Format for TEAM project proposals

Version of 21 October 2025

Table of content

Project proposal[1] TEAM projects

GENERAL INFORMATION

(note: this is a working document, all info needs to be inserted via the project submission tool)

Project information
Project title
National Data Science Network for Health, Agriculture, Environment and Education: A Flemish–Kenyan Partnership for Evidence-Driven Public Policy.
Project Summary
The National Data Science Network will strengthen Kenya's capacity for evidence-driven policy by establishing a centralized Data Science and Analytics Centre (DSAC) and a coordinated network of skilled data scientists. Fragmented datasets across health, agriculture, environment, and education currently limit timely decision-making and outbreak preparedness. The project will integrate and standardize these datasets, build institutional and human capacity, and implement governance frameworks for ethical, secure, and interoperable data management. Through structured training, mentorship, and exchanges with UHasselt, Kenyan data scientists will develop advanced skills in biostatistics, bioinformatics, epidemiology, and predictive analytics. KIPRE will coordinate the network, with UHasselt providing technical guidance. Partner institutions—including NPHI, DVS, NEMA, and CEMA—will contribute datasets, domain expertise, and support policy engagement. Activities cover capacity building, research, infrastructure, multi-stakeholder engagement, and knowledge dissemination, guided by robust monitoring and evaluation. By bridging fragmented data and fostering multi-institutional collaboration, the project will establish a sustainable national data science ecosystem, enhance evidence-based policymaking, and strengthen Kenya's preparedness for health, environmental, and agricultural challenges. It contributes to SDG 2, 3, 4, 9, 13, and SDG 17, promoting inclusivity, sustainability, and long-term impact.
Please indicate whether your project is in one country, or in multiple countries. You will need to specify which country (or countries), indicating main (at least one) and other countries.
Kenya
Project duration and start
5 years / 1 September 2026

Institutions / promoters *(in case of multiple institutes, indicate the main administrative institution/promoter in the partner country and at the Flemish HE level)[2] (this data can be uploaded via the data file Annex 1, or directly in the submission tool)*

[1] Note: This Word format is a working document, only meant as a preparatory format to help you in preparing your proposal. t as this information needs to be included in an online environment, the project submission tool.

[2] For visualization purposes limited here to main promoters/institutions, but full details to be included in the submission tool.

Flemish institution (s)	University of Hasselt , Data Science Institute
Flemish promoter (s)	Dr. Layla Kodalci
Partner institution (s)	Kenya Institute of Primate Research (KIPRE), National Public Health Institute (NPHI), Directorate of Veterinary Services (DVS) ,National Evironmental Management Authority (NEMA) , Center for Epidemiological Modelling and Analysis (CEMA)
Partner promoter (s)	Patrick W. Mwaura
Co-promoter Flemish/ partner	Christopher K. Kariuki (KIPRE), Stella Irungu (KIPRE), Joyce O. Imende (NEMA), DVS, NPHI, Mwangi Thumbi (CEMA)

Sector code OECD	As part of the preparation of the proposal, VLIRUOS requests some coding of the proposals for data purposes, you can prepare this in Annex 1 or complete directly in the submission tool

Sustainable Development Goals (SDG)	
Main SDG	SD3
Additional SDG	SDG 2, 4, 9, 13 and 17

Module 1: Context / problem analysis[3]

1.1. Sustainable development context

Provide the evidence-based relevance of this proposal and describe the key sustainable developmental challenge(s) that the project wants to tackle (cf. Agenda 2030, taking into account as well the SDG principles of LNOB, MIP and MSP) and its **global, regional, or local context** (including local and national policies, and the key actors involved).

Since the One Health framework was first conceptualised in 2004, many countries—including Kenya and others in sub-Saharan Africa—continue to struggle with implementing it effectively. A recent systematic review by Yopa Daniele Sandra et al. highlights persistent barriers: weak governance and leadership, fragmented planning, limited cross-sector collaboration, inadequate community engagement, poorly coordinated surveillance, lack of operational experience, chronic resource constraints, workforce shortages, and gaps in communication. These challenges, as Bukachi et al. note, have repeatedly surfaced during zoonotic outbreaks, environmental stresses, agricultural shocks, and public health emergencies.

Fragmented information systems and limited analytical capacity slow down evidence-based decision-making and reduce the country's ability to respond effectively. The education sector faces similar issues, with universities and training institutions lacking interoperable infrastructure for data sharing

[3] Module 1 is strongly linked with the selection criterion 1. relevance and coherence.

and applied analytics, further limiting the development of a skilled workforce to support a national One Health agenda.

Kenya's national context strongly reflects these challenges. While capable institutions exist—including the Kenya Institute of Primate Research (KIPRE), the National Public Health Institute (NPHI), the Directorate of Veterinary Services (DVS), the National Environmental Management Authority (NEMA), the Centre for Epidemiological Modelling and Analysis (CEMA), and several universities—each manages its own datasets, standards, and governance frameworks. Without harmonised protocols and interoperable platforms, information flow across health, agriculture, environment, and education remains fragmented.

This siloed approach has significant financial, operational, and public health costs: delayed threat detection, duplicated efforts, inefficient resource allocation, and gaps in multisector risk communication. Evidence from Griffin T. et al. and Milazzo A. et al. shows that weak inter-agency coordination directly contributes to delayed decisions and higher outbreak control costs. Without real-time integration of surveillance, laboratory, environmental, agricultural, and community-level data, agencies cannot build a complete risk picture, prioritise interventions, or evaluate the impact of public health measures.

These weaknesses impede progress toward Sustainable Development Goal (SDG) 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), SDG 13 (Climate Action), and SDG 17 (Partnerships for the Goals), and challenge the principles of Leaving No One Behind (LNOB), Meaningful Involvement of People (MIP), and Multi-Stakeholder Partnerships (MSP) that underpin Agenda 2030.

