Life-Nitrazens

Promoting better nitrate management through citizen participation

PROTOCOL

Citizen Science

Co-funded by the European Union

Project	LIFE NITRAZENS (101215633) Driving better nitrate management with citizen participation
Funding Programme	EU LIFE Programme
Document title	Citizen Science Strategy and protocols for the participatory monitoring of nitrates in water.
Study areas	Ebro and Duero river basins in Spain and Mondego in Portugal.
Coordinating entity	University of Burgos
Partners	University of Burgos CITA-Aragón Castile and León Natural Heritage Foundation Innovalia Osoigo Ibercivis Foundation Irrigation in Upper Aragon University of Coimbra Aguas Do Centro Litoral Municipality of Soure Association of beneficiaries of the Baixo Mondego
Official Website	https://life-nitrazens.eu/
Contact	life-nitrazens@ibercivis.es
Publication date	April 2026

Prologue

Water and associated ecosystems are highly vulnerable to nitrate pollution. In regions closely linked to agriculture and livestock farming, such as the Duero, Ebro and Mondego river basins, nitrate management is both a technical and a legal challenge. But it is also a challenge in terms of social cohesion, public health and environmental sustainability.

Life-Nitrazens was founded on the conviction that the complexity of nitrate pollution requires shared governance, where the rigour of science is informed by the knowledge and commitment of the public and the institutions responsible for its management.

This document you hold in your hands is the result of that partnership. The Citizen Science Strategy and Protocol for the Participatory Monitoring of Nitrates in Water lays the foundations for the design of a Local Support Network capable of generating scientific knowledge on the presence and concentration of nitrates in surface and groundwater and complementing official systems where they fall short. Through the citizen science protocols set out in this strategy, we transform public concern into reliable, transparent and useful data for governance in the management of this issue.

We would like to express our deepest gratitude to the Ambassadors, the local nodes and every volunteer participant for their generosity and commitment. Thanks to their efforts, and with the support of the European Union's LIFE programme, we are building a collective tool to improve the management and protection of water.

We invite you to join and become part of this journey.

Life-Nitrazens Team

Index

03 Travel guide. How do we move to action?

04 Annexes

Introduction: The nitrate challenge

01

What are nitrates and why are they necessary?

Nitrates (NO^-_3) are essential components of the natural nitrogen cycle. They are found naturally in soils, surface water and groundwater, and are one of the main forms in which nitrogen is taken up by plants for their growth and incorporated into other living organisms through the food web.

In natural ecosystems, soil and water microorganisms play a key role in the nitrogen cycle through processes such as nitrification and denitrification, which regulate the transformation of nitrogen between its different chemical forms (N2, ammonium, nitrates, nitrites, organic matter...). Thanks to these processes, nitrates are usually present in concentrations that are not harmful to ecosystems or to human health.

The problem: the broken balance

The problem arises when this natural balance breaks and an excess of nitrogen is produced in the environment, mainly as a consequence of human activities. This excess nitrogen, originating, for example from the intensive use of nitrogen fertilisers in agriculture, alongside intensive livestock farming or the inadequate management of slurry and manure, is largely converted into nitrates, which are highly soluble and mobile, seeping into groundwater or ending up in rivers and lakes.

When nitrate inputs exceed the the ecosystems' capacity to assimilate them, and their concentration rises above certain levels, this is referred to as nitrate pollution. Its effects on ecosystems and human health can be multifaceted and serious.

Some examples to highlight:

- **Environmental impact.**

In surface waters, excessive levels of nitrates can contribute to eutrophication, a process characterised by the excessive growth of algae and aquatic plants. This phenomenon reduces the amount of light reaching the water, lowers dissolved oxygen levels and leads to the deterioration of aquatic ecosystems.

- **Impact on human health.**

High concentrations of nitrates in drinking water can pose health risks after they are converted into nitrites in the body, leading to serious illnesses such as methaemoglobinaemia and an increased risk of certain types of cancer, such as colorectal and prostate cancer.

The *"gap"* in information

To protect water bodies from pollution caused by nitrates of agricultural origin, Europe has the Nitrates Directive (91/676/EEC). This directive requires Member States to identify Areas Vulnerable to Nitrate Pollution, and to implement water quality monitoring and action programmes aimed at reducing pollution. In Spain and Portugal, this directive is implemented through national and regional legislation in the form of regulations and management plans.

However, despite awareness of the problem and the existence of a legal framework, the available data show that the average nitrate concentration in many groundwater bodies across the EU remains high, or has not improved significantly in recent years. Furthermore, there remains a significant lack of information on actual nitrate concentrations, particularly in groundwater. This shortfall is exacerbated by structural limitations in the monitoring system: when a watercourse is not classified as a body of water, the Water Framework Directive does not require it to be monitored by the River Basin Authorities. In such cases, and apart from isolated initiatives by some autonomous communities, monitoring is usually limited to municipal health checks on drinking water supplies.

This situation leads to significant gaps in monitoring of small bodies of water, private water catchments and rural areas, posing a potential risk to the population and to ecosystems.

