BioClima

D5.1 Communication, Dissemination and Exploitation

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List of Acronyms

Acronym	Description
AI	Artificial Intelligence
CDE	Communication, Dissemination, and Exploitation
DoA	Description of Art
EBV	Essential Biodiversity Variables
EC	European Commission
ECV	Essential Climate Variables
EU	European Union
DoA	Description of Action
Dx.y	Deliverable number y belonging to WP x
GA	Grand Agreement
KPI	Key Performance Indicator
NGO	Non-governmental organization
No.	Number
WP	Work Package
TRL	Technology Readiness Level
IPR	Intellectual Property Rights

Executive Summary

This deliverable presents the Communication, Dissemination, and Exploitation (CDE) Plan of the BioClima project (Grant Agreement No. 101181408) [1], designed to support and maximize the visibility, uptake, and long-term impact of project results. It responds to the need for coherent and coordinated outreach activities that foster engagement with key stakeholders and reinforce collaboration between the European Union and China in the field of biodiversity monitoring and climate resilience.

The document addresses the challenge of effectively translating advanced scientific outputs—such as AI-supported tools, data fusion models, and ecosystem assessments—into accessible, actionable knowledge for academic, policy, industry, and societal audiences. It defines how project methodologies and results will be shared, adopted, and sustained through structured dissemination, stakeholder engagement, and exploitation strategies.

The main components of the deliverable include:

- A strategic overview of CDE objectives aligned with the Description of Action (DoA) and the Horizon Europe [2] programme priorities;
- Identification and mapping of key stakeholder groups (e.g. policymakers, NGOs, academia, industry, citizen scientists);
- Development of stakeholder-specific key messages and communication narratives;
- Specification of digital tools, media platforms, and visual identity guidelines, including the use of social media, the project website, press materials, and open-access repositories (e.g. Zenodo) [3];
- A detailed plan for scientific dissemination (publications, conferences), training (e-learning platform), and collaborative outreach (case studies and international workshops);
- Definition of exploitable results, pathways to academic and commercial exploitation, Intellectual Property Rights (IPR) management, and business models;

- Monitoring and evaluation mechanisms, including Key Performance Indicators (KPIs), data collection tools, and reporting processes using the SyGMa platform.

The plan integrates contributions from other work packages, particularly scientific, technical, and policy deliverables (e.g. those related to Essential Biodiversity Variables [4] and climate indicators), and ensures compliance with mandatory Horizon Europe [5] visibility and open science requirements.

In conclusion, this deliverable establishes a structured and flexible roadmap to ensure that BioClima's outputs reach their intended audiences, achieve lasting policy and societal relevance, and support post-project continuity. The CDE plan is fully aligned with the project's strategic objectives and will be reviewed and updated throughout the project lifecycle to adapt to evolving stakeholder needs and emerging opportunities.

1. Introduction

1.1 Purpose of the document

The purpose of this document is to present the comprehensive Communication, Dissemination, and Exploitation (CDE) strategy for the BioClima project, aligned explicitly with the objectives outlined in the Grant Agreement No. 101181408 [1] under the European Union's Horizon Europe framework [5]. This strategy details how the project's outcomes—specifically advanced AI-driven monitoring systems [6], harmonized methodologies for Essential biodiversity variables and Esential climate variables (EBVs [4] and ECVs), and insights derived from case studies conducted across Europe and China—will be communicated and disseminated to a diverse range of stakeholders, including policymakers, academia, industry, and civil society. Additionally, the document outlines mechanisms through which the project's outputs will be effectively exploited, ensuring their sustainability and maximizing their impact beyond the project's duration. Furthermore, this CDE strategy meets the requirements of the Grant Agreement by defining roles and responsibilities clearly, establishing measurable performance indicators, and ensuring transparent processes that facilitate effective visibility, stakeholder engagement, and international cooperation between the EU and China.

1.2 Relation to other project work

This Communication, Dissemination, and Exploitation (CDE) Plan directly aligns with the Description of Action (DoA) of the BioClima project, specifically addressing the objectives and tasks defined under Work Package 5. It serves as a foundational element for coordinated dissemination and exploitation activities, integral to the overall project roadmap throughout its lifecycle. This document strategically interfaces with key deliverables from related work packages, ensuring cohesive and integrated communication. Specifically, it incorporates inputs from technical deliverables related to scientific and technical developments, Essential Biodiversity Variables (EBVs) [4], Essential Climate Variables (ECVs), policy-oriented outputs, stakeholder engagement strategies, and exploitation pathways. Additionally, this CDE Plan maintains close integration with project management deliverables, ensuring systematic coordination, ongoing monitoring, and alignment with the broader objectives defined by the Grant Agreement.

1.3 Structure of the document

This document is structured into 11 major chapters, organized to facilitate clear navigation and comprehension:

- **Chapter 2** outlines the strategic approach to communication, dissemination, and exploitation, highlighting guiding principles, key performance indicators, and alignment with EU-China cooperation objectives.

- **Chapter 3** identifies and categorizes target audiences and stakeholders, detailing tailored engagement strategies, including multi-actor and citizen science initiatives.

- **Chapter 4** defines the core narrative, presenting mission and vision statements alongside scientific, technical, socioeconomic, and policy-oriented key messages customized for different stakeholders.

- **Chapter 5** describes specific communication tools and channels, addressing project visual identity, digital presence (website, blogs, social media), promotional materials, and media relations.

- **Chapter 6** details dissemination activities and materials, emphasizing scientific outputs, workshops, training events, case studies, demonstrations, field visits, and collaborative interactions with related projects and networks.

- **Chapter 7** elaborates on exploitation pathways, intellectual property management, sustainability approaches, concrete expected results, and post-project continuity mechanisms.

- **Chapter 8** provides an implementation timeline, outlines resource allocation, clarifies consortium partner responsibilities, and discusses budgetary planning.

- **Chapter 9** explains the monitoring, evaluation, and reporting framework, presenting specific performance indicators, data collection methods, internal reporting processes, and mechanisms for continuous improvement.

- **Chapter 10** focuses on risk assessment, identifying potential risks in communication, dissemination, and exploitation activities, and proposes concrete mitigation strategies.

- **Chapter 11** summarizes the key points of the plan, specifies the procedure for periodic updates and revisions, and reaffirms alignment with overall BioClima project objectives.

2. Strategy Overview

2.1 Overall Communication and Dissemination Strategy

The communication and dissemination strategy of the BioClima project aims to effectively enhance visibility, stakeholder engagement, and scientific impact both within the EU and internationally, with particular emphasis on strengthening EU-China collaboration. This strategy encompasses clear, targeted, and systematic dissemination of project objectives, methodologies, and key results, particularly focusing on advancements in monitoring Essential Biodiversity Variables (EBVs) [4] and Essential Climate Variables (ECVs), harmonized data systems, and AI-driven analytical tools. The project will leverage diverse and tailored dissemination channels, including peer-reviewed scientific publications, active participation in relevant international conferences, dedicated stakeholder events, policy workshops, targeted digital media platforms, and interactive engagement tools. Communication efforts will prioritize clarity, accessibility, and relevance, tailored specifically for key stakeholder groups such as policymakers, scientific and academic communities, NGOs, industry sectors, and the general public, ensuring maximized project reach, practical policy integration, and sustainable impact.