1.2 Institutional context of the partner institution(s)

Analysis of the capacity constraints and needs/priorities of the local partner institution and in particular the involved research & educational units/departments. Describe the added value of the project in addressing these challenges and how through shared ownership the local institution can be enabled to become a driver of change linked with the proposed project outcomes (Clarify the link with the sustainable development context described under 1.1.).

Many of Kenya's partner institutions still work in silos, managing fragmented datasets and facing real challenges in capacity. Research and educational units often lack enough skilled data scientists, epidemiological modellers, statisticians, and data engineers (Coker et al., 2023). Outdated servers, limited computing resources, and inconsistent data governance make it difficult for these units to carry out advanced analytics or predictive modelling. Opportunities for hands-on training, joint learning, and methodological alignment are also scarce, which limits their ability to generate integrated evidence that can guide policy.

The National Data Science Network, through the Data Science and Analytics Centre (DSAC), directly addresses these gaps. By introducing standardized data systems, practical workflows, and collaborative governance frameworks, DSAC allows local institutions to take ownership of projects and lead data-driven initiatives. Training programs, mentorship, and joint research clusters give staff

the chance to strengthen skills and apply them across sectors, turning previously isolated units into active drivers of evidence-based decision-making.

These efforts connect directly to Kenya's sustainable development priorities: improving public health (SDG 3) through integrated health data and outbreak preparedness, supporting food security (SDG 2) with predictive agricultural analytics, enhancing education and training (SDG 4) through applied learning, building innovation and infrastructure (SDG 9) via modern data systems, addressing climate risks (SDG 13) with environmental and ecological modelling, and fostering strong partnerships (SDG 17) through co-designed governance and North–South knowledge exchange. By linking capacity-building to these real-world challenges, the project ensures that the institutions themselves become central actors in shaping national strategies and solutions.

Module 2: Project strategy (Theory of Change)

*Describe your project strategy (Theory of Change) in 3 key questions. While these questions echo the key questions in Theory of Change (ToC) thinking process, a fully-fledged ToC is not requested. This ToC should reflect the alignment of your project with the general **VLIRUOS ToC**, and the 3 **SDG principles**. Explain your project following the key questions below.*

What is the long-term change to which you want to contribute (this answers the WHY question)?

- Summarise this in a short impact statement clarifying the long-term change to which the project wishes to make a meaningful contribution.
- Elaborate this further in a narrative text explaining the importance of this long-term change within Agenda 2030 and the SDG's and for who it is crucial.

Impact statement

The project strengthens Kenya's capacity for evidence-driven policy by building a national network of data scientists, enabling effective use of health, agriculture, environment, and education data. Local institutions become drivers of change, improving preparedness, resource allocation, and interventions, advancing SDG 3, 9, and 17 with inclusivity and sustainability.

Elaborate on the impact envisaged, why it is important and for whom?

The envisaged impact of this project is to enhance Kenya's ability to make timely, evidence-based decisions that protect the health, livelihoods, and well-being of its people. By creating a national network of data scientists and strengthening local institutions, the project ensures that data from health, agriculture, environment, and education sectors can be used effectively to guide interventions. This is crucial for responding rapidly to disease outbreaks, environmental shocks, and agricultural challenges, ensuring that resources reach those who need them most.

Primary beneficiaries are the institutions generating and using data—ministries, research institutes, and universities—which gain skills, tools, and governance structures to transform complex datasets into actionable insights. Indirect beneficiaries include policymakers, vulnerable communities, and the general public, who will experience faster responses, better-targeted interventions, and policies grounded in real-world evidence. By bridging gaps in capacity and collaboration, the project empowers local institutions to become drivers of lasting change, supporting national development goals and advancing equity, inclusion, and sustainability.

What do you want to achieve by the end of the project?

This needs to refer to the changes you want to achieve/observe by the end of the project. Convincingly explain how these align with VLIRUOS outcomes (cf. call document) by ticking the applicable 'boxes' [4]and make this very explicit.

[4] Please do no tick all the boxes for all of the outcomes, but simply those that are important to your project (max. 3), and explain how your project aligns with the standard VLIR-UOS outcomes that have been marked.

Point of attention: Reflect on the challenges for the sustainability of the project results after VLIRUOS funding in terms of capacity retention, continuation of improved research/education/extension activities, dissemination of results, etc.

By the end of the project, the initiative will have established a fully functional Data Science and Analytics Centre (DSAC) in Kenya that serves as the national hub for integrating, managing, and analysing data across health, agriculture, environment, and education sectors. This hub will consolidate fragmented datasets into standardized, interoperable platforms, enabling timely, consistent, and reproducible analyses to support evidence-based decision-making at national and sub-national levels.

Institutional capacity will be significantly strengthened: local research and educational units will gain trained data scientists, analysts, and technical staff equipped with advanced competencies in biostatistics, epidemiology, bioinformatics, data management, and responsible data governance. These skills will enhance the ability of institutions to conduct high-quality research, apply rigorous analytical methods, and generate actionable insights for policy and programmatic interventions. Furthermore, the project will establish structured processes for collaboration, methodological harmonization, and applied training, ensuring that institutions can continue these activities independently after project completion.

Human capacity and knowledge retention are central to sustainability. Through structured training programs, mentorship, and co-development of analytical workflows, local personnel will acquire both practical skills and leadership experience. Knowledge transfer will be embedded in everyday institutional routines, fostering a culture of continuous learning, collaboration, and evidence-driven research. The network created through the project will also facilitate ongoing partnerships among ministries, research institutes, universities, and international collaborators, securing North–South and South–South knowledge exchange beyond VLIRUOS funding.