Consequently, the true extent of the problem may be underestimated, as not all potentially contaminated areas are properly monitored or included in official monitoring systems.

What does the Life-Nitrazens citizen science and governance project contribute?

Given this context, the Life-Nitrazens project proposes an innovative and integrated approach to generate information and improve the governance of this problem in the Duero and Ebro basins (in Spain) and Mondego in Portugal. Its lines of action include:

1.

Awareness:

Awareness and outreach activities directed at citizens and the sectors involved, to increase knowledge about nitrate contamination, its causes and its consequences.

2.

Good Practices:

Behavioural change initiatives, aimed at promoting compliance with environmental legislation and the adoption of Good Management Practices, especially in the use of nitrogen fertilisers.

3.

Data Platform:

Creation of a Data Exchange Platform for Nitrate Governance, which will bring together information from public authorities, the scientific community, the agricultural sector and the general public, amongst others, acting as a centralised repository to support and facilitate decision-making and the development and implementation of policies at regional, national and European level.

4.

Citizen Science:

Gathering new data on nitrate concentrations in surface and groundwater, using participatory citizen science methodologies, with the aim of helping to build knowledge about the true extent of the problem by increasing the monitoring of water areas and points.

About this document

To respond to the challenge of participatory monitoring (objective IV), Life-Nitrazens has designed a strategy that balances scientific rigour with an accessible and simple participatory methodology.
The following sections detail the roadmap of this citizen science strategy: from the creation of the Local Support Network to the publication of validated results. This manual serves as a guide so that each participant knows how to transform their commitment into scientific knowledge for good governance.

At a glance, roadmap

02

As you can see in this roadmap, the citizen science strategy is divided into five stages.

Phase I builds our community, while Phases II to V form the cycle that we will repeat in each mini-campaign.

Below, we detail step by step each of these phases so that you know exactly what to expect.

Entry of participants →

Structural stage

PHASE I: Constitution of the support network

- Ambassadors and nodes.
- Meeting and training for ambassadors.
- Creation of participant group community.

Ambassadors Nodes Participants

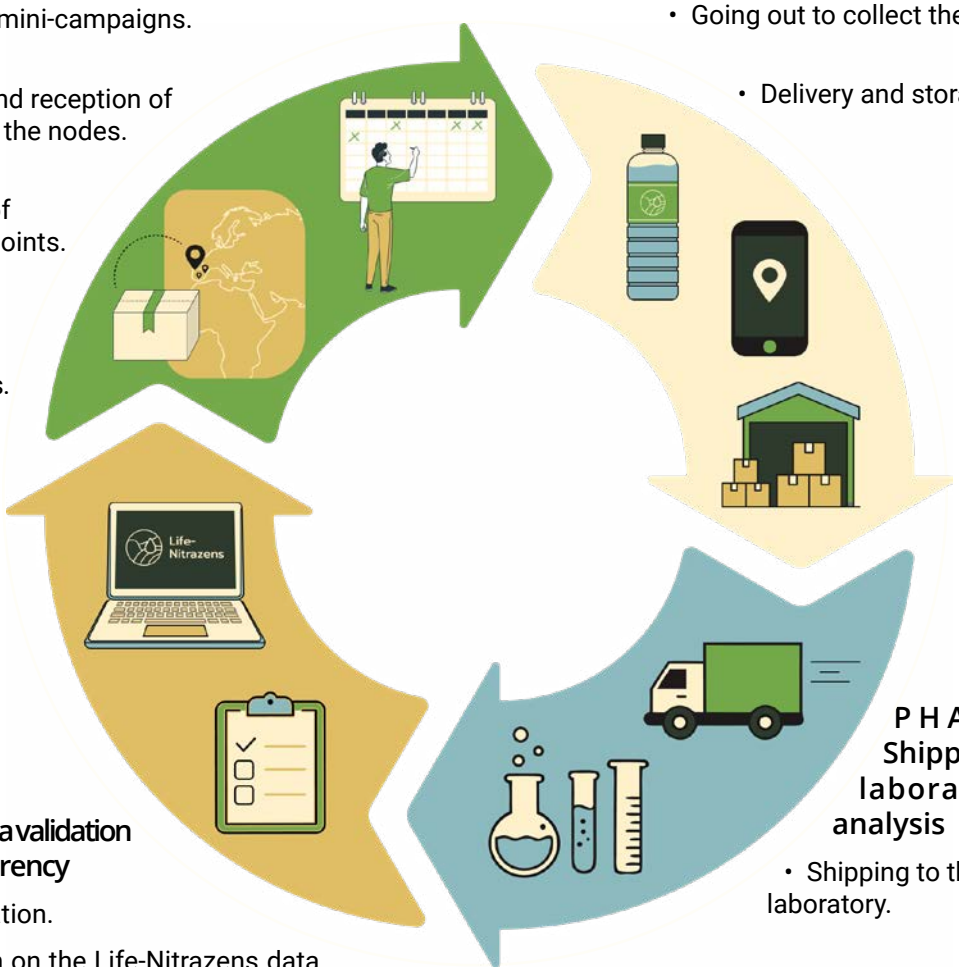
Operational cycle: the mini-campaign

PHASE II: Preparation of the sampling campaigns

- Define the mini-campaigns.
- Shipping and reception of material at the nodes.
- Selection of sampling points.
- Delivery of material to participants.

