



D6.1 Project Vision



Funded by
the European Union

Document Identification			
Related WP	WP6	Document reference	D6.1
Status	Final	Submissions date	30/04/2025
Related deliverables		Dissemination Level	PU
Lead Author	Tomas Mildorf (UWB)	Version	1.0
Co-Authors	All partners	Reviewers	All partners
Keywords	project vision	Website	http://bioclima.net/

This document is issued within the frame and for the purpose of the BioClima project. This project has received funding from the European Union's Horizon-RIA Framework Programme under Grant Agreement No. 101181408. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the European Commission.

Document History			
Version	Date	Change editors	Changes
0.1	06/03/2025	Tomas Mildorf (UWB)	Methodology for creating the project vision
0.2	10/04/2025	Tomas Mildorf (UWB)	Draft vision based on partners' inputs
0.3	21/04/2025	Tomas Mildorf (UWB)	Final vision based on the visioning session during the kick-off meeting in Prague
1.0	30/04/2025	Tomas Mildorf (UWB)	FINAL VERSION TO BE SUBMITTED

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List of Acronyms

Acronym	Description
AI	Artificial Intelligence
EO	Earth Observation
UAV	Unmanned Aerial Vehicle
EBVs	Essential Biodiversity Variables
ECVs	Essential Climate Variables
EU	European Union
UNFCCC	United Nations Framework Convention on Climate Change
GEO BON	Group on Earth Observations Biodiversity Observation Network

1. BioClima Vision

1.1. Extra Short Version

BioClima envisions AI-driven Earth observation as a catalyst for climate adaptation and biodiversity conservation. Integrating remote sensing, in situ data, and predictive analytics supports data-informed decisions and international collaboration, advancing scalable, nature-based solutions across Europe and China.

1.2. Short Version

BioClima envisions a future where AI-powered Earth observation delivers timely, actionable insights to drive climate adaptation and biodiversity conservation. The project will build interoperable, scalable monitoring frameworks across Europe and China by integrating high-resolution remote sensing, in situ data, advanced analytics and use of appropriate standards.

Leveraging geo-AI and predictive models, BioClima will enhance the analysis of Essential Biodiversity and Climate Variables (EBVs and ECVs), bridging science, communities and policy to support data-driven decisions. Through international collaboration, the project empowers policymakers, scientists, and communities to analyse ecosystem changes and implement sustainable, nature-based solutions.

BioClima aims to serve as a global reference in biodiversity and climate monitoring—connecting local and international perspectives, research and practice and advancing a resilient, data-informed future.

1.3. Extended Version

BioClima aims to become a flagship integrated biodiversity and climate monitoring initiative by harnessing cutting-edge AI, advanced Earth observation, and data interoperability across Europe and China. In an era of accelerating climate impacts and biodiversity loss, the project responds to the urgent need for timely, actionable, and geographically precise environmental intelligence.

BioClima is building flexible, multi-source monitoring systems that combine satellite and UAV remote sensing, ground-truth observations (including citizen science), and sophisticated data fusion models. These systems will enable early detection of ecological change and provide a scientific foundation for policy decisions that balance conservation with socio-economic land-use demands.

At its core, BioClima seeks to revolutionise how Essential Biodiversity and Climate Variables are tracked, analysed, and transformed into policy-relevant knowledge. The project prioritises the creation of interoperable standards and frameworks that align EU and Chinese datasets - fostering global collaboration, enhancing data accessibility, and contributing to the long-term harmonisation of environmental monitoring efforts.

BioClima reflects strong stakeholder expectations in several areas:

- AI-enhanced pattern detection and predictive modelling,
- Real-time environmental monitoring,
- Effective science-to-policy translation, and
- Scalable innovations, from local use cases to continental applications.

The project will directly support critical EU frameworks such as the Biodiversity Strategy for 2030, the Green Deal, and climate adaptation missions while aligning with global initiatives, including the UNFCCC, the Convention on Biological Diversity, and GEO BON. BioClima's outputs — ranging from high-resolution datasets to operational toolkits — will serve a wide range of actors, including EU and national policymakers, environmental agencies, academic institutions, and local communities.