Research and policy impact will be tangible: institutions will be able to generate and interpret multisectoral evidence to inform public policy, resource allocation, and preparedness for disease outbreaks, environmental stresses, and agricultural challenges. Evidence generated through the DSAC will be disseminated via dashboards, policy briefs, workshops, and stakeholder forums to ensure it informs decision-making and reaches policymakers, practitioners, and the public. By institutionalizing these workflows, the project strengthens Kenya’s ability to respond quickly to emerging threats and plan interventions that are equitable, efficient, and sustainable.

Sustainability and long-term vision are integral to the design. Governance frameworks, co-created by local partners, will ensure shared ownership and decision-making, embedding responsibility for the DSAC’s operations within national institutions. The establishment of standardized, interoperable data systems, coupled with trained personnel and formalized partnerships, will allow continuous research, teaching, and outreach activities after VLIRUOS funding ends. By providing enduring infrastructure, capabilities, and collaborative networks, the project ensures that institutional improvements, evidence generation, and capacity gains persist, driving national resilience and long-term contributions to development goals.

Alignment with VLIRUOS outcomes is explicit: the project strengthens institutional capacity, improves research quality, enhances teaching and training programs, and promotes multi-stakeholder engagement for evidence-based policy. It also advances principles of inclusion, equity, and sustainability by embedding gender-sensitive approaches and prioritizing capacity retention and local ownership.

Through these mechanisms, the DSAC will enable Kenyan institutions to become drivers of change in health, agriculture, environment, and education, bridging gaps in capacity, collaboration, and decision-making for long-lasting national impact.

How do you want to do this?

Explain how you will do it, describing your operational and methodological approaches, identifying key deliverables and activities (in line with the project's operational plan). In the operational plan, activities are to be organised in accordance with the six standard VLIRUOS project domains, giving particular attention for the standard domain dissemination/uptake strategy.
Clarify your approach for various underlying aspects, for example:

- Innovative research methods and approaches
- Strategies to create conditions for uptake (stakeholder involvement, communication, .)
- …

The project will deliver its objectives through a coordinated set of operational and methodological approaches across the six VLIRUOS project domains, focusing on institutional capacity, human development, data integration, evidence generation, and stakeholder engagement.

1. Education and capacity building

We will implement structured training programs, mentorship, and international academic exchanges to develop a skilled cadre of Kenyan data scientists capable of advanced analytics, predictive modelling, bioinformatics, epidemiology, and One Health approaches. Training will combine theoretical instruction with hands-on application using multisectoral datasets, ensuring that knowledge is immediately relevant to real-world challenges. Key deliverables include trained personnel, curriculum modules, and a mentorship network linking students, researchers, and practitioners.

2. Research

The DSAC will serve as a national hub for collaborative research, enabling institutions to analyse and interpret health, agricultural, environmental, and educational data coherently. Methodological innovation will be embedded in all activities, emphasizing interoperable data pipelines, predictive modelling, geospatial analyses, and scenario-based simulations to inform policy. Deliverables include research outputs, policy briefs, and methodological guidelines that reflect cross-sectoral priorities and evidence-based solutions.

3. Outreach, dissemination, and uptake

To ensure evidence informs decision-making, we will implement a comprehensive dissemination strategy. This includes policy briefs, dashboards, workshops, stakeholder forums, and targeted communication to ministries, local authorities, and community stakeholders. Stakeholders will be engaged throughout the project to co-design research questions, validate analyses, and shape recommendations. This approach ensures relevance, ownership, and practical uptake of evidence for decision-making, addressing the VLIRUOS principle of societal impact.

4. Service to society

The DSAC will translate analytical outputs into actionable interventions, informing public health policies, agricultural strategies, and environmental management. By integrating multisector data and evidence-driven approaches, interventions will be timely, context-specific, and equitable. Deliverables

include decision-support tools, early-warning models, and sector-specific recommendations aligned with national priorities.

5. Infrastructure and institutional strengthening

The project will establish interoperable, secure digital infrastructure, standardized data repositories, and robust governance frameworks for ethical data sharing and management. DSAC will provide institutional platforms for continuous learning, cross-sector collaboration, and evidence production. Key deliverables include functional infrastructure, standardized workflows, and documented governance protocols.

6. Partnerships and networking

Sustainability and scale will be achieved through multi-stakeholder partnerships at national, regional, and international levels, including UHasselt. Networks will facilitate North–South and South–South knowledge exchange, mentorship, and collaborative research. Deliverables include formal partnership agreements, collaborative research clusters, and knowledge-sharing platforms.

Integration of gender and environmental considerations

All activities will be implemented with a gender-sensitive lens to ensure equitable participation of women and underrepresented groups. Environmental indicators will be included in data analyses, enabling evidence-based policy that balances human health, agricultural productivity, and ecological sustainability.

Innovative research methods

The project emphasizes innovative approaches such as predictive modelling for outbreak detection, integration of real-time multisectoral data, scenario-based policy simulations, and the application of One Health analytics to address complex socio-ecological challenges.

Creating conditions for uptake

Stakeholder engagement will be continuous, involving ministries, research institutions, and local communities in co-design, validation, and dissemination. Policy-focused workshops, dashboards, and decision-support tools will ensure that evidence is not only produced but actively used in decision-making.

Summary

Through these integrated operational and methodological approaches, the project will create a sustainable, national network of data scientists, strengthen institutional and human capacity, standardize data systems, and ensure that evidence informs policy and practice. By embedding local ownership, inclusive governance, and stakeholder engagement, the initiative aligns with VLIRUOS outcomes, ensures long-term sustainability, and advances Kenya’s national development goals.