PHASE III: Sampling

- Going out to collect the water.
- Delivery and storage.



PHASE IV: Shipping to the laboratory and analysis

- Shipping to the laboratory.
- Analysis of the collected samples.

PHASE V: Data validation and transparency

- Data validation.
- Publication on the Life-Nitrazens data Platform.

Travel guide. How do we take action?

03

Obtaining the nitrate concentration data in the surface and groundwater of the Life-Nitrazens project requires the collaboration and coordination of the key actors in the sample collection process: the coordinating, technical and research team of the project and citizens in the form of ambassadors, nodes and participants. Here we explain, step by step, how the different stages of the process unfold and the role each of us plays.

PHASE I:

Definition and protocol for the creation of the local support network: Ambassadors, Nodes and Participants.

To ensure that Life-Nitrazens reaches every corner, we have a Local Support Network comprising:

Nodes

It is the physical meeting point:

They must be located in the study areas of the Life-Nitrazens project (see here). It can be your association, a civic centre or a town council. We only need it to be an accessible place where participants can deliver their samples and store them until collection.

Ideally the space should have a conventional refrigerator (to keep the samples between 2-8°C for a few days); if you do not have one, do not worry: we'll work together to find the best solution so that you can become a node too.

Node Manager

Logistical facilitator:

"The host". These are entities (such as town councils, civic centres, etc.) that are in charge of managing the Node. They offer an accessible place for material delivery, sample collection and storage. It is a passive but fundamental role. The person/entity that facilitates the Node gives access to the space although it does not imply direct social mobilisation. The Ambassador is responsible for the day-to-day logistics and for interacting with participants.

Ambassador

Mobiliser:

"The social engine", ideal for people or entities that want to encourage their members and/or community to participate, but do not have a physical premises. Your main task is to inspire and guide the participants in their community, using a nearby Node for the logistics of the samples.

Ambassador with Node

Integrated role (mobilisation + logistics)

These are people or entities that combine the functions of Ambassador and Node Manager. In addition to mobilising participation in their community, they directly manage a physical Node, facilitating both the mobilisation of participants and the logistics of collection, delivery and storage of samples.

This role implies a higher level of involvement, as it integrates both the social and operational dimension of the project in the same actor.

Participants

These are the citizens who, voluntarily and proactively, sign up to carry out sampling at points in the territory.

The Local Support Network is formed on the basis of expressions of interest, but also in accordance with technical and scientific criteria.

Your main functions according to your collaboration role:

Depending on the chosen modality, these will be the main tasks in which you will have our constant support:

If you are an ambassador

(Mobilisation or Integral Management). Your role is that of social engine:

- **Inspire and connect**: help us encourage other people in the area to take part in the sample collection. You will be the voice of Life-Nitrazens in your community.
- **Learn and share**: attend the training sessions organised as part of the project to learn about the nitrate problem and the methodology and objectives of the project we are involved in.
- **Guide**: you will act as the direct point of contact for participants in your area through a project communication channel (WhatsApp Community). You can give them some key guidelines (when they can collect the material and take the samples to the collection point once they've been collected) to ensure everything runs smoothly..

If you manage a node

(Logistical facilitator or Integral Management): you are a physical reference point and will provide support:

- To give way: allow it to be the place where participants collect their kits and deliver their samples.
- To safeguard: Provide a space (and if possible, a refrigerator) where participants can leave their samples safely.
- Facilitate the collection: Be available (or have someone from the entity available) for when the project's courier service comes to collect the accumulated samples to take them to the laboratory.

If you are a participant

Your role is fundamental, since:

- They are responsible for applying the sampling methodology at the chosen water points.
- Record the information in the App and collect the water sample.
- Ensure that the sample reaches the Node in optimal conditions.

Recognition and support:

Regardless of the chosen modality, all figures will receive training and support from the Life-Nitrazens team. In recognition of your commitment, we will highlight your work (or that of your organisation) on our official website, giving you visibility as a key player in the Life-Nitrazens project, subject to your consent.

Network formation protocol

1.

Ambassadors - Nodes

The first step is to create the network of ambassadors and nodes.

The coordinating team identifies and contacts entities that have the potential to be key pieces of the network. However, the project is open to all citizens and entities that wish to join proactively.

Regardless of the initial method of contact, in order to formalise participation and ensure the correct logistical management, it is essential to complete the registration through the registration form on our website.

What happens when you register?

In the registration form we will ask you for the basic details so that we can get in touch with you, send you the material and coordinate the sampling and logistics of the collected water samples.

We will invite you to join our WhatsApp Community channel so that you are up to date with everything and we can communicate in a direct and simple way.