Through active engagement in the Digital Earth agenda and initiatives like Destination Earth, BioClima will help shape a shared digital infrastructure for global ecosystem intelligence. Contributions such as enhancing the Global Ecosystems Atlas will reinforce its role as a strategic enabler of sustainability and resilience.

Ultimately, BioClima's legacy will be a scalable, replicable model of integrated ecosystem monitoring that strengthens EU-China cooperation, informs environmental governance, and empowers decision-makers at all levels. It is a vision for a future where decisions about nature and climate are guided by inclusive, data-driven, and innovative science.

2. Methodology and Survey Results

2.1. Preparatory Work

Before the kick-off meeting (April 2025), the following steps were taken:

- Reviewed project objectives from the Grant Agreement.
- Conducted a short online visioning survey distributed among the partners.
- Drafted a preliminary vision statement.
- Conducted an interactive session during the kick-off meeting to refine the vision.

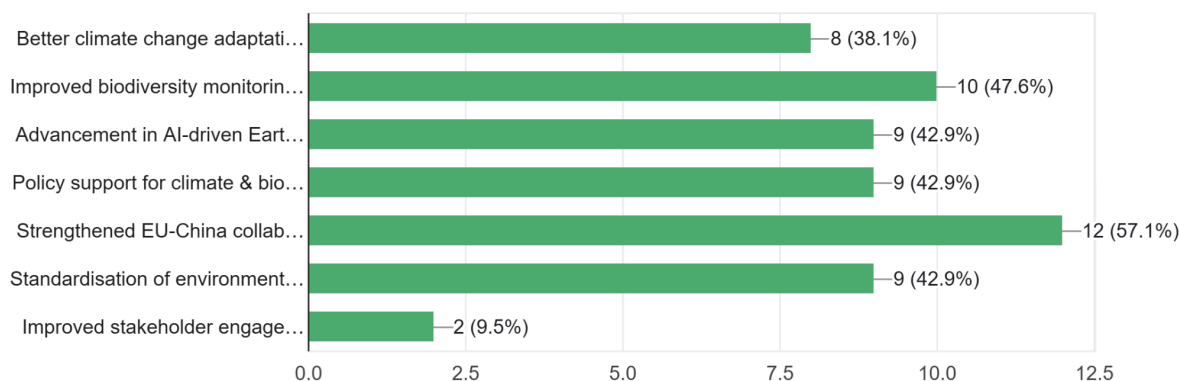
2.2. Visioning Survey

A short questionnaire was distributed to project partners to capture expectations, priorities, and ideas. The survey included questions on key project goals, challenges to address, and the role of AI and Earth observation. Respondents had the opportunity to provide free-text input, rate priorities, and select from multiple options. There were a total of 21 responses.

2.3. Survey Results

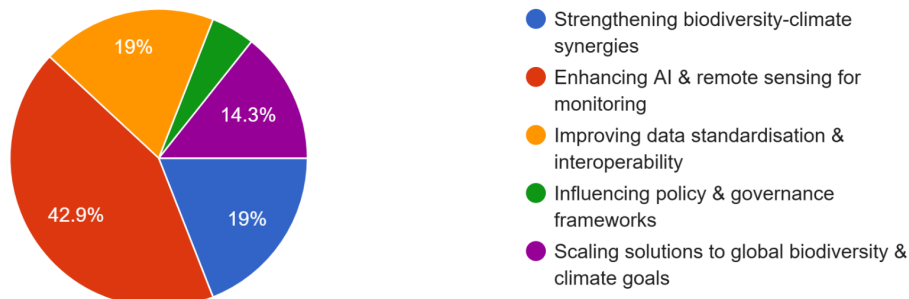
1. What do you see as the main societal impact of BioClima?

