Newsletter #2

10/01/2026

NbS-4-Climate

Knowledge Transfer of Nature-based Solutions through Education to Enhance Climate Change Adaptation and Resilience in Uganda"

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Co-funded by the European Union

Nature-based Solutions

A Sustainable Management Practice for Uganda and Sub-Sahara Africa

by Jose Luis Garcia Rodriguez

What brought the consortium together in this project was the interest and belief in Nature-Based Solutions (NbS). This term has become increasingly prevalent as various initiatives have been developed in different international regions. Definitions on NbS have been described by all major institutions worldwide, from the FAO and IUCN (International Union for Conservation of Nature) to the World Bank, among others.

Currently, NbS are aligned with the 2030 Agenda programme and can contribute to the achievement of the UN Sustainable Development Goals (SDGs) in any region of the world. Furthermore, its principles are also included in the New Urban Agenda. The New Urban Agenda represents a shared vision for a better and more sustainable future. If well-planned and well-managed, urbanization can be a powerful tool for sustainable development for both developing and developed countries.

Nature-based solutions (NbS) is a novel concept that is defined by IUCN as follows:

"Actions to protect, sustainably manage and restore natural or modified ecosystems, **addressing social challenges in an effective and adaptive manner, while providing human well-being and biodiversity benefits**, with climate change, food security, disaster risks, water security, social and economic development and human health are common social challenges"

Today's society is increasingly facing challenges such as climate change, urban expansion, compromised food security and water resource provision, and increase disaster risk vulnerability. One commonly used approach to responding to these challenges is to rely solely on technological strategies that has not been very effective.

An alternative approach is to manage (socio-)ecological systems in a comprehensive manner to sustain and potentially increase the benefits of **ecosystem services (ESS),** understood as the benefits that an ecosystem provides to its own environmental quality, as well as to the improvement of people's health, quality of life and economy. These ESS, derived from the functions of ecosystems themselves, form the basic functional unit of nature and are grouped into four different types:

- **Provisioning:** products obtained from the ecosystem (e.g. food, water, wood, fuel)
- **Regulating:** derived from ecosystem functions and helping to reduce local and global impacts (e.g. climate regulation, soil control, pollination, etc.).
- **Cultural:** intangible benefits (e.g. spiritual, education, leisure time).
- **Support:** necessary for the functioning of the ecosystem (e.g. biodiversity and primary production).

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In this sense, NbS are strongly connected to ideas such as a) natural systems agriculture, b) natural solutions, c) ecosystem-based approaches, d) adaptation services, e) natural infrastructure, f) green infrastructure and g) ecological engineering.

NbS are based on eight fundamental principles, which are as follows:

1) NBS adopt the standards (and principles) of nature conservation

2) NBS can be implemented autonomously or integrated with other solutions to societal challenges (e.g. technological and engineering solutions)

3) NBS are local, in the sense that they are determined by site-specific natural and cultural contexts, including traditional, local and scientific knowledge.

4) NBS deliver social benefits in a fair and equitable manner that promotes transparency and broad participation.

5) NBS maintain biological and cultural diversity and the ability of ecosystems to evolve over time.

6) NbS are applied at the landscape scale.

7) NbS recognise and address trade-offs between immediate economic development benefits and future options for the production of the full range of ecosystem services.

8) NbS are an integral part of the overall design of policies and measures or actions aimed at addressing

To conclude we believe the NbS is ideal from sustainable natural resources management and to enhance climate change resilience. This is particularly true for Uganda and the entire sub-Sahara region. Through this project necessary education tools will be developed that promote the awareness and adoption of NbS in Africa one of the most vulnerable regions to climate change although the continent contributing the least.

Examples of Nature- based Solutions

NbS-4-Climate Consortium Meeting in Madrid: Education, Nature-based Solutions and Field Learning

October 9-11, 2025 | Madrid, Spain by **Clara Cordon**

Project Yearly Meeting

The **School of Forestry and Natural Environment Engineering** of the **Universidad Politécnica de Madrid (UPM)** hosted a key consortium meeting of the Erasmus+ Capacity Building project **NbS-4-Climate – Knowledge Transfer of Nature-based Solutions through Education to Enhance Climate Change Adaptation and Resilience in Uganda**.