Resolution of doubts:

If as an ambassador, Node manager or ambassador with Node and you have any doubt you can consult our Frequently Asked Questions section (FAQ.) or write to us at the website contact email **life-nitrazens@ibercivis.es**. Once registered, you can use the WhatsApp Community channel for day-to-day queries.

2.

Activation and Training (The "Launch")

Meeting and training for ambassadors and node managers.

This step is prior to the recruitment of volunteers. Ambassadors and node managers must know the project thoroughly before receiving participants.

At the beginning of each campaign (during the first month), we will organise a hybrid meeting session (in-person and online).

The objective is to get to know each other, explain the methodology, the

logistics and resolve doubts.

In addition to this initial session, the coordinating team will be available for online support meetings whenever the ambassador and node managers need it.

3.

Incorporation of participants into the Network.

Creation of participant groups by the ambassadors.

Once the ambassadors have been trained and are ready to lead, the process of recruiting citizens begins.

Each ambassador will be able to make a call for participation in the project according to their reach (members of their entity, social networks, etc.).

Life-Nitrazens Support: Dissemination and Training

We will provide you with outreach material and support so that dissemination is simple and effective.

Furthermore, so that your work as an ambassador is as light as possible, the Life-Nitrazens team provides training materials (quick guides, tutorial videos and App manuals). Thus, you will not have to explain the technical methodology from scratch; your role will be to accompany and mobilise.

Management of participant registrations:

Interested citizens will register via the web form. The coordinating team with the received requests will be responsible for assigning the participant to their area, incorporating them into the project's WhatsApp community and the corresponding ambassador channel.

Ambassador. Your role in the channel:

As an ambassador, you'll simply need to use this space to engage with people, let them know about available materials, remind them of dates or answer quick queries. There's no need for you to manage personal data or carry out manual registrations.

Once the Network is formed and the channels established, we move to the operational sampling phase described below.

Is it a closed network?

Absolutely not! Although **Phase I** marks the beginning of the network, Life-Nitrazens is a living project.

- **New participants:** They can join at any time. If someone wants to participate in Mini-campaign 2 even though they were not in campaign 1, they just have to register through the form.

- **New Nodes or Ambassadors:** If new node managers/ambassadors join, we punctually activate Phase I to train and equip them, quickly integrating them into the cycle of the following mini-campaigns.

PHASE II:

Definition and protocol for the preparation of the sampling campaigns.

The sampling campaigns have a total duration of five months. Three major campaigns are planned on the following dates:

Campaign 1: April – August 2026

Campaign 2: October 2026 – February 2027

Campaign 3: April – August 2027

Each campaign follows a structured process to ensure the accuracy of the data and a positive experience for participants. Throughout this process the coordination between ambassadors, node managers, participants and the general project team is fundamental to be able to successfully carry out the sampling campaigns.

Below, each stage of the sampling campaign and the methodology to follow is described.

1.

Definition of the mini-campaigns

Within the 5 months of each campaign, we will organise time-limited sampling sessions or mini-campaigns.

What is a mini-campaign?

It is a short period (for example, two days or a week) where the delivery of material, the collection of water samples, their reception and storage at the node and shipping to the laboratory are concentrated.

Why do we do it this way?

To respect your time: It avoids the ambassador or the node having to be permanently available for months. The activity is concentrated in "windows" of a few days that we agree together.

For scientific rigour: we avoid samples spending too much time stored, ensuring they reach the laboratory in optimal conditions.

For sustainability: we maximise the efficiency of transport and avoid the saturation of the laboratory.

Flexibility:

Each ambassador will define the number and duration of their mini-campaign (or more than one) in coordination with the Life-Nitrazens team, taking into account:

- Availability of the ambassador and the node for the reception of samples.
- Number of participants or expected samples, taking into account the storage capacity at the node and the capacity of the corresponding laboratory for the analysis of the samples

Each mini-campaign is a complete journey through Phases II, III, IV and V of our framework. It is a concentrated effort to obtain quality data at a specific moment in the year.

2.

Shipping and reception of material at the nodes.

To ensure the mini-campaign is a success, the Life-Nitrazens team will coordinate the dispatch of two types of materials to each checkpoint.

What does the node receive?

- Sampling kits for participants.
- Logistics and shipping kit. Items required for sending samples to the laboratory: polystyrene (white foam) insulated containers and ice packs (gels) to maintain a stable temperature.
- Control log sheet so that ambassadors can record the entry of samples.

When is it received?

The shipment is received with sufficient advance notice before the start of the agreed mini-campaign.

Responsibility of the node

Node and ambassador must be coordinated to be able to receive the material when it arrives and place it ready for the moment when distribution of the material to participants begins.

3.

Selection of sampling points.

You choose where to contribute.

In Life-Nitrazens, you decide where you want to focus. Are you curious about the water in your well, the fountain in your square or the river that passes through your village? That is the best place to start!

Where can I take the sample?

The water sources from which samples can be taken range widely, from natural surface waters such as rivers, lakes and reservoirs, to groundwater such as that obtained from wells or springs. Water can be collected from the mains supply, from a tap at home, from a village fountain, or from points associated with irrigation channels, drains or other sources.

