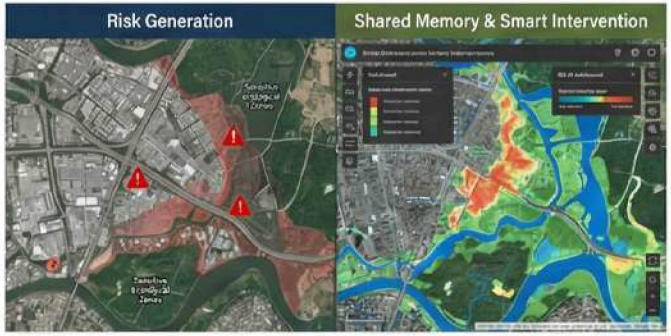
# “Nature Cities Alliances / NCA & Nature Based Intelligence / NBI Approaches”



A stunning high resolution aerial visual of a futuristic 'Nature City.' The image shows a dense urban area seamlessly interwoven with extensive green corridors, rooftop gardens, urban forests, and meandering waterways that act as natural flood barriers. The architecture blends with the environment, featuring green faced and permeable surfaces. It represents a dynamic ecosystem rather than just concrete infrastructure.

## The Pre-Disaster Phase: Where Risk is Generated




A sophisticated split screen visualisation comparing traditional planning versus NCA planning using high-tech GIS. On the Left labeled 'Risk Generation" a standard map shows gray infrastructure sprawling over sensitive ecological zones. On the right labeled "Shared Memory & Smart Intervention" a vibrant GIS data dashboard highlights vulnerable areas and proposes nature-based solutions like wetlands.

**Nature Cities Alliances** is a conceptual framework that perceives the city not merely as a technical entity, but as a dynamic and delicate ecosystem. In reality, this system represents our globe and the systems that make it up. There are physical, cultural, and natural components to this system. This alliance interprets disasters not as “extraordinary events” but as the delayed consequences of the flawed relationship established by this system. Therefore, the goal is not merely to create institutions that can act together when a disaster occurs, but to establish a common ground of understanding that can collectively consider the spatial, administrative, and ecological processes that produce disasters before they even emerge. Here, alliance means much more than temporary project-based collaborations. It is a long-term partnership between actors who speak the same language, look at the same spatial data, and share the same concept of risk.

**The pre-disaster phase** is the most critical area for **Nature Cities Alliances.** Because risk is generated at this stage. Incorrect site selection, disregard for ecological thresholds, and viewing nature merely as empty space all begin here. This alliance aims to bring together universities, local governments, professional associations, and technology producers around the same data and thinking regime.

Geographic Information Systems and remote sensing are not merely technical tools at this point; they serve as a shared memory that reveals where the city is vulnerable and what consequences each intervention will bring. Nature-based solutions are the translation of this memory into the language of planning. They are approached not as green space aesthetics, but as infrastructure that reduces flood risk, balances heat and preserves ecological continuity.

## The Value of Alliance During Disasters



A dynamic photograph showing nature-based solutions functioning during a severe weather event. A large, designed urban wetland park is filled with floodwater, protecting surrounding buildings. The water is being managed through natural dispersion areas.

# Nature Based Intelligence (NBI): The Cognitive Framework

CBS, remote sensing, and nature-based solutions are merely tools. The real issue is the courage to question decisions that generate risk. It is the will to see the city not as something opposed to nature, but as a continuation of nature. Without this will, the alliance remains merely a concept. With it, it truly becomes a transformative force.

The Nature Cities Alliance framework is often misinterpreted. It is seen as a network of goodwill, a club of cities, or a platform for sharing experiences. However, such an interpretation is naive in the context of disaster management. Disasters do not respect naive structures. For the NCA to be meaningful, it must produce a common decision-making mind. This common mind also has a technical name: Nature Based Intelligence.

Thinking of Nature Based Intelligence as just another AI product here oversimplifies the issue. NBI is not a predictive algorithm. It is more of a cognitive framework that reminds us how nature works. There are thresholds. There are carrying capacities. There are feedback loops.

When you exceed these limits, nature does not remain silent; it responds with a delayed but severe reaction. NBI exists to anticipate this response. It works not to generate numbers, but to stop the wrong decision early.

The role of NBI within NCA begins precisely here: before the disaster. Because the biggest mistake in disaster management is to focus everything on the moment of the disaster.



