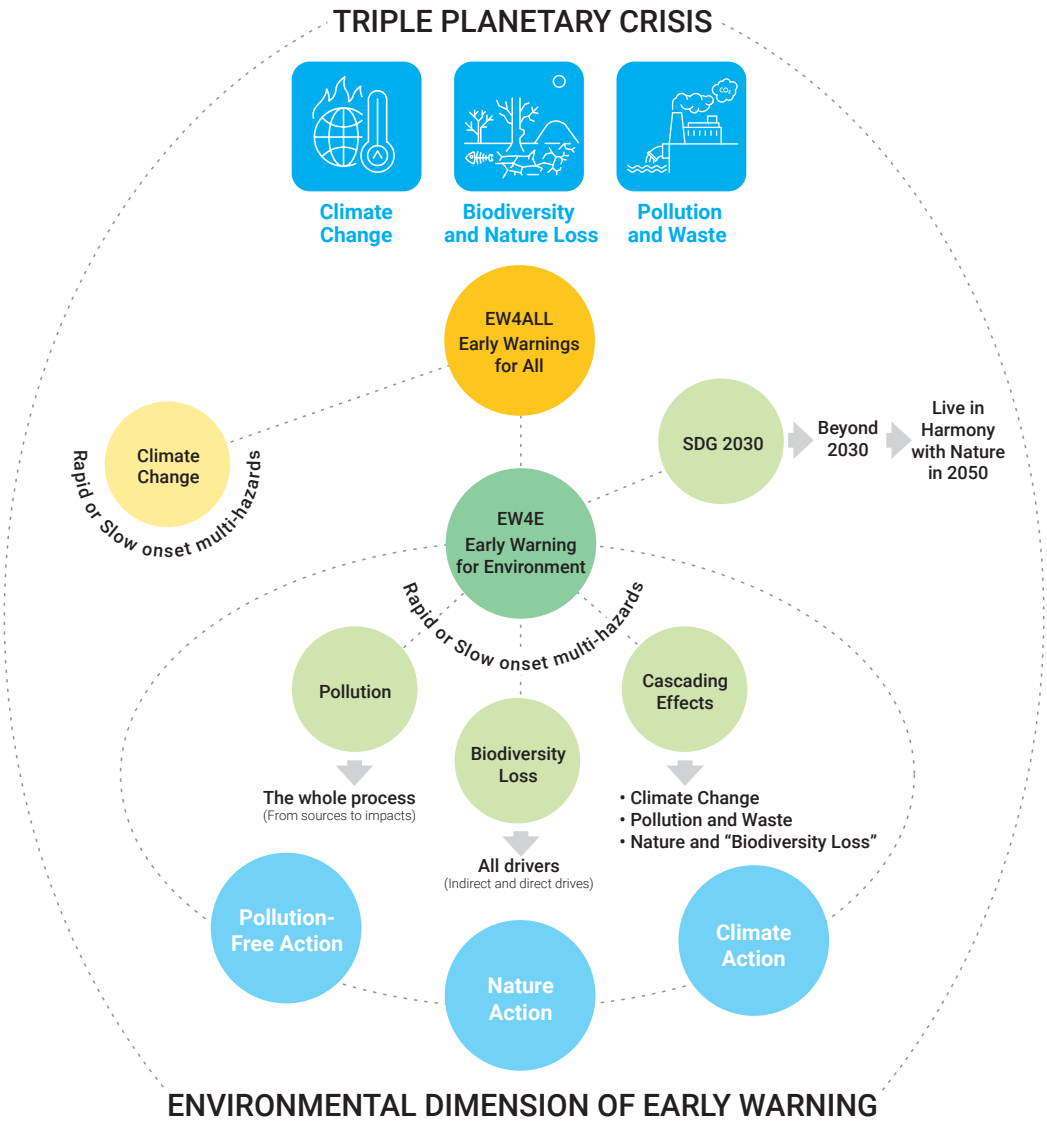
# One UN Common Approach to Early Warning for Environment

## Co-Creation of a Strategy for Early Warning for Environment (EWE)

"The facts are clear. Early warnings save lives and deliver vast financial benefits. I urge all governments, financial institutions and civil society to support this effort." – **António Guterres, UN Secretary-General**

"Nature loss and pollution are often more slow-onset and less visible than climate change, but no less damaging to lives and livelihoods, … that is why you are now tasked with building a strategy for a new dimension to Early Warning for All (EW4ALL) – Early Warning for Environment." – **Inger Andersen, UN Under-Secretary-General, UNEP Executive Director**