Please describe how the project will integrate the 3 SDG principles as presented by VLIRUOS[5]:

- Interconnectedness with due attention for the integration of gender, diversity & inclusion, and environment
- Coherence, Multi-Institutional partnerships and Multi-Stakeholder partnerships
- Leave No One Behind (LNOB)

1. Interconnectedness: Gender, diversity & inclusion, and environment

The project embraces interconnectedness by designing all activities to balance social, economic, and environmental considerations. Gender-sensitive approaches will ensure equitable participation in training, leadership, and decision-making, providing opportunities for women and underrepresented groups to engage fully. Diversity and inclusion principles will guide the composition of research teams, mentorship programs, and stakeholder consultations, fostering collaborative problem solving across disciplines and sectors. Environmental considerations will be integrated into data analyses and predictive models, allowing evidence-driven policies that simultaneously safeguard human health, agricultural productivity, and ecological sustainability. By linking these dimensions, the project ensures that interventions and outputs reflect the complex interconnections inherent in health, agriculture, environment, and education.

2. Coherence, multi-Institutional and multi-stakeholder partnerships

The project is built on strong multi-institutional collaboration, linking national institutions, research centres, and universities with international partners such as UHasselt. The DSAC will act as a hub, harmonizing fragmented datasets and fostering methodological standardization. Multi-stakeholder engagement is embedded through participatory research design, joint workshops, and policy forums, ensuring that government agencies, civil society, communities, and private sector actors co-create and use evidence. This coherence across institutions and stakeholders enhances synergies, avoids duplication, and ensures that the network operates as a sustainable ecosystem rather than a collection of isolated activities.

3. Leave No One Behind (LNOB)

The project applies LNOB principles by explicitly targeting underserved populations and marginalized communities in its research and dissemination strategies. Evidence produced will inform policies and interventions that prioritize vulnerable groups, ensuring equitable allocation of resources and timely responses to crises such as disease outbreaks or agricultural shocks. Capacity-building efforts are designed to be inclusive, providing opportunities for historically underrepresented groups in the data science workforce. By embedding LNOB principles, the project ensures that the benefits of integrated data-driven decision-making are accessible to all segments of society, directly supporting Agenda 2030's vision of inclusive and equitable development.

Describe the challenges for the sustainability of the project results after VLIR-UOS funding and the possible strategies to tackle those challenges.

1. Capacity retention:

After VLIR-UOS funding ends, there is a risk that trained personnel—data scientists, analysts, and technical staff—may move to other institutions or sectors, leading to gaps in expertise. To mitigate this, the project will implement retention strategies such as:

[5] *Fit with selection criterion 2 on the Quality of the design of the proposal (descriptor 2.1.)*

Institutionalizing training programs within local universities and research institutions so that skill development continues beyond the project lifecycle.

Establishing mentorship and career development pathways within the Data Science and Analytics Centre (DSAC) to incentivize staff to remain engaged.
Creating formal agreements with partner institutions to embed trained personnel in long-term roles linked to national data initiatives.

2. Continuity of research, education, and extension activities:

Sustainability of research and educational outputs can be limited if activities depend solely on external funding. Strategies include:

Integrating project outputs into existing institutional curricula and research agendas to ensure long-term adoption.

Developing open-access, reusable data repositories and standardized analytical workflows to allow continued research and application by local teams.

Establishing local leadership of thematic clusters within the DSAC, enabling institutions to independently plan, implement, and expand research activities.

3. Dissemination and uptake of results:

Without structured mechanisms, evidence generated may not translate into policy or practice. To tackle this:

Stakeholder engagement will be formalized through advisory boards, policy forums, and annual dissemination events, fostering ownership among ministries, agencies, and community representatives.

Policy briefs, dashboards, and data-driven decision-support tools will be co-produced with end-users to ensure usability and continued application.

Multi-stakeholder partnerships—including North-South and South-South collaborations—will provide ongoing technical support, knowledge exchange, and capacity reinforcement.

4. Infrastructure and governance:

Sustainability depends on secure, interoperable systems and robust governance frameworks. Strategies include:

Embedding standardized data management and governance protocols within partner institutions.

Leveraging cost-effective, locally maintained infrastructure with capacity for scaling, minimizing dependency on external resources.

Establishing formal agreements to ensure institutional responsibility for maintaining systems and analytical platforms beyond the project period.

By proactively addressing these challenges, the project ensures that the DSAC and the national network of data scientists continue to function as a self-sustaining ecosystem, driving evidence-based policy, capacity strengthening, and multisectoral collaboration in Kenya long after VLIR-UOS support concludes.

Next to the narrative description, you will be asked to select the relevant VLIRUOS outcomes and domains to which your project aligns when submitting the proposal in the VLIRUOS tool

Module 3: Organisation

Update the personal data of the project (co-)promoters in the submission tool (uploading Annex 1). Online links to CVs of the Flemish and partner promoter(s) are to be included. Check Annex 1 for more details: please use ORCID identifier for the Flemish promoter (and if applicable co-promoter)). For partner promoters (max. 1 per partner institution) any readable online CV is requested, but if not available, then add a CV as attachment in the online submission form. CVs of co-promoters are optional.

Please take note that in the case of an MSP, a representative of a non-HE actor could be indicated as a team member or partner co-promoter, but not as a (main) partner promoter.

How is the project structured / organised?

Describe the project's organisational structure/governance, internal communication, and distribution of roles and responsibilities, with attention for balanced partnership structures and interinstitutional cooperation. In case multiple partners are involved at Flemish or partner level, the roles of each partner in the implementation and management of the project need to be explained.