2.2 Exploitation and Sustainability Strategy

The BioClima project's exploitation and sustainability strategy is designed to ensure sustainable uptake and long-term utilization of project outcomes well beyond its duration. This strategy focuses explicitly on the exploitation of scientifically robust outputs, including harmonized biodiversity and climate monitoring systems, advanced AI-driven analytical methodologies, standardized data models, and integrated data services developed through EU-China collaborative efforts. Clearly defined pathways will facilitate academic advancement, commercial exploitation, and policy integration, supported by structured mechanisms such as technology transfer frameworks, comprehensive market analysis, proactive Intellectual Property Rights (IPR) management, and targeted stakeholder engagement processes. Long-term sustainability will be guaranteed through robust international collaboration agreements, ongoing stakeholder interactions, strategic alignment with national and international policy agendas, and well-defined post-project continuity plans, ensuring that BioClima's results yield continuous and tangible benefits for stakeholders and ecosystems beyond the project lifecycle.

2.3 Alignment with EU-China Cooperation Objectives

The BioClima project strategically aligns with the broader EU-China cooperation [2] framework by actively fostering collaboration and knowledge exchange between European and Chinese partners in the fields of biodiversity monitoring, climate resilience, and environmental sustainability. The project specifically aims at developing harmonized monitoring approaches utilizing standardized EBVs and ECV), leveraging complementary expertise from both regions. This alignment promotes mutual understanding, facilitates the sharing of best practices, and supports the development of integrated and interoperable monitoring and assessment systems. Enhanced EU-China cooperation through BioClima will increase joint research activities, collaborative scientific publications, and coordinated policy dialogues, thereby strengthening cross-cultural, interdisciplinary responses to global environmental challenges and contributing significantly to shared international policy and conservation frameworks.

2.4 Guiding Principles and Key Performance Indicators

BioClima's communication, dissemination, and exploitation activities adhere to core principles of **transparency, inclusivity, scientific rigor, stakeholder engagement,** and **measurable impact**, as required by the Grant Agreement. These principles guide the effective execution, monitoring, and continual refinement of all project actions.

A targeted set of **Key Performance Indicators (KPIs)** objectively evaluates progress, ensuring alignment with BioClima's broader objectives—namely integrating biodiversity conservation and climate resilience strategies, fostering international collaboration (especially EU-China), and promoting open science practices. The KPIs include both quantitative and qualitative metrics, such as:

- **Scientific Output**: Number of peer-reviewed publications, joint conference presentations, and cross-institutional research collaborations.

- **Stakeholder Engagement**: Number of stakeholder workshops, engagement events, attendance records, and user satisfaction scores collected from feedback surveys.

- **Online Outreach**: Web analytics (e.g., unique visitors, content downloads, average session duration) and social media engagement metrics (e.g., followers, post reach, interaction rates).

- **Collaboration & Policy Impact**: Evidence of joint EU-China initiatives, uptake of policy briefs by relevant authorities, number of policy dialogues or contributions to policy developments, and recognized policy influence.

- **Exploitation & Sustainability**: Number of licensed technologies or services, new commercial or policy-related partnerships, and post-project continuity measures established.

These indicators enable **systematic tracking and evaluation** of BioClima's performance, providing data-driven insights that will inform **ongoing adjustments** to the communication, dissemination, and exploitation strategy for maximum effectiveness.

3. Target Audiences and Stakeholder Mapping

3.1 Identification of Primary Stakeholders (Policy-Makers, NGOs, Academia, etc.)

In the BioClima project, primary stakeholders are identified based on their potential to contribute to and benefit from integrated biodiversity and climate resilience strategies, as outlined in the project's Grant Agreement. These include:

- **Policymakers and Regulatory Bodies**: Influential at regional, national, and international levels, responsible for shaping and enforcing policy frameworks that drive climate and biodiversity-related legislation.

- **Environmental Agencies and NGOs**: Active in climate adaptation and biodiversity preservation, with vested interests in deploying or advocating for innovative tools and solutions derived from project outcomes.

- **Academia and Research Institutions**: Engaged in cutting-edge research on biodiversity monitoring (e.g., EBVs), climate variables (e.g., ECVs), and AI-driven data analysis, ensuring scientific rigor and methodological advancement.

- **Industry Representatives and Technology Developers**: Focused on commercializing monitoring platforms, data services, and related solutions, thus playing a pivotal role in exploitation and market uptake.

- **Local Authorities and Community-Based Organizations**: Essential for localized ecosystem and climate adaptation measures, bridging grassroots realities with broader policy and technological innovations.

- **The Broader Public and Citizen Scientists**: Encouraged to participate via multi-actor approach and citizen science [7] initiatives, enhancing project reach, data quality, and real-world applicability of project findings.

By engaging this diverse group, BioClima aims to ensure that project outputs—such as harmonized monitoring systems, AI-driven methodologies, and policy insights—are relevant, accessible, and impactful across stakeholder domains, thereby maximizing the project's overall effectiveness and sustainability.

3.2 Engagement Strategy for Target Groups

BioClima's engagement strategy is customized to meet the unique needs and interests of each stakeholder category while maintaining coherence with the project's broader goals (e.g., EU-China collaboration, integrated biodiversity and climate monitoring, and a multi-actor approach).

1. **Policy-Makers and Regulatory Bodies**

    - **Policy Briefs and Workshops**: Develop concise, evidence-based policy briefs leveraging data on EBV), ECVs, and AI-driven analytics. Organize targeted workshops at strategic junctures (e.g., project milestones, policy cycles) to facilitate dialogue and uptake.

    - **Joint EU-China Policy Dialogues**: Host bilateral or multilateral discussions that foster direct input from Chinese partners, further strengthening international policy alignment.

2. **Environmental Agencies and NGOs**

    - **Interactive Seminars and Targeted Materials**: Provide outcome-focused materials (e.g., infographics, technical leaflets) to illustrate best practices in biodiversity conservation and climate resilience.

    - **Collaborative Platforms**: Encourage ongoing participation in dedicated online communities or project forums, promoting knowledge exchange and advocacy collaboration.

3. **Academia and Research Institutions**

    - **Scientific Publications and Conferences**: Disseminate key findings through high-impact journals, academic conferences, and collaborative workshops, ensuring up-to-date sharing of methodologies and results.

    - **Joint Research Initiatives**: Enhance cooperation through co-authored papers, data-sharing agreements, and AI-based tool development, particularly in collaboration with Chinese research entities.

4. **Industry and Technology Developers**

    - **Technology Demonstrations**: Organize hands-on demonstrations of BioClima's AI-driven monitoring [6] tools and data services, illustrating commercial viability.

    - **Market Uptake Sessions**: Offer targeted sessions and roundtables focusing on potential business models, intellectual property rights, and licensing options for project-developed solutions.

5. **Local Authorities and Citizen Science Communities**

    - **Community Workshops and Pilot Projects**: Involve local authorities in pilot testing of BioClima solutions, ensuring alignment with community needs and resource availability.

    - **Citizen Science Initiatives**: Develop user-friendly data-collection platforms or apps to facilitate public participation, enhance data quality, and foster a sense of local ownership over project outcomes.