21 responses

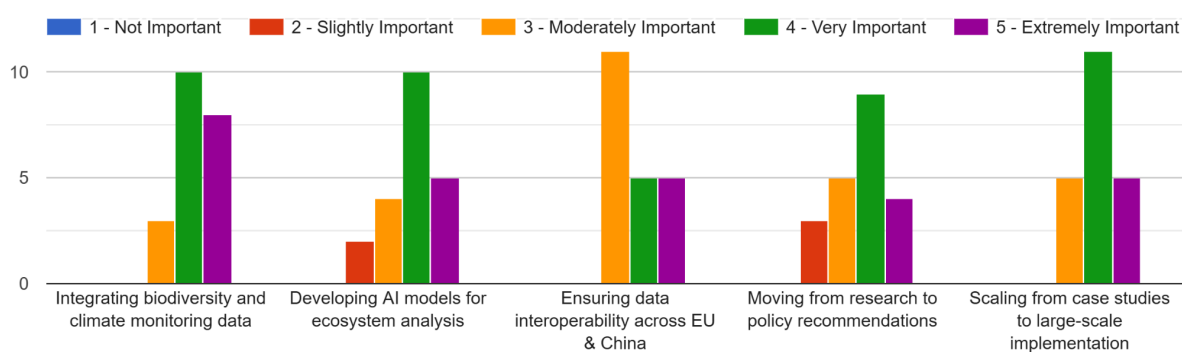


2. In your opinion, what should be the top priority for BioClima's vision?

21 responses

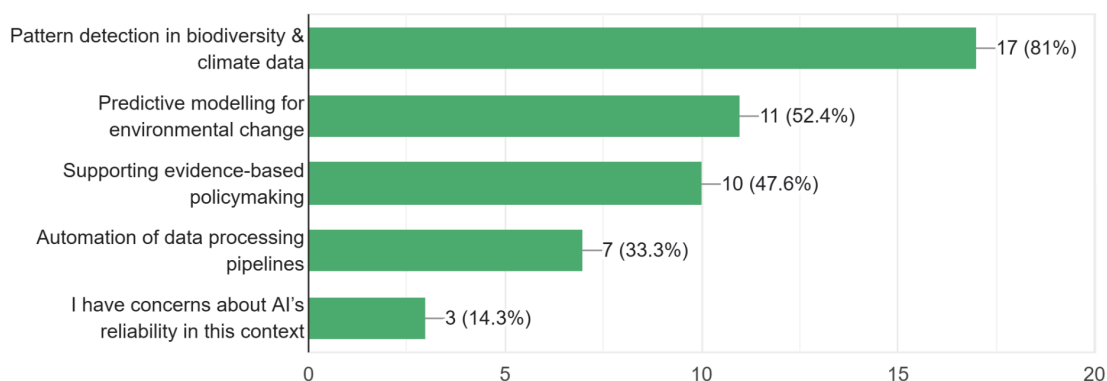


3. What are the biggest scientific or technical challenges BioClima must address?



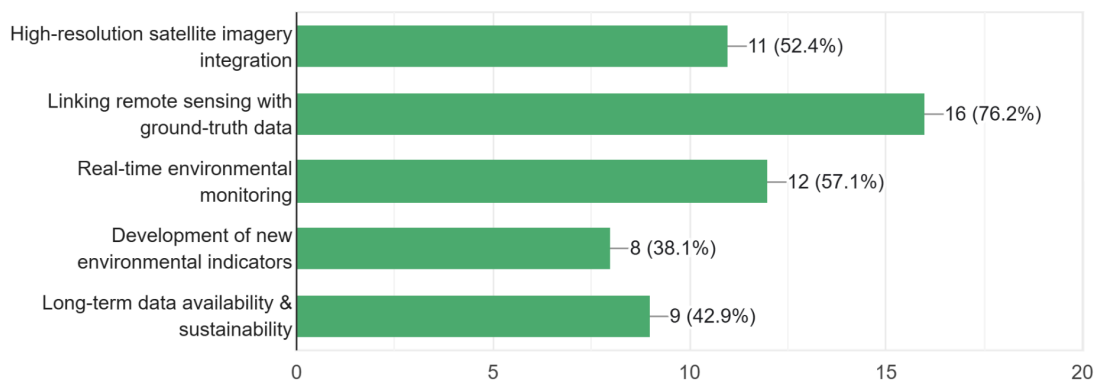
4. How do you see the role of AI in BioClima?