The National Data Science Network will be organised to bring together institutions, experts, and communities around one shared goal: using data to strengthen Kenya's health, agriculture, environment, and education systems. The project is built on a partnership model that values collaboration, transparency, and shared responsibility.

KIPRE will lead the initiative as the national coordination hub, hosting the Data Science and Analytics Centre (DSAC). The project director at KIPRE will provide strategic oversight, while a deputy director manages day-to-day operations and ensures smooth communication between partners. Together, they will guide the network's activities and maintain strong links with government ministries.

UHasselt will serve as the Flemish partner, offering technical mentorship, support in advanced analytics, and guidance in curriculum development. Their technical lead will work closely with Kenyan teams to co-design training programmes, strengthen research capacity, and establish interoperable data systems that follow best practices.

National institutions—including the National Public Health Institute (NPHI), the Directorate of Veterinary Services (DVS), the National Environment Management Authority (NEMA), and the Centre for Epidemiological Modelling and Analysis (CEMA)—will play central roles. Each institution will nominate a focal point responsible for coordinating local activities, sharing expertise, and ensuring adherence to data governance and ethical standards.

The project will use a hub-and-spoke structure: KIPRE as the central hub for coordination and data integration, and partner institutions as spokes contributing specialised knowledge, datasets, and pathways for policy uptake. Regular steering committee meetings will bring together all focal points and the Flemish promoter to review progress, address emerging challenges, and jointly make decisions.

To ensure inclusivity and accountability, an advisory board with representatives from government, civil society, and gender and equity experts will provide strategic guidance and ensure that the needs of underserved groups inform the project's direction.

Clear roles and responsibilities will support efficient implementation:
• KIPRE will coordinate the network and manage infrastructure.
• UHasselt will provide technical leadership and capacity-building.

• Ministries, research bodies, and universities will contribute domain expertise and facilitate policy linkages.
• DSAC focal points will oversee local workflows, mentor junior staff, and support compliance.
Training and mentorship opportunities will be openly advertised, with selection criteria that emphasise gender balance, diversity, and inclusion. The structure promotes equal participation, shared ownership, and strong inter-institutional cooperation, ensuring that the network remains effective and sustainable beyond the project's lifetime. Max. 2500 characters.

Describe, if relevant, the role and selection procedure of scholarship holders (master, PhD) in the project set-up. It is deemed crucial to already think about how this will be organised, in order to ensure a smooth start of the project.

Scholarship holders—whether at Master's or PhD level—will play an important role in strengthening the technical backbone of the National Data Science Network. Their work will directly support DSAC activities in data integration, advanced analytics, and policy translation. They will contribute to applied research projects in areas such as disease surveillance, environmental modelling, agricultural risk prediction, and education data analysis, while also helping build demonstrator dashboards, methodological tools, and reproducible workflows for use by partner institutions.

Their involvement will also reinforce the long-term sustainability of the network, as each scholarship holder will be attached to one of the participating institutions—KIPRE, NPHI, DVS, NEMA, or CEMA—ensuring that the skills gained remain within the national system. Joint supervision between UHasselt and Kenyan institutions will strengthen academic mentorship, encourage co-publication, and support the development of high-quality thesis work aligned with national priorities.

The selection of scholarship holders will follow a transparent and competitive process. Calls will be publicly advertised across relevant ministries, universities, and research institutes. Eligibility criteria will emphasise academic merit, motivation, and alignment with project themes, while also ensuring strong representation of women and underserved groups in line with LNOB and gender equity principles. A selection panel composed of KIPRE, UHasselt, and partner institution representatives will review applications, conduct interviews, and match successful candidates to specific research projects and supervisors.

This structured approach ensures that scholarship holders meaningfully contribute to the project's operational work while building a new generation of skilled data scientists committed to Kenya's long-term development. Max. 2000 characters

MIP / MSP set-up: Please indicate if you consider your project is a Multi-Institutional Partnership[6], meaning it structurally involves additional institutions of higher education in Belgium/locally, and/or whether it is a Multi-Stakeholder Partnership[7] with non-academic actors

[6] Multi-Institutional Partnership (MIP): This concerns a structural collaboration between several higher education institutions at Flemish/Belgian (including the Institute of Tropical Medicine (ITM)) and/or partner level within the framework of a project, with the aim of obtaining better results by pooling available expertise.
[7] Multi-Stakeholder Partnership (MSP): this concerns a structural collaboration with at least 1 non-academic actor (= multi-stakeholder; civil society, private sector, governmental actors, etc.) within the framework of a project, in which this actor plays an active role in the project implementation.

MIP: No

MSP: Yes

In case *Yes,* then explain the added value of this MIP collaboration setting for the project, at the level of partner HE&SIs and/or Flemish HEIs; or at the level of the different actors in an MSP.

This project is designed as a Multi-Stakeholder Partnership (MSP), bringing together a diverse group of institutions that each play a critical role in Kenya's data ecosystem. While it is not a Multi-Institutional Partnership (MIP) on the Flemish side, the MSP model provides considerable added value for both impact and sustainability.

The partnership links KIPRE, the National Public Health Institute (NPHI), the Directorate of Veterinary Services (DVS), the National Environment Management Authority (NEMA), and the Centre for Epidemiological Modelling and Analysis (CEMA), working closely with UHasselt as the technical and academic lead. By involving these actors from the health, agriculture, environment, and education sectors, the project reflects the complexity of real-world challenges and ensures that solutions are practical, relevant, and nationally owned.

The MSP structure adds value in several ways. First, it ensures that the project draws from the strengths of each institution—whether scientific expertise, access to data, policy influence, or operational capacity—allowing the DSAC to function as a truly national resource. Second, it promotes shared ownership and accountability, reducing the fragmentation that has historically limited Kenya's ability to use data effectively for early warning, preparedness, and policy development. Third, working with multiple stakeholders speeds up uptake of project outputs, as institutions involved in generating evidence are the same ones responsible for using it in decision-making.