By tailoring specific engagement measures to each stakeholder group, BioClima seeks to ensure widespread adoption, relevance, and long-term impact of project outcomes across environmental, societal, and commercial spheres.

3.3 International Cooperation Stakeholders (EU-China)

BioClima actively engages international stakeholders, with a particular emphasis on sustained EU-China collaboration to advance integrated biodiversity and climate monitoring. This collaboration features:

- **Joint Workshops and Bilateral Exchanges**: Organized at key milestones to align research objectives, share best practices, and facilitate knowledge transfer between European and Chinese partners.

- **Collaborative Research Initiatives**: Co-designed research activities, enabling the development of harmonized frameworks for Essential Biodiversity Variables (EBVs) and Essential Climate Variables (ECVs) that are interoperable across regions.

- **Integration with Key Networks**: Close coordination with networks such as **GEO BON**, **China GEO BON**, **EuroGEO BON** [8], and related biodiversity observatory platforms to reinforce scientific integration, standardization, and coordinated action on biodiversity monitoring and climate resilience.

- **Policy Engagement and Frameworks**: Engagement with EU-China policy dialogues to ensure that BioClima outputs (e.g., scientific findings, monitoring tools, policy recommendations) feed into policy development and international agreements, thereby expanding the project's global impact.

Through these efforts, BioClima fosters a robust cross-cultural and interdisciplinary approach that harnesses the complementary expertise of EU and Chinese partners, in line with the overarching objectives outlined in the Grant Agreement.

3.4 Multi-Actor Approach and Citizen Science Initiatives

BioClima embraces a multi-actor approach to ensure that diverse stakeholder perspectives ranging from local communities and civil society organizations to industry stakeholders and policymakers are integrated throughout the project lifecycle. The multi-actor approach involves:

1. **Citizen Science Engagement**

    - **Data Collection**: Empowering non-expert volunteers, local communities, and educational institutions to contribute valuable observations (e.g., species sightings, habitat conditions), thereby increasing the spatial and temporal coverage of environmental data.

    - **Capacity Building:** Offering training sessions, user-friendly digital platforms, and mobile applications that facilitate accurate, standardized data entry and promote long-term engagement.

2. **Collaborative Decision-Making**

    - **Workshops and Roundtables:** Organizing participatory events where citizens, NGOs, academia, and government representatives jointly discuss findings, identify challenges, and propose solutions aligned with BioClima's objectives.

- **Feedback Loops:** Creating channels for ongoing feedback and iterative refinement of monitoring protocols, tools, and policy recommendations.

3. **Integration with Policy and Governance**

   - **Evidence-Based Policymaking:** Ensuring that citizen-generated data and insights feed into local and regional governance, particularly in designing and implementing climate resilience measures.

   - **Bridging Knowledge Gaps:** Facilitating active knowledge exchange between scientists, policy stakeholders, and local actors, aligning technical innovations with real-world needs and capacities.

By systematically involving citizens and multiple stakeholder groups in data collection, knowledge co-creation, and decision-making, BioClima not only enhances the credibility and breadth of its scientific outputs but also fosters broader societal ownership of biodiversity and climate resilience initiatives in both EU and Chinese contexts.

4. Key Messages and Narrative

4.1 Project Mission and Vision Statements

Mission

The mission of the BioClima project is to drive scientific innovation and deliver practical solutions for biodiversity management and climate resilience. This is achieved through robust EU-China cooperation, cutting-edge research on Essential Biodiversity Variables (EBVs) and Essential Climate Variables (ECVs), and inclusive stakeholder engagement across multiple sectors.

Vision

BioClima envisions resilient ecosystems and communities that can sustainably adapt to climate change. This involves integrating scientific evidence into policy and governance frameworks, enhancing data-driven decision-making, and strengthening capacities for managing environmental challenges at local, national, and international levels.

4.2 Scientific and Technical Messages

The BioClima project is committed to elevating scientific knowledge and delivering actionable solutions for biodiversity management and climate resilience. The core scientific and technical messages focus on:

1. **Integrated Monitoring and Analysis**
    - **EBVs and ECVs**: Leveraging Essential Biodiversity Variables and Essential Climate Variables to create harmonized, high-resolution datasets for ecosystem assessments.
    - **AI-Driven Methodologies**: Employing advanced machine learning and data fusion techniques to predict climate-driven impacts on biodiversity with greater accuracy.
2. **Tool Development and Validation**
    - **Innovative Platforms**: Creating robust, user-friendly tools that facilitate evidence-based decision-making for stakeholders (e.g., policymakers, conservation practitioners, industry).

- **Field Testing**: Conducting multi-site validation and demonstrations, including comparative EU-China pilot studies, to ensure broad applicability and replicability.

3. **Interdisciplinary Collaboration**

    - **Multi-Sector Approach**: Coordinating expertise from ecology, climatology, remote sensing, data science, and socioeconomics to tackle complex environmental challenges.

    - **EU-China Cooperation**: Reinforcing international best-practice exchange and encouraging the integration of complementary scientific competencies between European and Chinese partners.

Through this collective focus, BioClima aspires to drive forward state-of-the-art research in biodiversity and climate resilience, thereby delivering practical, science-backed solutions that benefit ecosystems, societies, and economies on a global scale.

4.3 Socioeconomic and Policy-Focused Messages

BioClima underscores the interdependence of biodiversity, ecosystem health, and socioeconomic stability, emphasizing the following key messages:

1. **Policy Integration for Climate Resilience**

    - **Interlinked Biodiversity and Climate Agendas**: Stresses the inclusion of biodiversity monitoring and management within overarching climate and environmental policy frameworks, reinforcing resilience at local, regional, and international scales.

    - **EU-China Alignment**: Highlights the importance of harmonizing policy actions and regulatory approaches between European and Chinese stakeholders for greater global impact.

2. **Socioeconomic Benefits and Opportunities**

    - **Ecosystem Services**: Illustrates how robust biodiversity conservation can yield tangible economic and social benefits, such as sustainable

agriculture, tourism, and improved public health.

- **Sustainable Economic Growth**: Demonstrates how strategic biodiversity investments can unlock green jobs, attract responsible private-sector engagement, and foster nature-based solutions.

3. **Governance and Resource Management**

- **Integrated Environmental Governance**: Advocates for the adoption of cross-sectoral policy measures and shared standards that support transparent, science-based decision-making.

- **Stakeholder Inclusivity**: Encourages inclusive stakeholder participation—ensuring that local communities, NGOs, industry, and policymakers collaboratively shape sustainable resource management practices.

Through these socioeconomic and policy-focused messages, BioClima aims to bridge the science-policy interface, making biodiversity conservation and climate resilience strategic priorities that advance equitable and sustainable development in both EU and Chinese contexts.

4.4 Tailoring Messages to Stakeholder Types

BioClima communication and dissemination efforts are carefully tailored to address the unique interests, expectations, and information requirements of each stakeholder category. This targeted approach ensures the project's messaging resonates with diverse groups, while maintaining a cohesive framework grounded in EU-China collaboration, interdisciplinary research, and the effective use of EBVs and ECVs.