21 responses



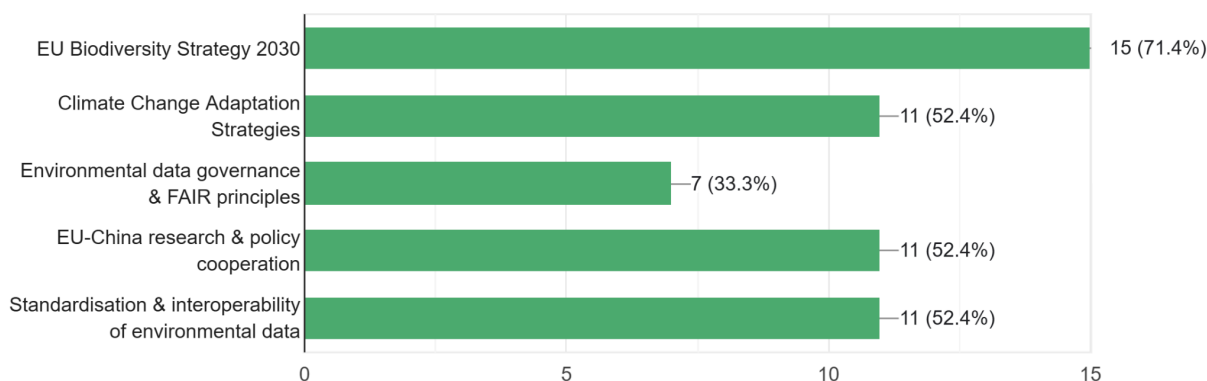
5. What aspects of remote sensing and Earth Observation should BioClima emphasize?

21 responses



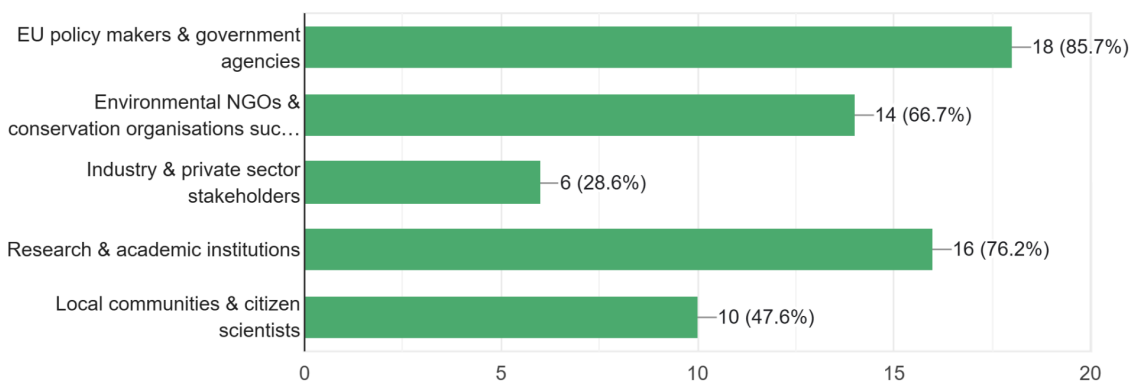
6. Which policy areas should BioClima focus on?