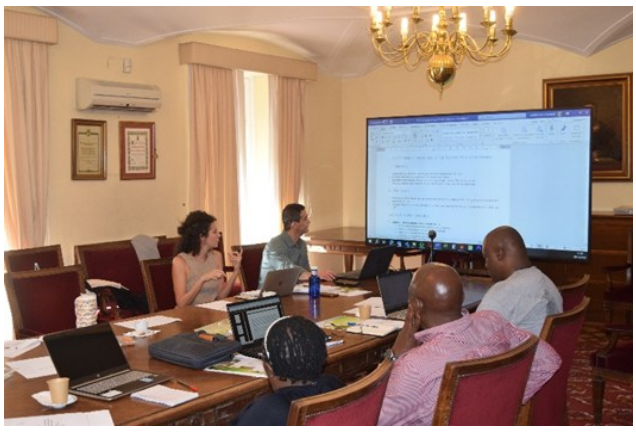
The meeting brought together representatives from **Democritus University of Thrace (Greece)**, **Kyambogo University (Uganda)**, **University of Kisubi (Uganda)** and **UPM (Spain)**, under the coordination of **Prof. George Zaimes** (DUTH). The programme combined strategic coordination, academic harmonization, hands-on learning and field-based experience.

Teaching Tuning Workshop: Harmonizing Education on Nature-based Solutions

A central component of the meeting was the **Tecahing Tuning Workshop**, held on **9 October 2025** at UPM, focusing on the joint development of the course *"Nature-based Solutions for Climate Change Adaptation"*, the core educational output of the project.

During this workshop, partners worked collaboratively on defining and validating a **common modular structure** for the course; aligning **learning outcomes, contents and teaching methodologies**; establishing **shared quality criteria and evaluation approaches**; and ensuring coherence with the project's capacity-building objectives for Uganda.

The workshop reinforced a participatory and consensus-based approach, ensuring that the future training programme is academically robust, pedagogically coherent and context-relevant for climate adaptation challenges.



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Hands-on NbS Workshop at the Hydrology Laboratory (UPM)

The programme continued with a **practical workshop on Nature-based Solutions**, delivered by **Prof. Guillermo Tardío** at the **Hydrology Laboratory of UPM**. The session focused on the application of NbS to **hydrological restoration and sustainable water management**, with a particular emphasis on African contexts.

Beyond its technical dimension, the workshop served as a **networking and knowledge-exchange space**, fostering dialogue between European and African partners. The session also strengthened synergies with the **LIFE Alnus Taejo** project, highlighting complementarities between Erasmus+ and LIFE initiatives in the field of NbS, ecological restoration and climate resilience.

Field Trip to El Pardo: Nature-based Solutions in Practice

The meeting concluded with a **technical field visit to El Pardo (Madrid)**, guided by **UPM staff** and NbS experts **David E. Martínez Muñoz** and **Alicia de la Fuente López** from **ALIDA Ingeniería del Medio SL**.

Participants explored real-world NbS interventions in Mediterranean environments, including River and stream restoration measures, Erosion control techniques, Revegetation using native species, and Nature-based water management strategies.

The field visit provided a valuable opportunity to discuss the **transferability of NbS practices** between European and African contexts, reinforcing applied learning and cross-regional cooperation within the NbS-4-Climate consortium.

On the Ground: EU Project Monitoring Meeting Drives Focus on Impact and Sustainability.

December 18, 2025

by Grace Julius Ssembatya

Kampala, Uganda – In a significant step towards ensuring the successful implementation and lasting legacy of the NbS-4-Climate project, consortium partners recently convened in Kampala for a detailed monitoring meeting with officials from the European Union.