1. **Policymakers and Regulators**

- **Policy Relevance & Implementation**: Emphasizes regulatory implications, actionable policy recommendations, and potential integration into existing governance structures (local, national, EU-China).

- **Evidence-Based Decision-Making**: Highlights how EBVs and ECVs, along with AI-driven analytical tools, inform robust, data-driven strategies for climate resilience and biodiversity management.

2. **Academia and Research Community**

    - **Technical Rigor & Methodological Advancements**: Showcases cutting-edge AI methodologies, data fusion techniques, and harmonized monitoring protocols.

    - **Collaboration & Replicability**: Encourages joint publications, open data exchange, and capacity-building initiatives to replicate BioClima innovations in new geographical or thematic contexts.

3. **Industry and Private Sector**

    - **Innovation & Economic Potential**: Demonstrates the market relevance of BioClima's solutions (e.g., AI-driven monitoring tools) for technology transfer, commercialization, and sustainable business models.

    - **Sustainability & Corporate Social Responsibility**: Underlines how adopting BioClima's best practices can yield long-term economic returns while strengthening corporate environmental stewardship.

4. **NGOs and Civil Society**

    - **Environmental Protection & Social Impact**: Highlights positive outcomes from improved biodiversity conservation and climate-adaptation measures in local communities.

    - **Multi-Actor Engagement**: Showcases inclusive project mechanisms (e.g., participatory workshops, citizen science) that empower civil society to influence decision-making.

5. **General Public and Citizen Scientists**

    - **Accessibility & Relevance**: Uses plain language, relatable examples, and interactive tools to connect citizens with scientific findings and encourage their active participation.

    - **Community Benefits & Opportunities**: Communicates how local communities can benefit directly from BioClima initiatives (e.g., ecosystem services, climate resilience), thus stimulating collective ownership and

long-term behavioral change.

By customizing key messages to the needs and interests of each stakeholder group, BioClima ensures broad-based support, meaningful engagement, and the successful dissemination and exploitation of its outcomes across Europe and China.

5. Communication Tools and Channels

5.1 Project Visual Identity Guidelines

The BioClima project will adopt a consistent visual identity comprising a standardized logo, color scheme, typography, and templates for presentations, reports, and promotional materials. These guidelines ensure coherence and professional recognition across all dissemination channels, enhancing the project's visibility and stakeholder recognition

- Project logo in several formats
- Color scheme and typography
- Template for reports and deliverables (Word document)
- Template for PowerPoint presentations

Project logo in several formats

- colored logo
- black and white logo

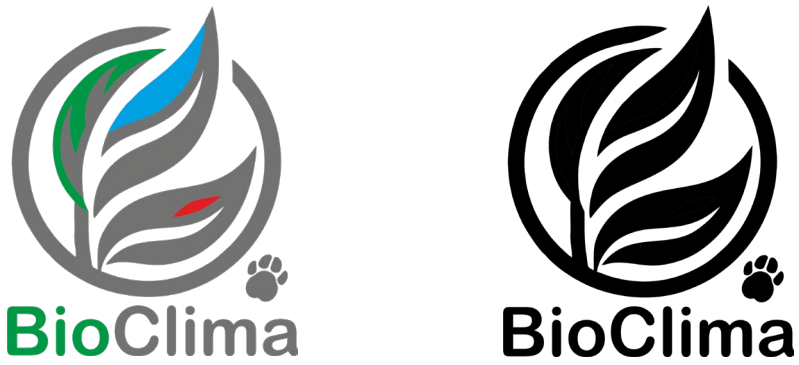

Figure 1: Project logo in several formats

Color scheme and typography

black [#000000]
gray [#727271]
green [#009846]

blue	**[#00a0e3]**
red	**[#e31e24]**

Figure 2: Color scheme and typography

Fonts:

1. Open Sans Regular
2. **Open Sans Bold**
3. *Open Sans Italic*
4. Open Sans Underline

Template for reports and deliverables

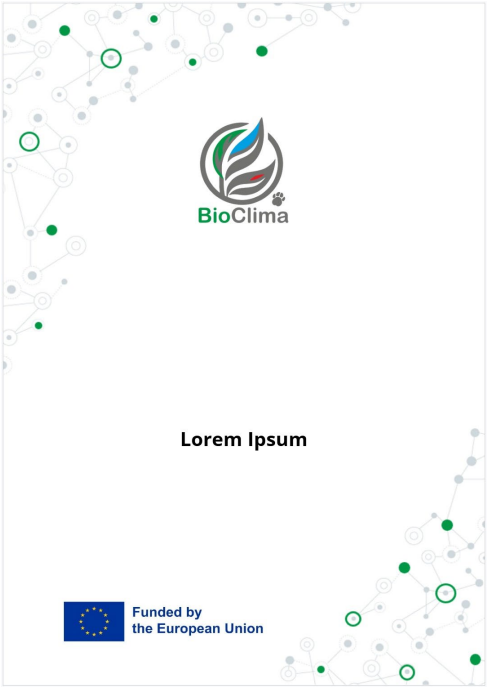

Figure 3: Template for reports and deliverables

Template for PowerPoint presentations

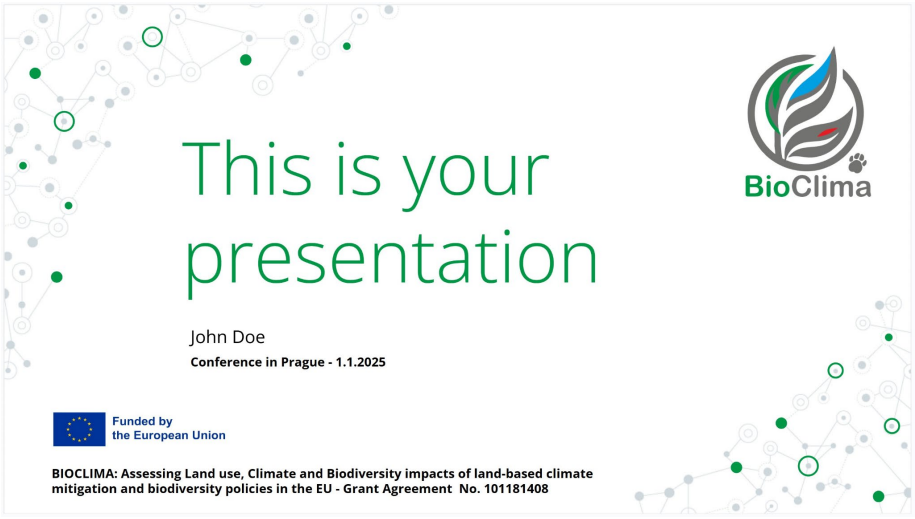

Figure 4: Template for PowerPoint presentations

All printed and digital project materials must contain the following EU funding statement and disclaimer:

- **EU funding statement (mandatory on every printed and digital project output)** "This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101181408 [1]."
- **Disclaimer (mandatory on every printed and digital project output)** "Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them."
- **Placement requirements for the emblem, funding statement, and disclaimer** **"**The emblem must be positioned on the title page (or equivalent first screen) immediately above the funding statement and disclaimer; all three elements must always appear together and remain clearly visible."

