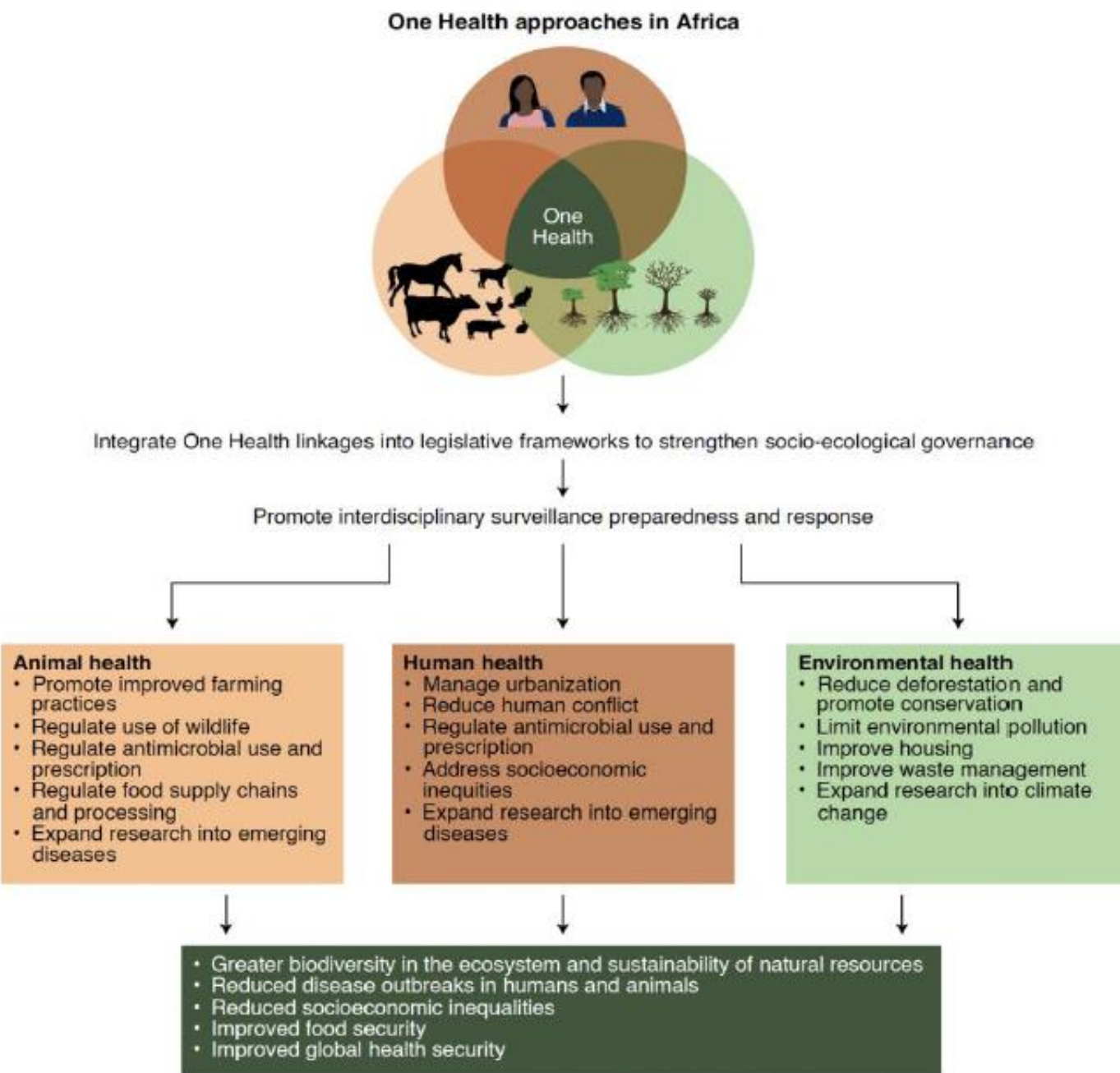


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## About NESTLER

The **NESTLER** project is a collaboration between the EU and African member states aimed at promoting sustainability through the One-Health initiative. The project combines technological innovations to monitor the well-being of animals, plants, and humans using a holistic approach. By integrating advanced remote sensing technologies, the project develops a software platform that collects data from satellite sources, unmanned aerial vehicles, and IoT devices. These data are processed using machine learning algorithms to extract predictive models that support sustainability. Additionally, the project investigates insect production as a protein resource and the utilization of animal waste in crop-based farming to enhance circular economy practices.

## One-Health Sustainable Partnership



## In a nutshell

### Smart farming sensors

- IoT sensors monitor environmental parameters
- Safe wearable devices among livestock observe the well-being of animals
- Hardware devices measure crop quality

### Remote sensing technologies

- Detection and mapping of predictive epidemiological outbreaks
- Preventing pest infestation in crop cultivation
- Ingesting satellite data sources along with data streams captured from UAV and other IoT devices

### Crop quality assessment and pest control management

- Advanced AI models in complex heterogeneous data for yield quality estimation and livestock disease detection
- Analysis for food security against pest infestation outbreaks
- Risk assessment methodologies that adversely affect the produce quality
- Predictive analytics on forecasting environmental, weather and climate conditions

### Integrated cloud-edge digital platform

- Integrate heterogeneous data formats
- Leverage advanced technologies to improve food security and safety
- Visualization dashboard integrated with GIS system presents intuitive information for end user

### Insect protein production technology on the circular economy

- Key research studies on the impact and role of insect protein for security food safety as well as human health
- Evaluation and promotion of benefits of insects mass production towards environmental benefits

### One-health EU-Africa policy framework

- Knowledge repository on the historical case-studies
- Economic impact assessment from environmental, weather and climate models
- Setup knowledge transfer center to stimulate dialogue between EU-Africa