For UHasselt, the MSP provides a strong platform for co-created research, co-supervision, and long-term collaboration across sectors. For Kenyan institutions, it strengthens capacity through embedded mentorship, harmonised data practices, and sustained interaction with international expertise. Ultimately, the MSP structure creates a realistic pathway for the DSAC to be scalable, inclusive, and sustainable well beyond the project lifecycle. *Max. 2000 characters*

Module 4: Stakeholders and coherence

4.1. Stakeholder management

Stakeholder management strategy

Stakeholder management refers to the management of the interactions with the most important stakeholders of a project (external to the project team e.g., knowledge users (farmers, policy makers, etc.), intermediaries (NGO's), etc.), contributing to the realisation of the project outcomes and impact (e.g., the end-users of the project results, knowledge users). Explain how the project will manage stakeholders or engage with them (see examples above).

The success of the National Data Science Network depends on meaningful and continuous engagement with a wide range of stakeholders who generate, manage, and use data across Kenya's health, agriculture, environment, and education sectors. The project therefore adopts a structured, inclusive, and adaptive stakeholder management strategy to ensure that the network's outputs are relevant, trusted, and used in decision-making.

Internal stakeholders include researchers, analysts, and technical staff from KIPRE, NPHI, DVS, NEMA, and CEMA. These teams will act as institutional focal points for data sharing, integration, and analytics. They will actively contribute to the implementation of DSAC activities, participate in technical training, and help co-create tools, workflows, and governance protocols. Trainees and junior scientists involved in the programme also form a key internal group, as they will be the core human resource sustaining the network after the project ends.

External stakeholders include national policymakers from the Ministries of Health, Agriculture, Environment, and Education—actors who rely on evidence to guide preparedness, early warning, and response strategies. Civil society organisations, community representatives, and local research users will also be engaged to ensure that outputs reflect real needs on the ground. International stakeholders, particularly UHasselt, will offer technical mentorship, co-supervision of research, and methodological guidance.

Stakeholder engagement will follow a tiered approach based on each group's level of influence and interest. High-influence stakeholders, such as ministerial policymakers and institutional leaders, will be involved closely through the advisory board, joint planning meetings, and structured consultations that ensure alignment with national priorities. High-interest but lower-influence stakeholders—such as junior researchers, community groups, or civil society actors—will be engaged through workshops, open dialogues, participatory research approaches, and regular information sessions. Lower-priority stakeholders will be kept informed through newsletters, dashboards, and periodic updates to maintain awareness and identify new opportunities for collaboration.

To promote uptake of project results, communication will not rely on one-off dissemination. Instead, the project will use ongoing dialogue, policy briefs, interactive dashboards, webinars, training sessions, and practical demonstrations to help stakeholders integrate evidence into their daily decision-making. Engagement will be guided by gender-sensitive and LNOB principles to ensure equitable participation and representation of underserved groups in both consultation and leadership roles.

Coherence with national and international initiatives will be ensured by mapping the project landscape and creating synergies with Belgian development actors, regional One Health networks, and relevant

academic programmes. Regular coordination with other VLIR-UOS initiatives will help avoid duplication and strengthen the overall learning ecosystem. Through this holistic, inclusive approach, the project builds trust, strengthens capacity, and fosters long-term collaboration that will sustain the National Data Science Network well beyond the project period. *Max. 3,000 characters*

Next to the narrative, please identify the project's 5 most important stakeholders.

List of 5 key stakeholders
Ministry of Health- National Public Health Institute (NPHI)
Ministry of Agriculture and Livestock Development - Directorate of Veterinary Services (DVS)
Ministry of Environment, Climate Change and Forestry - National Environment Management Authority (NEMA)
Ministry of Education - Centre for Epidemiological Modelling and Analysis (CEMA)
Hasselt University (UHasselt)

4.2. Coherence

Coherence is about the complementarity of the project with the actions and networks of other actors and/or other HES4SD [8]initiatives. Elaborate on how the project is coherent with:

- other VLIRUOS funded activities (e.g. with TEAM, SI, ITP, IUC, Global Minds projects, ICP Connect, PSP, etc.) *(internal coherence);*
- other actors/projects (e.g., local, partner country level, regional, Belgian non-governmental actors, etc.) *(external coherence)*

Please note that lessons learned from previous experiences from earlier projects and/or between the project partners fit in Module 8.

The proposed National Data Science Network builds strongly on existing VLIR-UOS structures, thereby ensuring internal coherence within the broader HES4SD portfolio. The project complements ongoing ICP Connect and Global Minds initiatives at UHasselt that focus on strengthening analytical capacity and ethical data practices. Through these links, the network will benefit from established teaching materials, thematic expertise in biostatistics and data engineering, and an already active community of researchers working on public health, environmental modelling, and sustainable development. The collaboration also aligns naturally with previous TEAM and SI projects in the region that have promoted institutional strengthening, data-driven policy engagement, and applied research for health and environment. By positioning the DSAC framework as an operational layer supporting these initiatives, the project ensures that capacity-building and scientific outputs feed into a wider ecosystem of training, research, and innovation.