- **Consequences of non-compliance** "Omission or incorrect use of the emblem, funding statement, or disclaimer may render the associated costs ineligible (Grant Agreement Art. 17 §2). "

5.2 Project Website and Blog/News Section

A dedicated BioClima website will serve as the primary digital platform for project communication, regularly updated with relevant news, events, publications, and project outcomes. It will also feature a blog/news section to provide timely updates on project activities, research findings, and events, effectively engaging diverse stakeholders.

The web portal is fully responsive, i.e. it displays correctly on different devices with different screen sizes.

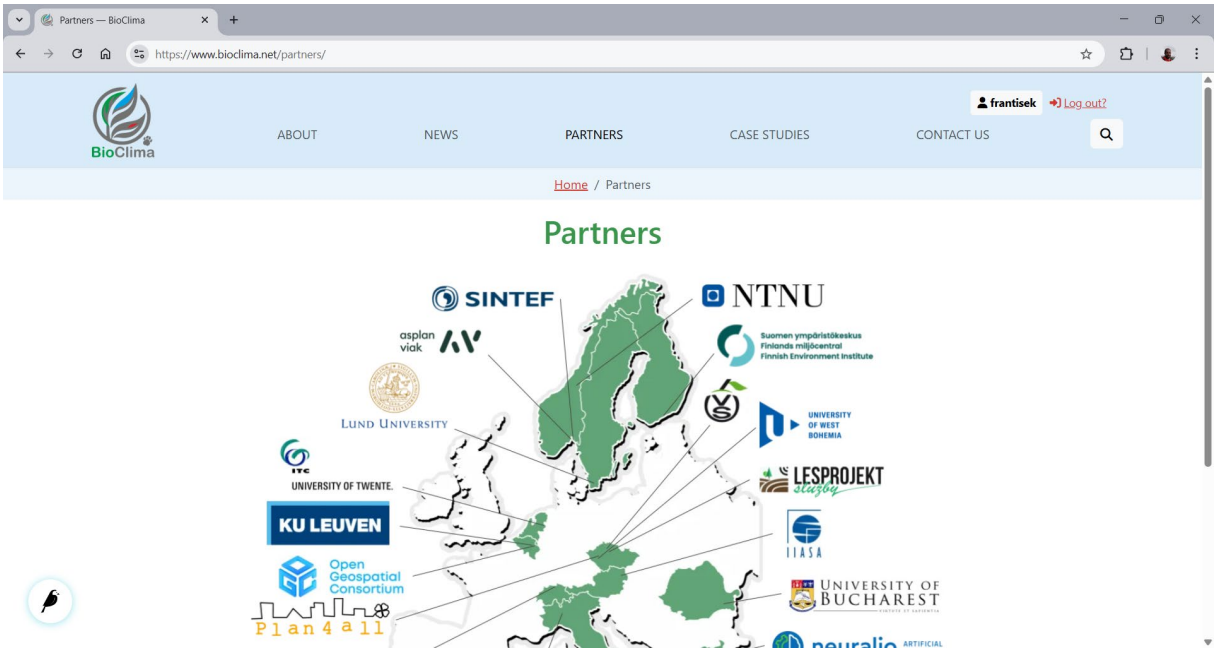

Figure 5: Project Website 1

For the editorial system, we have opted for the Wagtail CMS platform [9], enhanced with the CodeRed CMS extension. Wagtail stands out as a leading open-source Content Management System (CMS) trusted by organizations of all sizes, including prominent names like Google, NASA, and the British NHS. Built upon the Django framework with Python as its primary development language, Wagtail offers exceptional extensibility. Functionality can be readily expanded through custom widgets, page templates, permission configurations, and other system parameters. This inherent flexibility paves the way for seamless integration with potentially existing organizational systems, such as a city geoportal, should that need arise in the future. Wagtail thrives thanks to a vibrant community that fosters a continuous stream of valuable plugins and extensions.

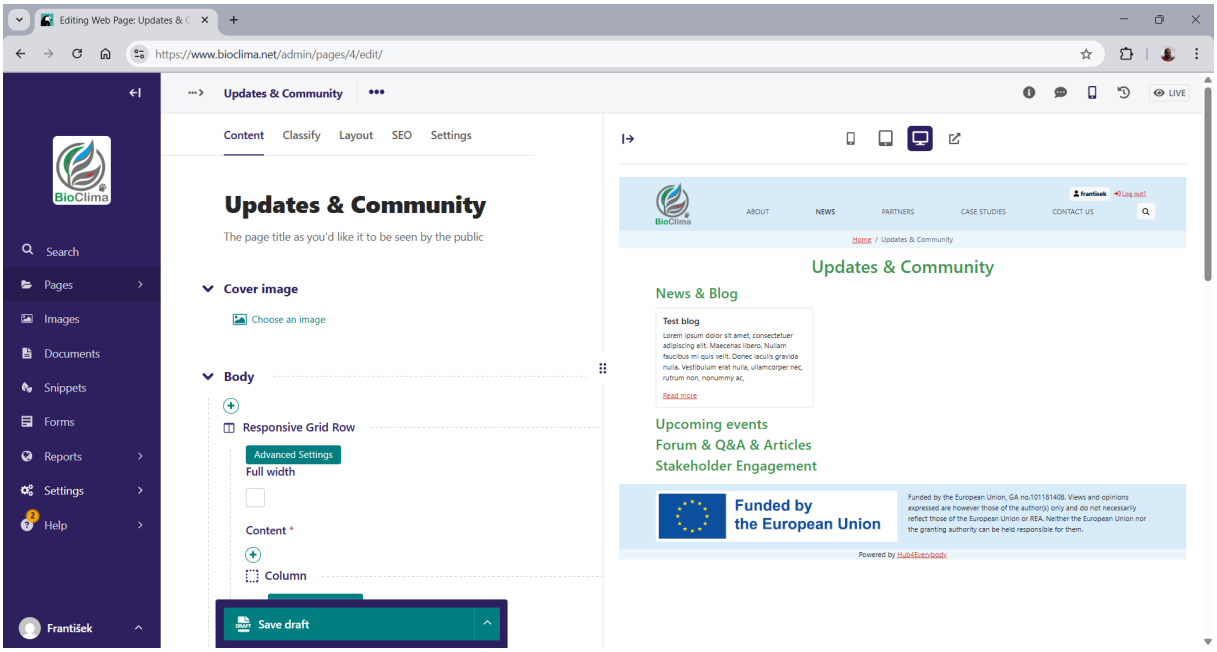

Figure 6: Project Website 2

The selection of Wagtail CMS as the editorial system's platform brings several advantages to the table. First and foremost, its inherent flexibility allows for customization to perfectly align with the organization's specific needs. Furthermore, being open source ensures long-term sustainability and fosters ongoing contributions from the community. Finally, the active Wagtail community provides a wealth of support and resources, further solidifying its position as the ideal choice for this project.