You just have to identify the type of water. You can consult it on our website or in the App guide.

Three golden rules for happy sampling

1. Your safety comes first: never take a sample if the access is dangerous, slippery or in an unstable area. If you cannot get there easily, it is better to look for another point.
2. Make sure the point is publicly accessible. If it is a private well or a closed property, ask the owner for permission first. Citizen science is above all a network of good neighbourliness.
3. We will not take samples directly from industrial discharges or from sewage treatment plant pipes.

Decisions of the scientific team:

Sometimes, in order to have a "complete" picture of an area, we may suggest some strategic points that we may be missing to cover and be able to map those empty areas.

4.

Material delivery. Your citizen scientist kit.

Your ambassador will deliver the material to you on the agreed dates depending on the water samples you have planned to collect from different places.

What does your participant kit include?

- Collection bottle (50ml): a new polyethylene bottle with hermetic closure for each water point you want to analyse. Samples can only be collected and sent in the specific bottles of the Life-Nitrazens project

- High-resistance labels to identify your sample. Each one carries a unique code to ensure that your data are never lost.

- Access to the Life-Nitrazens App: Your digital tool to record the sampling point, upload photos and consult your results.

- Insulated bag. A small bag designed to keep the temperature of the sample protected from the moment of collection until you deliver it at the node.

Everything at hand: in addition to the physical material, you will always have at your disposal in the App and the Life-Nitrazens website all the help infographics, tutorial videos and step-by-step guides.

PHASE III:

Definition and protocol for sampling (we collect the water samples).

The day has finally come to go out and collect your water sample! To ensure your sample provides reliable scientific data, follow this protocol. Don't worry, it's easier than it looks!

1.

Before leaving home.

Check that you have your kit (bottle, label, bag) and that the Life-Nitrazens App is ready on your mobile (see installation and use manual).

2.

When you are already in front of the water. The digital record.

When you are already in front of the water you want to collect, before opening the bottle, fill in the data requested by the app.

a. Record the Location. When you are already at your sampling point, open the App and press the location button.

i. Privacy: If your water point is from a private place (tap of a house, private well) the project App is specific for these points, the location will not show your exact point, but a general area to protect your privacy.

ii. No coverage? Do not worry. The App will save the data and send them when you have internet again.

a. Fill in the rest of the fields in the App (see the app guide). Record the information of your sample in the App while you are at the water point (it takes a moment).

i. Important: for the laboratory to be able to analyse your water, we need the data to be uploaded. Without the App record, the sample cannot be processed.

3.

Collection of the water sample:

The moment has arrived! For your sample to be representative and useful, follow these steps:

a. Where do I get the water from? It is important to be able to determine the point at which the sample will be most representative of the water to be analysed. Some examples:

• In rivers and channels: where the water flows, somewhat away from the banks if we see that there is dirt.

• In standing water: introduce the bottle where you can see the greatest depth.

• In water sources: choose the spout that has the most force or flow.

• In wells: let a pumping time elapse to purge the pipe.

b. Prepare the bottle (the triple rinse): before the definitive sample, "clean" the bottle with its own water in the following order:

• Fill the bottle halfway.
• Close it and shake it well.
• Empty the water.

Repeat this 3 times.

c. Definitive collection, no bubbles! We want only water, no air so that the results are not altered.

• Fill the bottle until it overflows.

• Close it while the water overflows.

• Trick: If bubbles remain, give the bottle a few taps or submerge it open and close it under the water.

d. On the way to the node. Protection. Slowly but surely. Once the sample is collected we must deliver it to the node.

• Dry the bottle, make sure it has its label.

• Cold chain: store the bottle in the insulated bag. Beware of heat, keep the bag away from the sun, the car heating or heat sources. Your sample prefers the cool!

• Clock running: you have a maximum of 2-3 hours to take it to the node's refrigerator.

e. Reception at the node (instructions for the ambassador). Once the participant arrives at the node, the ambassador carries out the "handover" of the custody of the sample following these steps:

• Identify: ask the participant for the sample. Take the bottle out of the thermal bag. Look at the code on the label.

• Record in the paper log sheet:

a. Bottle code.
b. Date and time of arrival.
c. Refrigerator check. Mark "Yes" when the bottle is stored in the refrigerator.
d. Insulated bag check. Mark "Yes" when the bag is in condition to be reused for another kit.
e. Observations or incidents (for example, if the bottle was badly closed, without a label etc.).

• Cold custody: keep the bottle in the refrigerator (between 2-8°C, ideally 4°C).

• At the end of the collection day or when the fridge reaches its capacity, the Ambassador will share a photo of the log sheet in the ambassadors' WhatsApp channel. This will serve as a pre-warning for the collection logistics and as a backup copy of the data.

Any questions?

Write to us through the WhatsApp group and the Life-Nitrazens Team will respond immediately.

PHASE IV:

Logistics protocol for shipping and laboratory

Once the mini-campaign is finished and with the samples stored in the refrigerator, the Life-Nitrazens team activates the transport logistics towards the analysis centres:

1.