The session, attended by representatives from all Ugandan partners; **Kyambogo University, University of Kisubi,** and **GrassRoots Ministry,** served as a critical platform for transparent dialogue, progress assessment, and strategic planning. The agenda, set by the EU delegation, focused on a comprehensive review of the project's "state of play," with a particular emphasis on impact beyond mere deliverables.

The meeting opened with the presentation from the consortium partner - KYU, structured around key themes requested by the EU:

Work Package Deliverables: Partners provided detailed updates on the status of assigned work packages, highlighting completed milestones and the concrete outputs being generated on schedule.

Achievements & Challenges: The discussions celebrated key achievements—from technical successes to strengthened local collaborations—while also fostering an environment of openness about logistical, operational, or contextual challenges faced in the field. This candid exchange is vital for adaptive management and collective problem-solving.

Measuring Tangible Impact: A core focus was on articulating the project's ripple effects. Partners shared evidence of impact at multiple levels: institutionally (through strengthened policies or internal capacities), locally/nationally (via community engagement and alignment with national development goals), and regionally.

Below are some highlights from the productive sessions in Kampala:

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Strategies for Sustainability: Perhaps the most forward-looking part of the dialogue centered on ensuring the project's results endure. Partners discussed actionable strategies for embedding successful methodologies into local systems, fostering community and institutional ownership, and creating viable models for the continued use of project outcomes.

Strengthening the Collaborative Fabric

The presence of the EU monitoring officers provided invaluable external perspective and guidance. Their questions and insights helped sharpen the consortium's focus on results, accountability, and strategic direction. For Ugandan partners, the meeting was more than a review; it was a reaffirmation of the shared mission and a chance to synchronize efforts for the crucial phases ahead.

The gathering underscored a fundamental principle: that the strongest projects are built on a foundation of transparency, robust partnership, and a relentless focus on creating sustainable, locally-owned impact.

Below are some highlights from the productive sessions in Kampala:

Conference Presentations

by George N. Zaimes

George N. Zaimes presented the NbS-4-Climate project at 5th Annual Meeting of Mediterranean Geosciences Union held in Athens, GREECE, November 10-12, 2025. Specifically, he presented the need for the project, the importance nature-based solutions, the aims of the project and the major accomplishments till this point. The presentation gained substantially interest from the attendees.

First NbS Network Meeting online

by Valasia Iakovoglou

The first online NbS Meeting will take place on **January 29, 2025** online at 10:00 (CET Time).

The meeting is intended for those interested in nature-based solutions and includes research centers, business, public authorities, communities, private companies and organizations from Uganda and neighboring countries. In addition, policymakers, stakeholders and the general public are also invited to attend.

The network will meet online every 6 months through online to discuss the project's issues and results providing valuable feedback on its Deliverables.

Those who wish to become members of the NbS-Network Members will be able to:

- Be informed about the actions and results of the project, through semi-annual online meetings, semi-annual newsletters and social networks
- Be informed of the educational events and seminars that they can participate in
- Have the opportunity to work with Private and Public Bodies, Universities, Research Centers
- Can evaluate and exploit the results of the project
- Have access to the NbS-4-Climate project portal
- Be able to use the Virtual Learning Platform for distance learning
- Be able to get in contact and utilize specialized graduates / undergraduates with new and innovative skills tailored to the needs of the water market
- Be able, if they wish, to contribute to the project results
- For more information, please check the link below

Networking

Dissemination of the NbS-4-Climate Pamphlet

by Georgio Gkiata

George Zaimes at 7th Euro-Mediterranean Conference for Environmental Integration (EMCEI-2025), 23-26 June 2025, Reggio Calabria, Italy.

George Zaimes at Academy of Water Resources Conservation Forest in Qilian Mountains, 4-20 July, 2025, Zhangye, China

Valasia Iakovoglou and George Zaimes at the Department of Natural Resource Ecology & Management, Oklahoma State University, 10 August, 2025, Stillwater, USA

José Luis García Rodríguez at Letur facing the DANA: Natural Solutions, Emergency Management and Rural Resilience", 24-26 September 2025 organized by Universidad Castilla La Mancha, Spain

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Quote "Change yourself NOT nature"