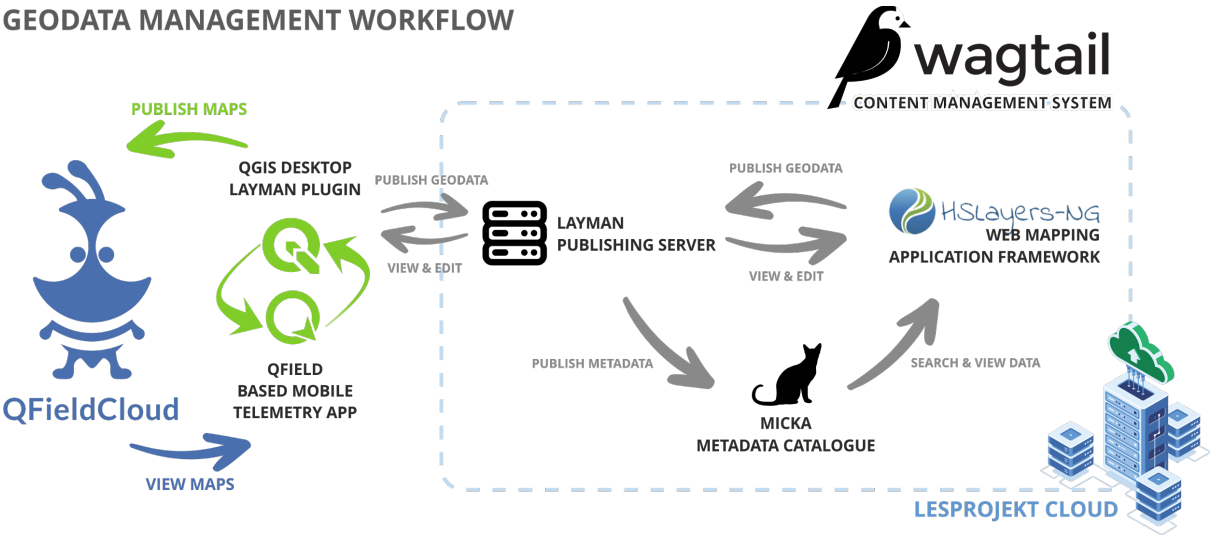

Figure 7: Wagtail management workflow

Wagtail CMS is also one of the cornerstones of the Hub4Everybody https://hub4everybody.com/ platform, which is planned as a means for publishing and sharing pilot data and project results, whether in the form of text documents, but

especially also in the form of map compositions and interactive map applications. Hub4Everybody provides a comprehensive system for publishing web content, as well as any documents, and also includes very strong support for publishing geodata and map outputs. It also provides the ability to fully manage metadata.

5.3 Social Media Accounts (e.g., LinkedIn, Twitter/X, ResearchGate, Facebook, Instagram)

BioClima will maintain an active presence on various social media channels—including **Facebook** (***https://www.facebook.com/BioClimaProject***), **LinkedIn** (***https://www.linkedin.com/company/bioclimaproject***), **Twitter/X** (***https://x.com/BioClimaProject***), **Instagram** (***https://www.instagram.com/bioclimaproject/***), and **ResearchGate (*http://XXX*)**—to reach diverse audiences and facilitate the timely sharing of project milestones, scientific breakthroughs, events, and interactive content. Each platform will be leveraged according to its distinct audience demographics and engagement styles, ensuring targeted dissemination of information.

In addition, BioClima will use open-access scientific repository **Zenodo** [3] (https://zenodo.org/communities/bioclima/) to store and disseminate publications, datasets, and other project resources, thereby further supporting transparency, accessibility, and alignment with the EU's open science objectives.

Social Media KPIs

- **Posting Frequency**: At least two BioClima-related posts/announcements per month on each channel.
  Engagement Rate: A target of at least 5% average engagement rate on posts (e.g., likes, comments, shares).
  Follower Growth: Aim for a total of 2,000+ cumulative followers across all channels by Month 18.
  Platform-Specific Interactions: Minimum of 1,000 impressions per social media post per channel by Month 12.

This integrated digital strategy not only enhances stakeholder participation but also amplifies BioClima's overall visibility and impact, aligning with the Grant Agreement's requirements for measurable outreach and transparent communication.

5.4 Printed and Digital Promotional Materials (Flyers, Posters, Roll-ups)

BioClima will produce a range of promotional materials—flyers, posters, and roll-ups—available in both printed and digital formats. A core promotional package will be issued at project start (M1) and updated at the beginning of each subsequent project year (M13, M25, M37) so that information and visuals remain current. Each annual package will comprise, at minimum, 500 printed flyers/posters, three roll-up banners, and redesigned digital equivalents prepared for website download and social-media dissemination. The materials will communicate the project's key messages, scientific outputs, and stakeholder-engagement opportunities in a concise form and will be deployed systematically at conferences, stakeholder events, exhibitions, and broader public-outreach venues to ensure wide project visibility.

KPIs for Printed and Digital Materials

- **Quantity produced (per major project milestone)**
  • 250 two-sided A4 project flyers (full colour)
  • 200 business-card format contact cards with project name, EU emblem, and QR code linking to the BioClima website
  • ≤ 10 A1 scientific posters for exhibition areas
  • 2 roll-up banners (≈ 85 × 200 cm) for conference backdrops
- Digital PDF versions of the flyer and poster will be released simultaneously on the project website and Zenodo.
- **Event Utilization**: At least one BioClima roll-up or banner showcased at every significant external event (e.g., conference, policy workshop) involving a consortium partner.
- **Digital Downloads**: Track at least 300 downloads or views of digital flyers and posters from the project website or shared platforms (e.g., Zenodo) by Month 12.
- **Stakeholder Feedback**: Collect feedback via short surveys or informal interviews at events, aiming for a 70% positive rating on clarity and relevance of the promotional content.

By adhering to these requirements and KPIs, BioClima ensures both compliance with EU visibility rules and the effective communication of the project's objectives and results to a wide range of stakeholders.

5.5 Press Releases and Media Outreach

BioClima will utilize press releases and strategic media outreach to showcase key project milestones, results, and events. These efforts aim to inform a broad audience—including

the general public, policymakers, industry stakeholders, and scientific communities—about the project's achievements and impact.

KPIs for Press Releases and Media Outreach

- **Press Release Frequency**: At least two major press releases per year, timed around significant milestones (e.g., launch of new monitoring tools, publication of high-impact research, or major stakeholder events).

- **Media Coverage**: Secure coverage in a minimum of five prominent media outlets (including specialized scientific platforms and general news agencies) annually.

- **Online Engagement**: Track website referrals and click-through rates originating from press releases; aim for at least 200 unique visits per press release landing page.

- **Stakeholder Reach**: Measure the number of stakeholders contacted directly through mailing lists or press distribution services, targeting an incremental 10% increase in the mailing list each year.

By incorporating these acknowledgments, disclaimers, and measurable targets, BioClima ensures both visibility and transparency, aligning with EU requirements and maximizing the project's broader societal impact.

6. Dissemination Actions and Materials

6.1 Scientific Publications and Conference Presentations

The BioClima project will disseminate its **scientific outcomes** primarily through **peer-reviewed journal publications**, **scientific reports**, and **presentations** at **international conferences**, symposia, and workshops in fields such as climate resilience, biodiversity monitoring, remote sensing, and AI methodologies. By targeting **high-impact journals** and respected academic platforms, BioClima maximizes visibility, credibility, and the potential for broader scientific collaboration.