Preparation of the shipment (Node Manager/ambassador responsibility).

It is the moment to prepare the box for shipping.

• Coordination of the ambassador (or the node manager, if applicable) with the project team to define the date, time and place of collection of the samples, with the Life-Nitrazens coordination team being responsible for contact with the transport company.

• Preparation of the shipment: prepare the box for sending. Important note: the box must be ready for when the company arrives, but should not be prepared too far in advance in order to make better use of the cooling time of the gels.

• Verification and registration: verify the code of the samples introduced into the box and record it in the paper log sheet.

• Once noted, the paper log sheet (of which a photo will already have been sent by WhatsApp as a backup copy) will be placed inside the shipping box protected in a plastic sleeve to prevent it from deteriorating with the moisture of the cold gels or the samples.

• Labelling: the box must be correctly labelled in accordance with the shipping codes of the transport company.

2.

Laboratory analysis.

To close the process, the determination of the nitrate concentration will be carried out in technical laboratories of the entities that form part of the project coordination:

• Duero basin: University of Burgos

• Ebro basin: CITA – Aragón

• Mondego river basin (Portugal): University of Coimbra and Aguas do Douro

Note:

The internal technical procedures of the laboratories are governed by their own analytical quality manual, independent of this participation strategy.

PHASE V:

Data validation system, transparency and governance.

Data validation

The data obtained from laboratory analyses are not published automatically; they go through a quality control process.

• The contrasting process: the laboratory results will be contrasted with the information provided by the participants in the Life-Nitrazens App and with the monitoring sheet (log sheet) collected by the ambassadors at the nodes.

• Quality assurance: this cross-referencing of data allows us to verify that the sample was taken, delivered and stored correctly. This validation system allows the nitrate data incorporated into the Life-Nitrazens Data Exchange Platform to be reliable.

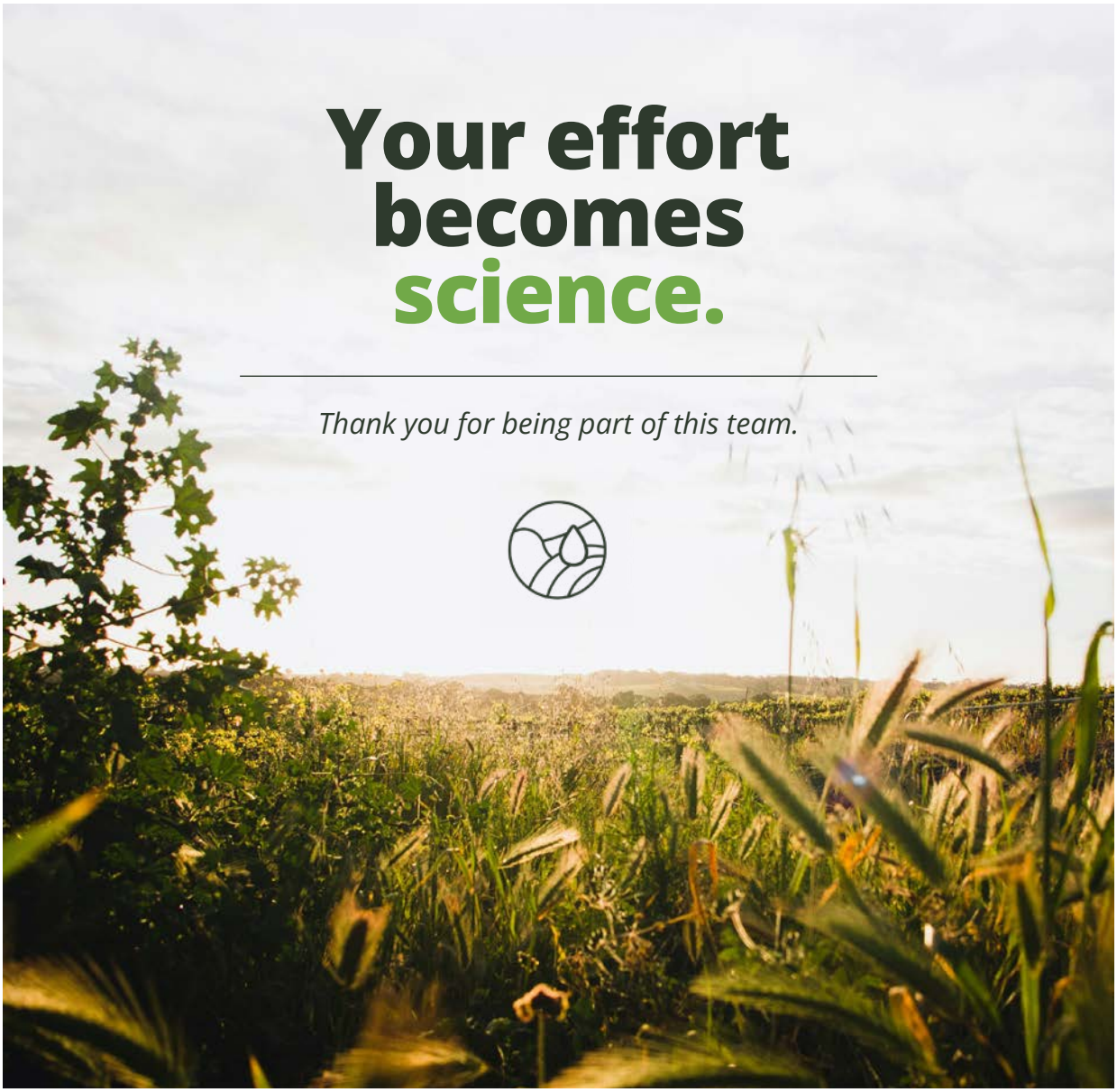
• Access to results: once validated, the data will be available for viewing and downloading on the project platform.