An artistic high-tech visualisation of 'Nature Based Intelligence". The image shows a complex network resembling both a biological nervous system (roots, mycelium networks) and a digital data network (glowing nodes). It illustrates NBI as a cognitive framework acting as the 'common mind' for the city.

## NBI's Role Before the Disaster: 'Should We?'




A powerful before-after predictive modelling visualisation. The top half shows a natural floodplain. the bottom half shows two potential futures modelled by NBI: On the left, the floodplain is filled for construction (high risk). on the right the floodplain is preserved as a park (resilient).

Before the disaster, NBI states: It is not enough to say there is risk here. The real question is: at what threshold does this risk turn into a catastrophe? Floodplains can technically be filled in, yes. But that filling does not erase the memory of the water. The NBI writes that memory back into the space. Thus, cities confront the question "should we?" before the question "can we?"

During a disaster, NBI shows not only the damage to the area you will intervene in, but also its sensitivity. It may be possible to open a road, but that road may be an ecological artery. A temporary shelter area speeds things up but can permanently kill the soil. NBI makes these kinds of secondary damages visible. It looks where most crisis tables don't.

## NBI During and After Crisis



A detailed disaster response map visualised through NBI. Unlike a standard damage map, this image highlights ecological sensitivities (critical arteries, soil health) in glowing colours, warning relief workers not to disrupt these vital systems.

After a disaster, perhaps the most critical role of the NBI comes to the fore. This is because most systems shut down their memory at this stage. Damage is assessed, reports are written, and the same spaces are rebuilt with slightly more robust structures. NBI pauses here and asks: What did this disaster teach us? Which natural system gave warning? Which intervention exacerbated the problem? Within the NCA, these questions are asked not just for that city, but for the entire alliance. Thus, the disaster ceases to be a local trauma and becomes a moment of collective learning.

That's why NBI is not just a decision support system at NCA. It is also a corporate memory mechanism.

Intercity information transfer occurs not through abstract presentations, but through the same decision scenarios. This is to avoid repeating the same mistakes and missing the same nature signals. The educational dimension also arises from this. Municipalities, planners, and disaster managers learn the same language. This is not software training. It is the alignment of thinking patterns.

Ultimately, it must be stated clearly. Without Nature-Based Intelligence, the Nature Cities Alliance remains a well-intentioned network. Meetings are held, documents are produced, but when it comes to decision-making, everyone reverts to their own intuition. With NBI, however, the NCA transforms into a structure that produces decisions and anchors the responsibility for those decisions in nature. The difference in disaster management is precisely where this becomes evident.

The Nature Cities Alliance is also an education and knowledge network. Education here does not mean teaching in the traditional sense. It means people from different disciplines learning to look at the same spatial problem together. Students, academics, municipal employees, and planners begin to speak the same language. A capacity emerges that can interpret geographic data, recognize ecological thresholds, and consider nature-based solutions as risk mitigation tools. Information sharing is based on interpretation, not ownership. Value lies not in the data itself, but in placing that data in the right context.

# PROJECT UPDATES & EVENTS

February 2026 | E-NEWSLETTER

## WHAT WE HAVE DONE DURING PAST YEAR

- Prepared and finalized core **WP1 project management deliverables: Quality Assurance Plan** (D1.1), **Risk Management Plan** (D1.2), **Project Monitoring Plan** (D1.3), **Project Evaluation Strategy Plan** (D1.4), and the **Need Analysis Report** (D1.5).
- Produced key WP2 **research analysis outputs: Consolidated Literature/Case Study/Best Practices Report** (D2.1) and **Needs Assessment Report** (D2.2), **consolidating evidence and translating it into program needs.**
- Established the project's **visibility** and **dissemination infrastructure** under WP5 by **launching the project website and social media accounts** (D5.1) and preparing the **Dissemination Plan** (D5.2).
- Delivered **international coordination and governance** through **major project events: Online Kick-off Meeting (March 2025), WP2 Team Work Meeting in Slovakia (November 2025),** and the **Annual Evaluation & Coordination Meeting 1 (Online, December 2025).**
- Ran the **Steering Committee meeting series** regularly (Apr, May, Jun, Jul, Aug, Oct 2025; Jan 2026) to maintain **cross-WP alignment,** monitor progress, and keep deliverables on track.



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