KPIs for Scientific Publications and Conference Presentations

1. **Publication Output**
    - At least **10 peer-reviewed journal articles** accepted for publication in high-impact or field-recognized journals by Month 24.
2. **Conference Presence**
    - A minimum of **5 major conference presentations** or poster sessions per year, showcasing findings to both European and international audiences.
3. **Open-Access Availability**
    - 100% of accepted articles made openly accessible via Zenodo (or equivalent platforms) within **6 months** of publication, in compliance with Horizon Europe open science requirements.
4. **Bibliometric monitoring**
    - Track citation counts, altmetric attention scores, and repository downloads for all open-access outputs.
    - Peer-reviewed articles: ≥ 10 citations per article within 18 months of publication; cumulative ≥ 50 citations across all BioClima papers by project month 42.
    - Grey literature (policy briefs, white papers, Zenodo datasets): ≥ 300 downloads and ≥ 100 social-media or news mentions within 12 months of release.

Through these measures, BioClima ensures robust dissemination of scientific knowledge and fosters a culture of open science and collaboration, in line with European Commission guidelines

6.2 Workshops, Training Sessions, and Webinars

BioClima will organize a series of **specialized workshops, training sessions, and webinars** targeting policymakers, researchers, practitioners, and local communities. These activities are designed to disseminate **practical insights**, **innovative methodologies**, and **AI-powered tools** developed by the project, thereby fostering stakeholder capacity, encouraging adoption, and enhancing synergy between climate resilience and biodiversity management efforts.

Integration of E-Learning Platform and AI Tools

- **E-Learning Platform**: An interactive learning environment, integrated with the BioClima website www.bioclima.net featuring step-by-step tutorials, recorded training sessions, and best-practice guides.

- **AI Modules**: Customized AI-driven modules (e.g., predictive analytics, data visualization) enabling participants to engage in hands-on exploration of project methodologies and data.

KPIs for Workshops, Training Sessions, and Webinars

1. **Number of Events**: At least **eight** training events (workshops/webinars) over the project's lifespan, including at least **two AI-specific sessions**.

2. **Participant Reach**: Achieve an average of **30+ participants** per event, spanning multiple stakeholder categories.

3. **E-Learning Engagement**: A minimum of **200 active users** completing one or more AI-driven modules on the e-learning platform by Month 24.

4. **Stakeholder Satisfaction**: Conduct post-session surveys aiming for **≥80% positive feedback** on session relevance and clarity, ensuring continuous improvement of training materials.

By integrating a dedicated e-learning platform and AI-based tools, BioClima's training efforts will help stakeholders effectively apply cutting-edge methods for biodiversity conservation and climate resilience.

6.3 Case Studies, Demonstrations, and Field Visits

The project will conduct **detailed comparative case studies** and **field demonstrations** to showcase real-world applications and tangible results of BioClima's methodologies and technologies. Specifically, seven EU-based case studies will be conducted—covering regions in Finland, Austria, Romania, Czech Republic, the European Arctic, Greece (Crete), and Northern Belgium—alongside at least ten case studies in China. These cross-regional analyses will highlight how BioClima's approaches can be adapted to diverse geographical, ecological, and climatic contexts.

- **Local EU Case Studies**: Focus on varied settings (e.g., boreal forests, alpine terrain, steppe habitats) to assess biodiversity and climate resilience measures under differing land-use practices.

- **Chinese Case Studies**: Target distinct biogeographical regions (e.g., Greater Khingan Mountains, North China Plain, alpine areas), allowing comparative assessments with EU counterparts, particularly for climate adaptation strategies and biodiversity monitoring.

All outputs and findings from these studies will be published on the official project website at **https://www.bioclima.net/**.

KPIs for Case Studies, Demonstrations, and Field Visits

1. **Number of Case Studies**: Completion of seven EU-based and ten Chinese case studies, ensuring diverse coverage of ecosystems and management practices.

2. **Field Visit Attendance**: At least **25** participants per demonstration site, representing policymakers, scientists, local communities, and relevant industries.

3. **Replication Rate**: Minimum of **two** documented instances of best-practice adoption in new regions or sectors, reflecting the practical impact and scalability of project outcomes.

4. **Documentation and Knowledge Sharing**: Publication of case-study summaries and best-practice guidelines on **https://www.bioclima.net/** within **one month** of each study's completion, promoting transparency and broader uptake.

By integrating immersive field activities with robust local analyses, BioClima demonstrates the real-world utility of its biodiversity and climate resilience strategies in both European and Chinese contexts.

6.4 Collaboration with Other Related Projects, Networks, and Platforms

BioClima will actively collaborate and engage with **other related projects** and **international networks**, including **GEO BON**, **EuroGEO BON**, **China GEO BON** [8], **FOCAL Grant Agreement: 101137787**, **Fair2Adapt Grant Agreement: 101188256**, and **GODIGIBIOS**, as well as additional platforms involved in climate resilience, biodiversity monitoring, and environmental observation. Through:

1. **Joint Events and Workshops**: Co-hosted sessions aimed at sharing findings, discussing best practices, and identifying areas for synergy between project outputs.

2. **Shared Dissemination Activities**: Coordinated publication releases, policy briefings, and digital campaigns that underscore common goals (e.g., open-access data, AI-driven analytics).

3. **Cross-Project Networking**: Actively seeking opportunities for knowledge exchange and capacity building, aligning methodological approaches, and enhancing the visibility of EU–China collaborations.

By synchronizing efforts across these international platforms and complementary projects, BioClima aims to amplify the **overall impact and reach** of its dissemination actions, ensuring robust integration of biodiversity and climate resilience strategies into diverse scientific and policy contexts.

7. Exploitation Plan

7.1 Overview of Expected Results (Technologies, Models, Data Services)

BioClima anticipates delivering several **concrete exploitable outputs** that will significantly advance biodiversity and climate monitoring practices, both in Europe and China:

1. **AI-Driven Biodiversity Monitoring Platforms**
    - Integrating **remote sensing**, **in situ data**, and **citizen science** inputs for dynamic tracking of species distribution, habitat conditions, and climate impacts.
2. **Comprehensive Data Fusion Models**
    - Merging **climate**, **biodiversity**, and **land-use** datasets to enable predictive analysis, ecological risk assessment, and scenario-based planning.
3. **Joint EU–China Digital Platform**
    - Offering **harmonized, standardized, and interoperable** biodiversity and climate monitoring data services, fostering international alignment and collaboration.
4. **Innovative EBV and ECV Analysis Tools**
    - Tailored for **vulnerable ecosystems** (e.g., forests, grasslands), these tools streamline the measurement and interpretation of Essential Biodiversity Variables (EBVs) and Essential Climate Variables (ECVs).
5. **Interactive E-Learning Modules and Guidelines**
    - Equipping stakeholders with **step-by-step training**, **decision-support materials**, and **AI-driven** components, ensuring practical adoption of BioClima methodologies and ecosystem management best practices.

By aligning these deliverables with the project's overarching EU–China collaboration framework, BioClima aims to produce sustainable, high-impact solutions that can be readily adapted across diverse ecological settings, ultimately strengthening the global capacity for climate resilience and biodiversity conservation.