Transparency and governance:

By integrating the validated results into the Data Exchange Platform, the project adheres to the principles of Open Science, enabling any organisation or member of the public to access the information transparently. The aim is thus to contribute to and serve as a governance tool for public authorities and water managers, by helping them to identify areas for action.

How is this process repeated?

While **Phase I** (The Network) is the permanent basis of the project, **Phases II to V** are activated cyclically. Each time we initiate a mini-campaign, we travel the path again: we prepare the material, go out into the field, send to the laboratory and publish the results...



Appendices

04

Appendix I: QUICK GUIDE FOR THE PARTICIPANT

Thank you for joining Life-Nitrazens! Your involvement is key to finding out whether our water bodies are affected by excessive nitrate levels. Follow this guide to successfully take part in the Life-Nitrazens nitrate monitoring network.

PHASE I

Establishment of the Local Support Network

Before starting: registration

1 *Official Form*

The first step is to register through our web form. It is essential in order to assign you an ambassador and a reference node.

2 *WhatsApp Community*

Once registered, you will be added to the channel for your area. There you will receive the notices and information: date of material delivery and of the mini-campaigns and we will resolve your doubts in the WhatsApp channel or through **life-nitrazens@ibercivis.es**

PHASE II.

Pre-sampling in the mini-campaigns

Before going out to collect the water

1 *Material collection*

Go to your node on the indicated day to collect your kit.

2 *Planning*

Choose your water point and make sure it is safe and you have permission. Avoid collecting from effluents of treatment plants or industries.

3 *Geonity App*

Download it on your mobile. It is the tool that links your sample with the project map.

PHASE III.

Establishment of the Local Support Network

Before starting: registration

1 *Representative zone of my water point:*

I collect the water at the point where the sample will be most representative (rivers and channels where the water flows, in standing water at the deepest zone, in wells let a pumping time elapse to purge the pipe and springs where the water has the most force or flow).

2 *Digital record*

Before taking the sample, open the Geonity App at the same place of collection to record the exact location and fill in the fields that the application asks you for with the information.

3 *Triple rinse*

Fill the bottle a little with the water you are going to sample, shake it and empty it. Repeat this three times.

4 *Definitive collection, no bubbles!*

Fill the bottle to the brim, trying to avoid air bubbles when closing the cap.

5 *Protection and cold*

Store the sample in the insulated bag, away from heat sources or direct sunlight.

6 *Entrega ao Nodo*

Deliver the sample to the node within 3 hours of collecting the sample. Time is crucial to ensure that the nitrates remain stable.

Appendix II: QUICK GUIDE FOR AMBASSADORS/AS AND NODE MANAGERS

As an ambassador/a and/or node manager your mission is to facilitate coordination and mobilisation. Here is your roadmap:

PHASE I. Creation of the Local Support Network

1 *Registration and training*

a *Mandatory registration*

The whole team (ambassadors and node managers) must be registered through the official form.

b *Modalities*

i.

Ambassador without node: support and dissemination.

ii.

Node manager: facilitate the physical space for reception of samples and material delivery.

iii.

Ambassador with node: support, dissemination and management of the physical space with material delivery and reception.

c *Connection*

Once registered, you will be included in the project's WhatsApp group and will attend the training we will give on Life-Nitrazens, objectives, methodology and coordination.

2 *Activation and dissemination*

a *Motivation*

Spread the project in your community or entity to give the opportunity to participate.

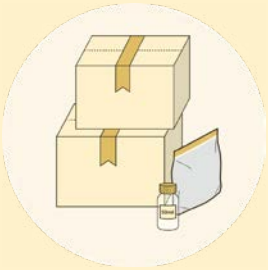
b *Assignment*

Participants register via form and are assigned to the corresponding ambassador channel by proximity or preference within the Life-Nitrazens WhatsApp community.

PHASE II.

Preparation of the mini-campaigns within the sampling campaign

1 *Mandatory registration*



Reception of material at the node. (Managers and Ambassadors coordinate to organise the space).

2 *Define the mini-campaign*

a.

Decide on the key dates for the mini-campaign based on your availability and with the help of the Life-Nitrazens team:

i. Day for handing out materials to participants.

ii. Days for field trips and sample collection.