21 responses



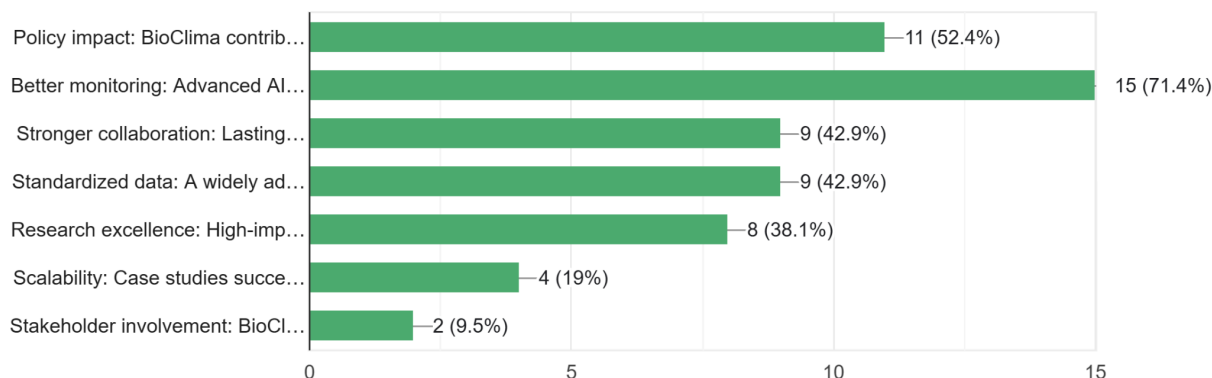
7. Who should be the main target audience for BioClima results?

21 responses



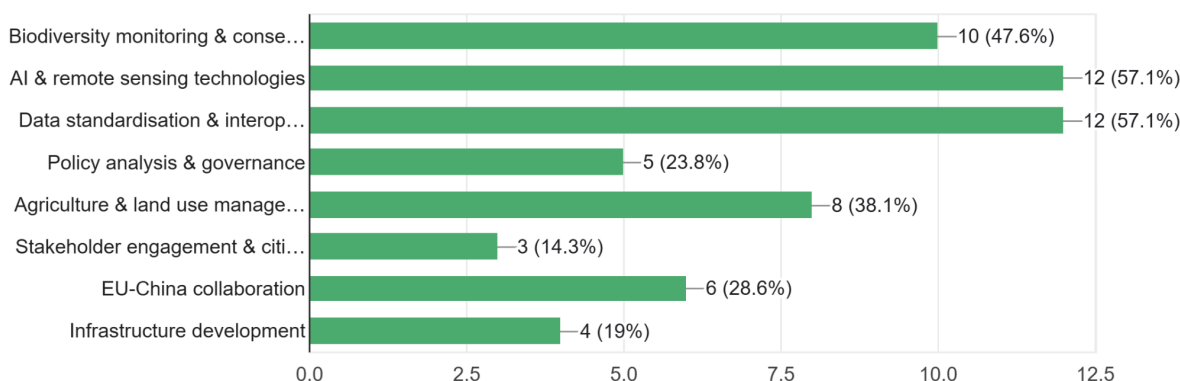
8. What would success look like for BioClima by 2029?

21 responses



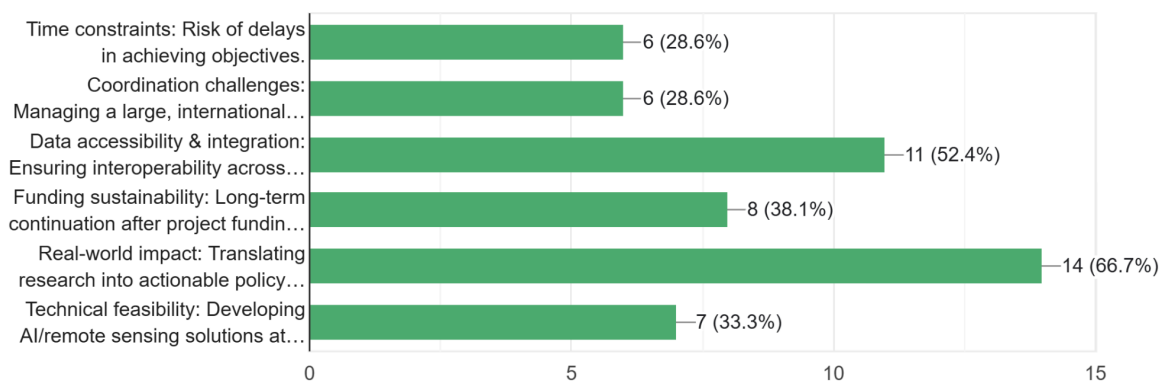
9. What expertise does your organization bring to BioClima?

21 responses



10. What concerns you most about BioClima's implementation?

21 responses



11. In one word, what best captures your hope for BioClima?