## Principles:

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| Demand-driven and country ownership, and sustainable operations at the national level and/or local level. | Priority-setting, developing countries in particular those most vulnerable to triple planetary crises, climate change, pollution and nature loss. | The holistic approach at the national level covers risks of triple planetary crises, climate change, pollution and biodiversity loss, and their cascading effects | One UN Common Approach with a clear division of labour and collaboration, to jointly establish and support National Early Warning Systems to cover risks of climate change, pollution and waste, and nature and biodiversity loss, joint implementation and operation of EW4ALL + EWE at the national level. |

## Scope:

EWE covers risks of Pollution and Waste, Nature and Biodiversity Loss, Cascading risks of triple planetary crises, and their Impacts and Risks on SDGs, with 4 critical Pathways:

- EWE on Pollution and Waste (Upstream & Downstream Pollution--Whole Processes Monitoring/Early Warning from source to impacts, focusing on cities, sectors, river basins:
  - Sources of pollutants from sectors such as construction, transportation, energy, chemicals, agriculture/ aquaculture, food industry, bio-industry, medical, and electronics.
  - Types of pollution of down-stream—air, water (ground/surface), land (farmland, wetland, mountain, pastureland, etc), ocean (coastal/sea), various types of urban waste.
  - Risks of pollution to human beings, the economy and nature's health.
  - A matrix listing the above, linking sources to impacts.

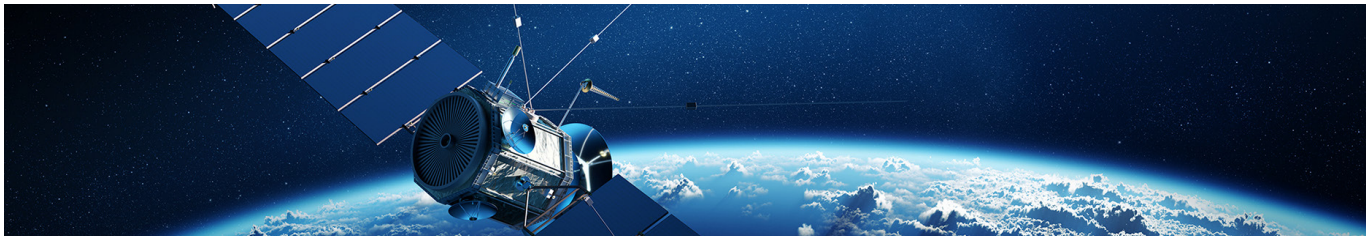
- EWE on Nature and Biodiversity Loss - All major drivers count; focusing on Countries and Sites:
  - Five major drivers of nature loss, land use change, climate change, overexploitation of biological resources, pollution and invasive species.
  - Loss of species and habitats--including deforestation, loss of wetlands, land degradation, forest fire, loss of peat land, melting of frozen ground (cryosphere).
  - Risks and impact of nature/biodiversity loss to human health and livelihoods, ecosystem sustainability

- EWE on Impacts of Climate Change/ Pollution/ Biodiversity Loss and their inter-linkages and cascading risks:
  - Interlinkages between climate change, pollution and biodiversity loss.
  - Cascading risks of impacts.
  - Potential options for solutions to minimize risks of the three crises, source solutions and co-benefits to address these crises.
  - Monitoring of solutions and investment enablers needed to catalyze solutions uptake to ensure translation of early warnings to early actions.

- EWE is critical to meet SDGs 2030 and Living in Harmony with Nature 2050.
  - EWE's direct contributions to SDGs 2, 6, 13, 14, and 15 etc.
  - EWE's indirect contributions to SDGs.

## Mission:

Protect all developing countries with EWE services, and together with EW4ALL, to minimize risks of disasters from the triple planetary crisis.



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## Goals:

**Goal 1**

By 2025 a global hub will have been established, starting to provide data (e.g. GEO-Spatial), methods, tools, and standard services to regional and national operations, with several countries piloting National Early Warning Systems (NEWS).

**Goal 2**

By 2027 all regional supporting hubs will have been established, and fully functional to support the establishment and operation of national EWE services, with more NEWS established and in operation in more countries in the development stage.

**Goal 3**

By 2027 a global-regional-pilot national network of early warning systems will have been established as the basis of a future structured global system.

**Goal 4**

By 2030 at least half of developing countries will be provided EWE services before 2030; and, by 2035, all developing countries will be provided EWE services, supported by regional and global hubs.

**Digital Infrastructure Architecture**

Digital Infrastructure to deliver EW services shall be a system that would include a global hub, and regional and thematic hubs that would be able to support the establishment and operation of National EW Systems. Hence, National EWS shall be centred in the infrastructure portfolio, through which sub-national, city and even community EWS can be further developed and supported, by applying advanced technologies, such as AI and ML.