Externally, the project is coherent with key national and regional actors working at the intersection of public health surveillance, environmental monitoring, agricultural resilience, and One Health. The collaboration with NPHI, DVS, NEMA, and CEMA reflects a deliberate effort to harmonise data systems and avoid fragmentation. Each institution already collects valuable data, but these datasets often

[8] HES4SD: Higher Education for Sustainable Development, referring hereby more especifically to the thematic Joint Strategic Framework of Belgian Scientific actors ARES, ITM and VLIRUOS.

remain siloed. The project therefore strengthens complementarity by enabling shared tools, harmonised standards, and joint analytics pipelines that support national early-warning systems and coordinated decision-making. At the regional level, the project aligns with East African networks focused on infectious disease modelling, climate-related risk assessment, and food-system intelligence, allowing for exchange of expertise and interoperability of data systems.

Coherence with Belgian development actors is ensured through periodic consultations with organisations experienced in digital health, ecosystem monitoring, and education for sustainable development. These partnerships provide additional channels for dissemination, policy dialogue, and potential scaling of network activities. By grounding its approach in existing platforms rather than creating parallel structures, the project strengthens complementarity, enhances efficiency, and ensures that the National Data Science Network becomes a durable component within both national systems and the wider VLIR-UOS landscape. *Max. 2.500 characters*

Module 5: Planning and budgeting

Plan your activities over the different activity years per project domain

For the budget, please use the budget annex, a separate excel sheet to be uploaded to the online tool

Budget – value for money

Motivate your requested budget. Elaborate on how much will be spent on the different activities and why you choose this repartition. Particular attention should be given to (a) any personnel costs, (b) investment costs.[9] Explain the main financial focus/needs of your project (explain link with core activities; share of investment, personnel/operational/scholarship costs) and any in-kind co-funding at the level of the partner institution.

Identify what parts of the budget will be managed by which partner (Flemish/partner HEI(s)), and in particular in the case of interinstitutional collaborations with multiple promoters reflect on how the budget will be managed (incl. any redistribution of local coordination costs).

The planning and budgeting approach for the National Data Science Network is built around the practical needs of the project and the long-term goal of strengthening Kenya's capacity for evidence-informed decision-making. Activities are organized across five domains—capacity building, infrastructure and institutional strengthening, research and methodological development, multi-stakeholder engagement, and knowledge dissemination—each with defined timelines and clear responsibilities for the Kenyan and Flemish partners.

Capacity-building activities will run throughout the project, combining short courses, professional certificates, mentorship, and exchange programmes with UHasselt. These trainings will target data scientists, analysts, and technical officers from ministries, universities, and research institutes. A deliberate effort is made to support gender balance, regional diversity, and the inclusion of underrepresented groups. The budget allocated to training covers facilitation, training materials, travel support, and digital learning platforms.

[9] Please check out our financial framework document, section TEAM projects, and take into account the good practices related to the share (%)of these categories in relation to the overall budget'. A good practice is to keep the share of personnel costs as limited as possible, and to limit investment costs to an indicative max. of 25% of the total budget.

Infrastructure and institutional strengthening will concentrate on the establishment of the Data Science and Analytics Centre (DSAC), including hardware, servers, secure cloud solutions, and essential software tools. The cost of infrastructure represents a substantial part of the budget, but it is justified by the central role of DSAC in hosting integrated datasets and supporting national analytics workflows. Technical staff from KIPRE, NPHI, NEMA, DVS, and CEMA will handle installation and maintenance, with UHasselt providing technical guidance. These investments form the backbone of the project and are critical for long-term sustainability.

Research and methodological development will involve joint projects that apply advanced analytics—such as predictive modelling, outbreak forecasting, and environmental monitoring—using the integrated datasets hosted at DSAC. These activities ensure continuous skill transfer, strengthen scientific output, and deepen collaboration between institutions. Budget allocations here focus on operational costs, local fieldwork where necessary, data collection, and collaborative research meetings.

Multi-stakeholder engagement activities will be implemented annually to ensure that the project remains aligned with national priorities. These activities include policy dialogues, consultation workshops, and joint planning sessions with government departments, civil society groups, and private-sector partners. The budget for this component supports convening costs and coordination efforts, ensuring strong ownership and uptake of results.

Knowledge dissemination and uptake include public workshops, online dashboards, policy briefs, and stakeholder forums aimed at translating technical outputs into actionable insights. Funds are allocated to communication materials, digital platforms, and travel for outreach, with a focus on reaching marginalized communities and groups traditionally left behind.

Project management resources support coordination, financial oversight, reporting, and monitoring. Personnel costs are kept lean by using existing staff structures as much as possible, with dedicated coordination roles only where necessary for effective implementation. Budget management will be shared between UHasselt (overseeing Flemish costs and transfers) and KIPRE as the lead Kenyan institution (overseeing local expenditures). In-kind contributions—such as office space, administrative support, and partial staff time—will be provided by the partner institutions to enhance cost-efficiency.

Overall, the budget balances investment in infrastructure, human capacity, and collaborative research. This repartition ensures maximum value for money: foundational investments create long-term capacity, while operational funds sustain learning, innovation, and practical policy impact across sectors.

Max. 4.000 characters

Module 7: Monitoring [10]

Approach of monitoring & quality assurance

Selected projects will be asked to report on a limited set of generic, standard indicators (e.g., number of peer reviewed publications, extension/outreach/capacity-building activities realised, uptake/influence of new skills/, # of PhD and Master scholars directly supported by the project, etc.). Complementary, in this section of the proposal, briefly describe how you will assess/monitor the results of your specific project (can be both qualitative and quantitative) during and at the end of the project.

Monitoring and quality assurance will be built into all stages of the project to ensure that progress is measured effectively and that activities remain aligned with the intended outcomes. The project will combine the standard VLIR-UOS indicators with a concise set of project-specific measures that track growth in human capacity, institutional strengthening, data integration, and the uptake of evidence by policy actors.