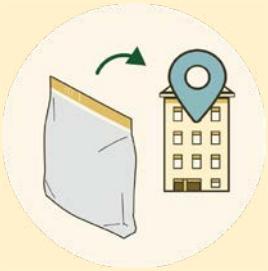
b.

Communicate it to your participants through the WhatsApp channel.

PHASE III.

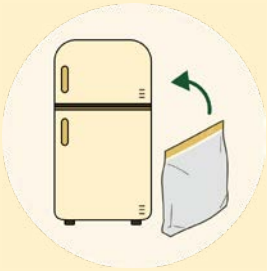
Sampling

1 *Reception of samples*



You must be at the node on the day of sample collection.

2 *Registration*



Fill in the log sheet and store the sample immediately in the refrigerator.

3 *Log sheet*

Take a photo of the log sheet and send it by WhatsApp to the coordination channel.

PHASE IV.

Shipping logistics

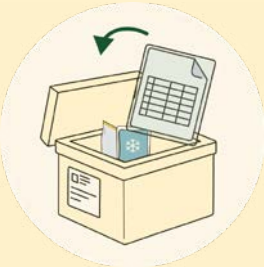
1 *Availability*

Confirm your schedule with the team so that they can arrange collection with the transport company.

2 *Prepare shipment*

Prepare the polystyrene box with the samples placed correctly upright and the cold gels

3 *Original box and label*



Place the original log sheet (protected in a sleeve), close the box and stick the transport label provided by the coordination team.

Appendix III: : LOG SHEET FOR AMBASSADORS

ANEXO III: ESTADILLO PARA EMBAJADORES/AS

Life-
Nitrazens

TRACKING SHEET FOR AMBASSADORS. ROADMAP FOR COLLECTING WATER SAMPLES AT THE NODE

NAME OR LOCATION OF THE NODE:

Name of Ambassador	Bottle code	Delivery date	Exact delivery time	Refrigerated (Yes/No)	Insulated Bag Delivery (Yes/No)	Date Sent to Laboratory	Incidents or comments

Life-Nitrazens

geonity by ibercivis

Geonity Quick Start Guide for taking part in Life-Nitrazens

1. Before starting

You need a mobile phone with an internet connection for the initial installation of the app, available for both iOS and Android.

Geonity

GET IT ON Google Play

Download on the App Store

2. Download and log in

Download Geonity on your mobile. When you open the application, you can log in with your email and password, create a new account or use an existing account from Google or Apple/iOS to enter more quickly.

3. Search for the Life-Nitrazens project

Once inside the app, use the search bar to locate the project. Write "Life-Nitrazens" and select the corresponding option:

1. Life-Nitrazens: to register general samples.

2. Life-Nitrazens (private property): for samples taken in private locations, such as the tap of your house or a private well. In this case, the exact point will not appear on the map.

4. Open project and download

Within the project screen, if you think that in the place where you are going to take the sample there will be no coverage or internet connection, press the button to download project. This way you will be able to participate without a connection.

Life-Nitrazens

geonity by ibercivis

5. Enter the map and add observations

Enter the map by pressing the "View map" button. On the map you will be able to see all the already registered participations. To create your sample, press the "add" (+) button located in the lower right corner.

6. Fill in the form and send the observation

Once you have created your comment, please complete the submission form. When you have answered all the questions, click the 'Submit comment' button at the bottom to complete your submission and record your contribution.

Useful tips

• If you're heading to an area with poor mobile coverage, download the project before you set off.

• Check that the location on the map coincides with the point where you took the sample.

• Read each field of the form carefully and complete all the required information.

• If you attach an image, try to make it sharp and well illuminated.

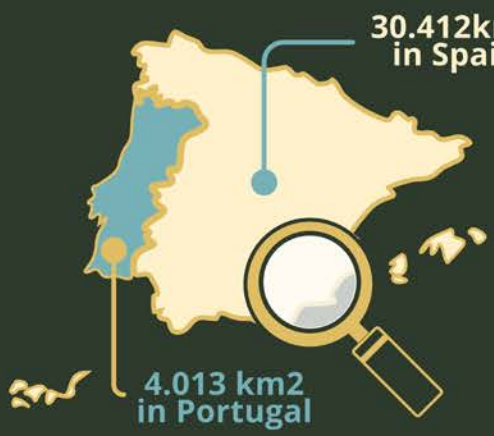
• If the observation is not sent at the moment, do not repeat it: Geonity will upload it when the device recovers connection.

Do you need help?

If you have any problem during the registration process, project search or sending of observations in Geonity, you can contact us through the email address: life-nitrazens@ibercivis.es

Or through our WhatsApp community.

At Life-Nitrazens, we are committed to the following:



34.435 km2
study area

Between Spain and Portugal

3.000
samples will be analysed

in the project's laboratories

100
ambassadors leading the way

- 90 in Spain
- 10 in Portugal

2.500
citizens taking part

- 2.200 in Spain (of which 400 will be unsolicited)
- 300 in Portugal (of which 100 will be unsolicited)

Co-funded by
the European Union