CITIZEN SCIENCE GLOBAL PARTNERSHIP

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Air Quality for Everyone Everywhere

Enhancing citizen science initiatives for air quality monitoring worldwide

The Citizen Science and Air Quality Community of Practice (CSAQ) is dedicated to strengthening cooperation among organisations and individuals working with citizen science and air quality.

PURPOSE

In 36% of countries, there is no open-air quality data, leaving 838 million people unprotected and limiting accountability, health protection, and policy action. Citizen science can close this gap by generating open data, building knowledge, and driving action to protect the environment.

CSAQ will help countries close critical air quality data gaps and translate local evidence into policy. Its goal is to enhance citizen science initiatives for air quality monitoring worldwide and to consolidate the use of citizen science data in support of clean air and public health policies.

airgradient · EPIC · earthwatch · nilu · openaq · teach STEM · CODATA · CitiObs

VISION AND UNEA ALIGNMENT

CSAQ will create and expand a global, open network of citizen-science air-quality observatories, especially in low- and middle-income countries—and connect their data to national and global platforms. This will accelerate research and enable evidence-based policies that reduce premature deaths from air pollution.

At **UNEA-7,** CSAQ delivers a concrete **three-year plan** that advances UNEA-7's theme on a resilient planet, supports UNEA mandates on reducing air pollution, and can act as an implementation partner to the **Global Air Quality Cooperation Network** by bringing standardized, community-generated air-quality data into global cooperation.

OBJECTIVES (BY 2029)

1. DATA COVERAGE
Provide a starter pack for monitoring air quality to at least 15 disadvantaged communities; deploying over 500 low-cost sensors.

2. CAPACITY BUILDING
Train 10,000 citizen scientists, educators, and officials on citizen science for air quality; publish open training packs and establish regional hubs.

3. DATA PRESERVATION, ACCESS AND TRUST
Publish and implement FAIR-by-design governance frameworks, open data validation standards and metadata/provenance schema; integrate the data in existing global platforms and dashboards (using solutions as Open-AQ) to ensure sustainability of the resources.

4. POLICY UPTAKE
Inform ≥30 policy decisions (urban mobility, burning controls, school exposure, industrial enforcement).

15 disadvantaged communities

500 low-cost sensors

10,000 trained citizen scientists

30 informed policy decisions

CSAQ OFFERS

A **Starter Pack** that enables communities, civic organizations, and public authorities to launch and sustain citizen-science air-quality observatories. The Starter Pack consolidates best practices and technologies from global partners. The monitoring infrastructure is locally embedded and co-designed to respect community priorities, culture, and objectives.

- **Air Quality monitoring sensors:** open hardware affordable devices (~€200 per unit). AirGradient.com *Buy One, We Gift One* campaign.
- **Visualisation dashboards**: data is integrated with the global platform OpenAQ.org.
- **Community peer-learning and capacity building**: access to toolkits (CitiObs Knowledge Platform) and a growing network (mailing list, newsletter, meetings and forums).
- **Standards & governance**: support to validate data with a scalable framework for harmonizing, standardizing, and correcting crowd-sourced sensors, and meet FAIR and UNESCO Open Science principles (aligned with CODATA).

PARTNERSHIP OPPORTUNITIES

Initiatives and Communities

- Support in monitoring air quality using sensing devices
- Support in using the data to advocate for policy changes
- Possibility to integrate your data into global platforms aligned with UNESCO Open Science

Scientific and Environmental Institutions

- Peer-learning and knowledge exchange with international institutions
- Participation in the development of standard and harmonized methodologies

Member States, authorities and agencies

- Access to granular data to complement reference monitoring
- Support on integrating citizen science data into clean air strategies

Funders and Philantropic Organisations

- Investing in scaling of cost-effective initiatives with clear policy relevance

MILESTONES

UNEA-7 (Dec 2025)
Open Call for Expressions of Interest for joining CSAQ.

Q1–Q2 2026
Convene meetings with CSAQ partners.

Consolidate worldwide regional hubs.

Q3–Q4 2026
Publish the Starter Pack for citizen-science air quality observatories.

On-bard 15+ communities; co-create local workplans and training curricula.

2027-2028
Deploy sensor networks and integrate the data in global platforms.

Inform policy decisions (e.g., school exposure, waste-burning controls, wild fire detection systems).

2029
Publish three-year impact report and propose phase-2 expansion.

Publish policy impact stories and research outputs.

Join the Air Quality CoP (Scan the QR code)
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