Progress will be monitored at individual, institutional, and system levels. For trainees, learning will be assessed through pre- and post-training evaluations, mentorship follow-ups, and practical assignments. At the institutional level, indicators will include the number of interoperable datasets integrated into the Data Science and Analytics Centre (DSAC), functioning data pipelines, harmonised governance protocols, and the quality of inter-institutional collaboration. System-level monitoring will focus on whether DSAC outputs—dashboards, briefs, and predictive models—are being used by ministries and agencies to support planning and surveillance.

Both quantitative and qualitative data will be collected. Quantitative indicators will track training numbers, research outputs, datasets ingested, and engagement events. Qualitative indicators will capture stakeholder satisfaction, relevance of evidence products, and inclusion of underrepresented groups. All indicators will be disaggregated by sex, institution, and stakeholder type to uphold LNOB and gender principles.

Monitoring will be continuous, supported by routine documentation of training, system performance, and stakeholder engagement. A dedicated monitoring officer will coordinate data collection and reporting, while quarterly review meetings will help identify risks, adjust activities, and ensure coherence with the Theory of Change.

A central reporting dashboard within DSAC will provide real-time tracking of key indicators and generate summaries for decision-makers and VLIR-UOS. Annual reports will synthesise achievements, lessons, and adaptations, ensuring accountability and continuous improvement.*Max. 2.000 characters*

[10] Please note Module 6 is not applicable for TEAM projects.

Module 8: Learning and steering

Project track record: Indicate whether this project proposal is a continuation of an existing VLIRUOS funded intervention, or a re-submission (*note: a checkbox will be included in the online submission tool)*

- List, if relevant, previous experiences, projects between the project partners and describe the achievements / actions already undertaken. How will the lessons learned from previous experiences be taken on board?
- In case of follow-up projects, or in case of an earlier IUC partnership, what is the added value of this project?
- In case the project is a re-submission of a proposal submitted previously in VLIRUOS calls for proposals, please also indicate how you dealt with shortcomings as compared to a previous proposal.

Note: If this is a first-time project, the question below can be left open.

The Kenya Institute of Primate Research (KIPRE) has a strong history of collaborations with national institutions and Flemish partners through VLIR-UOS funding. Previous projects, such as the IPMB workshops and the RECON initiative, have strengthened capacity in molecular biology, zoonotic disease surveillance, and cross-border animal disease management. IPMB enabled intensive training of Kenyan researchers and laboratory upskilling, while RECON established cross-border Foot-and-Mouth Disease surveillance protocols and promoted multi-sectoral communication. Lessons from these projects underscore the importance of sustained training, integrated One Health approaches, and translating research into actionable policy.

KIPRE's collaborations with key national partners underpin this project. With NPHI, KIPRE advances zoonotic disease research, snakebite envenoming interventions, and local vaccine and drug development. Collaboration with DVS focuses on transboundary animal disease research, ethical animal management, and data-driven disease control strategies. CEMA works with KIPRE on epidemiological modeling, spatial analysis, and predictive tools, translating field and laboratory data into actionable insights. NEMA engages with KIPRE on ecosystem health, environmental determinants of disease, and GIS-based monitoring of land-use and biodiversity changes to inform conservation and public health policy.

These partnerships have built institutional capacity, established skilled research teams, and fostered multi-stakeholder networks. Lessons learned—such as the need for continuous capacity building, interoperable data systems, and structured stakeholder engagement—directly inform the design of the National Data Science Network. By leveraging these collaborations and prior VLIR-UOS experiences, the project ensures effective integration of health, environmental, and agricultural data, strengthens evidence-based policy, and promotes sustainable impact across Kenya.

Max. 2.500 characters

Confirm this proposal was developed together (partner in Flanders and partner country) and was not AI-generated (e.g. for the context analysis). If generative AI was used: explain how and to what extent
This proposal was developed collaboratively by the partners in Kenya and Flanders, including KIPRE, NPHI, DVS, NEMA, CEMA, and Hasselt University (UHasselt). All sections, including the context analysis, project design, and operational planning, were jointly drafted and reviewed by the human project team to ensure accuracy, feasibility, and alignment with national priorities. Generative AI tools were not used to create any substantive content of this proposal. Any minor use of AI was limited to formatting or language suggestions, without affecting the project rationale, design, or data. The ideas, objectives, methodologies, and partnerships presented here reflect the knowledge, experience, and planning of the project partners. Maximum 1000 characters

Annexes

Annex 1: Excel with tabs per module for formulation

General information	General information on the project
Module 3	Information on who is involved in the project and its organisational structure. Please be aware that the institutions linked to the Flemish promoters (max. 1 in Belgium) and partner promoters (1 or multiple in the partner country, max. 1 per partner institution). Institutions of Flemish or local co-promoters are not contracted.
Module 5	Activities (= activity plan, organised per intermediate change domain, with indication of who is responsible for the activity)

Annex 2: TEAM budget format

Mandatory Annexes without format

Annex 3: CVs of the (main) promoters[11] (in case not submitted as an online link)

[11] In the exceptional case that the project proposal is submitted by a Flemish postdoc, the CV of the Flemish co-promoter with min. 10% ZAP status should also be added.

Annex 4: Endorsement letter of the partner institution(s)[12]

Optional Annexes[13] : Letter of support of formalised Synergy in case of a Multi-Stakeholder Partnership (MSP)/Multi-Institutional Partnership (MIP) set-up ; Complementary Endorsement letters of other partner institutions in the project proposal (apart from the Endorsement letter(s) of the partner promoter(s) (if any)

[12] Endorsement letter: institutional support letter, referring to the employment link of the main partner promoter with a (recognized higher education) partner institution, and the support of this same institution to the project. The letter should be signed at least by an authority at Faculty level, but preferable by the vice-chancellor.

[13] No other annexes will be considered