UN agencies over the last decades have been developing different data platforms and providing early warning services to different extents, mostly ad hoc and sectoral, but able to support their respective country programmes. Nonetheless, these are good bases on which we develop corporate global and national platforms as consolidated EWS to deliver EW Services on risks of pollution, climate change and nature loss.

**How member states could support Early Warning for Environment?**

The role of member states -Policymakers play a crucial role in ensuring environmental early warning services are established and sustained. Policymakers at the national level must be armed with essential elements to establish and sustain an Early Warning for Environment system.

**In general, policymakers must consider five enabling conditions for the establishment and sustainability of a National Early Warning for Environmental System.**

1. **Awareness and demand:** both the policy/decision-makers and the public must be aware of the risks of pollution and nature loss and feel the urgent and strong need to have a national EWE system in place to provide alerts and to help governments and communities prepare.

2. **Policy and legislation:** the government must have a preferential policy to plan and invest as a priority, or in the case of LDCs they must request development partners to prioritise investment in Early warning for Environment. In some countries, there also needs to be legislation in place to ensure long-term investment.

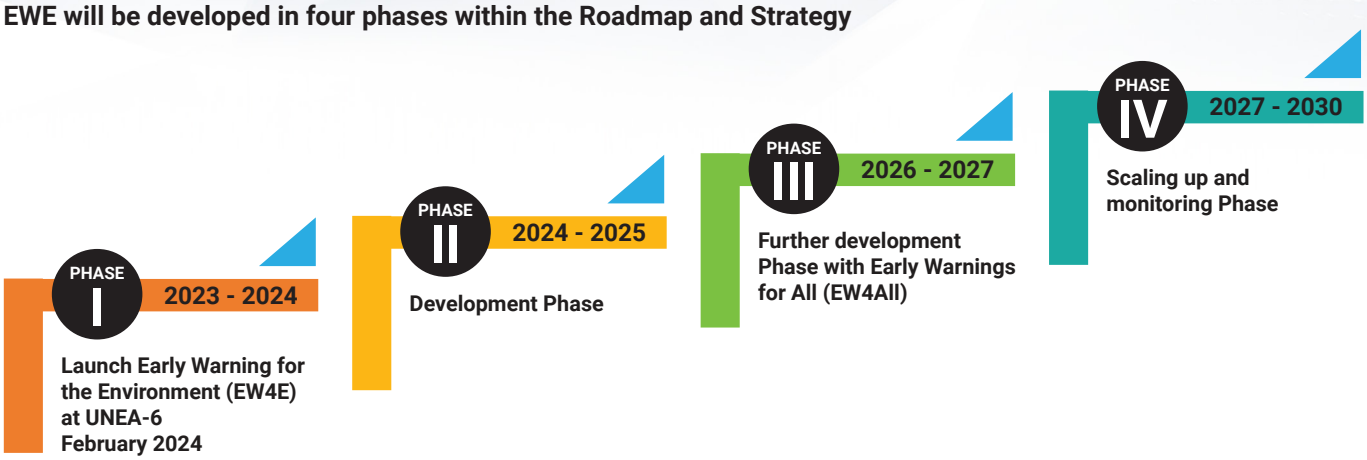
3. **Institutional capacities:** this is critical whether there is adequate capacity of relevant institutions at national or even local levels to be able to operate the system and deliver services to government and communities, for example, ministries of environment and their affiliated institutions such as relevant research institutes.

4. **Technology and infrastructure:** we are in the digital age, and technology is not necessarily the constraint. Still, infrastructure must be available, such as constant and adequate power supply, and at least 4G networks. For many LDCs, this could be an additional investment.

5. **Finance conditions:** for many low-income countries, financial support for the establishment of an EWE system could be provided through international cooperation, and even operational costs could be covered by development

partners, but for long-term operation and sustainability, including upgrading the technical system for low-income countries could be a challenge until the governments' priorities investment to ensure the operation of these systems are adequately funded given the cost-effectiveness of such systems in reducing risks for lives and properties in case of disasters.

**EWE will be developed in four phases within the Roadmap and Strategy**




**Example of Priority area on EW on Air Pollution- Budget and Finance:**

**Phase I: 2024-2030**

2024-2025: 15 countries - Pilot phase $7.5 million
2026-2027: 30 countries- Implementation $15 million
2028-2029: 75 countries - Implementation $37.5 million
2030: Conclusion phase to plan for the next phase $40 million

**Phase 2: Maintains phase I results 2031-2035**

**Every year, $ 100K for maintenance/operations**
**$100 million for 100 countries**
**Global and regional supporting hubs**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Contact: alexandre.caldas@un.org

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