7.2 Pathways for Exploitation (Academic, Commercial, Policy Uptake)

BioClima defines multiple, clearly articulated pathways for exploiting the outcomes generated through the project's research and technological development. Each partner maintains its **individual exploitation plan**, provided in an annex to this report, outlining tailored strategies for realizing the value of project outputs within their respective domains. In general, the project's exploitation efforts will focus on three key streams:

1. **Academic**
    - **Open-Access Publications**: Ensuring broad dissemination of BioClima's findings through peer-reviewed journals and open repositories.
    - **Curricular Integration**: Incorporating new methodologies and AI-driven monitoring tools into university courses and training modules, thereby fostering the next generation of climate and biodiversity experts.
    - **Methodological Advancements**: Enhancing scientific approaches to biodiversity monitoring, climate modeling, and data fusion, creating synergies with existing research initiatives.
2. **Commercial**
    - **Industry Partnerships**: Developing collaborations with technology providers, environmental consulting firms, and data analytics companies interested in licensing or co-developing BioClima's tools and platforms.
    - **Market Feasibility**: Conducting targeted market analyses to identify viable commercialization opportunities, focusing on user-friendly solutions for biodiversity and climate resilience.

- **Technology Transfer & Licensing**: Establishing frameworks that facilitate the efficient and equitable transfer of project-developed innovations to commercial partners or spin-off ventures.

3. **Policy Uptake**

    - **Actionable Scientific Insights**: Providing decision-makers with robust evidence and data-driven recommendations, informed by BioClima's integrated monitoring approaches.

    - **Policy Recommendations**: Tailoring guidelines for local, regional, and international agencies, ensuring that biodiversity conservation and climate resilience are mainstreamed into environmental governance.

    - **Stakeholder Engagement**: Promoting continuous dialogue with policymakers and NGOs, aligning BioClima innovations with policy priorities and funding opportunities.

By coordinating these exploitation pathways, BioClima seeks to transform cutting-edge research into impactful actions and lasting benefits across academic, commercial, and policy arenas—solidifying the project's legacy beyond its formal duration.

7.3 Intellectual Property Rights (IPR) and Ownership

BioClima will implement explicit Intellectual Property Rights (IPR) guidelines ensuring BioClima will establish and maintain transparent guidelines for **ownership** and **exploitation** of all project-derived results. This framework will govern rights related to **software**, **data analytics algorithms**, **methodologies**, and **other technologies** arising from the project. By explicitly defining these rules in an internal agreement, the consortium ensures:

1. **Clear Ownership Allocation**: Each partner's contributions and corresponding intellectual property are identified and documented, preventing ambiguities or disputes.

2. **Fair Access and Sharing**: All consortium partners gain appropriate access to BioClima outputs, balancing open collaboration with respect for proprietary interests where needed.

3. **Effective Exploitation**: The guidelines facilitate smooth technology transfer, licensing, or commercial partnerships, thereby enabling long-term sustainability and impact of BioClima solutions.

In doing so, BioClima promotes both **transparency** and **fair access**, ensuring that innovative developments and project outcomes can be leveraged effectively for **sustainable** and **scalable** biodiversity and climate resilience solutions.

7.4 Business Models and Sustainability Approaches

BioClima's long-term sustainability builds on **diversified business models** that cater to distinct stakeholder needs while ensuring continued support and evolution of the project's solutions and platforms:

1. **Open-Access Provision**
    - Publicly accessible datasets and scientific outputs, facilitating transparent knowledge exchange and driving collective innovation.
2. **Commercial Licensing**
    - Formal licensing agreements for specialized technologies (e.g., AI-driven monitoring tools), generating revenue that supports ongoing development.
3. **Service-Oriented Models**
    - Consultancy, training, and technical support—particularly around biodiversity and climate resilience—enabling stakeholders to integrate BioClima methodologies effectively.
4. **Public-Private Partnerships**
    - Collaborative arrangements between research institutions, governmental bodies, and industry players, ensuring continuous resource sharing and operational alignment beyond the project's funding period.

By combining **open-access** resources with **commercial** and **service-based** pathways, BioClima fosters a resilient operational framework that encourages both **innovation** and **sustainability**. These strategic approaches will enable the ongoing refinement, expansion, and real-world adoption of BioClima's solutions, well after the formal conclusion of the project.

7.5 Post-Project Continuity and Follow-Up

Ensuring **long-term relevance** and **sustainable use** of BioClima solutions is paramount. Accordingly, the project will employ the following continuity mechanisms:

1. **Operational Platform Maintenance**
    - Keep core digital platforms (e.g., AI-driven monitoring tools and databases) fully functional and accessible, with routine updates to accommodate advances in technology and data standards.
2. **Ongoing Partner Commitments**
    - Secure formal agreements from key consortium members, industry stakeholders, and policy institutions to continue refining and co-developing BioClima tools and methodologies.
3. **Regular Stakeholder Engagement**
    - Host periodic workshops or online fora to gather feedback, discuss emerging challenges, and promote the exchange of best practices, thus preserving the multi-actor approach beyond the project's initial funding period.
4. **Long-Term Assessments**
    - Conduct scheduled impact evaluations (e.g., at 12, 24, and 36 months post-project) to gauge the adaptability of BioClima outcomes to evolving biodiversity and climate resilience needs, ensuring that solutions remain scientifically robust, user-centric, and policy-relevant.

By aligning these measures with each partner's exploitation plan and fostering continuous collaboration, BioClima will retain a dynamic presence in the research and policy landscape, contributing sustained value to biodiversity and climate resilience efforts well after the project's official completion.

8. Implementation Timeline and Resource Allocation

8.1 Milestones and Deliverables for Communication, Dissemination, and Exploitation

The BioClima project spans **48 months**, with a well-defined timeline structured around specific milestones and deliverables to ensure efficient management of communication, dissemination, and exploitation activities. **Key milestones** include:

- **Month 1–2**: Project kickoff and initial consortium meeting(s), focusing on internal coordination and finalizing the communication plan.
- **Month 3**: Establishment of a cohesive visual identity and confirmation of branding guidelines.
- **Month 4**: Official launch of the BioClima website and social media channels.
- **Month 6**: First wave of dissemination workshops and webinars, introducing project methodologies and engaging core stakeholder groups.
- **Month 12**: Second round of stakeholder-focused workshops, presenting initial findings and updates from early demonstration activities.
- **Month 18**: Third round of capacity-building sessions (e.g., training events or interim results presentations).
- **Month 24**: Mid-term review to assess progress, stakeholder engagement effectiveness, and alignment with project KPIs.
- **Month 30**: Major dissemination push, including targeted policy briefs and industry-focused presentations.
- **Month 36**: Additional synergy event and stakeholder workshop to highlight advanced project outcomes and integration of case study results.

- **Month 42**: Pre-final dissemination round, gathering stakeholder feedback to refine final outputs.

- **Month 48**: Final project results dissemination event and dedicated exploitation workshop, facilitating knowledge transfer, licensing opportunities, and extended uptake of BioClima innovations.

Deliverables—as stipulated in the Grant Agreement—include:

- **Communication & Dissemination Materials**: Flyers, posters, newsletters, social media content.

- **Technical Manuals**: Guidelines on new AI-driven monitoring tools, data fusion methods, and e-learning modules.

- **Policy Briefs & Reports**: Summaries of relevant findings targeted at policymakers, NGOs, and industry.

- **Training & Capacity-Building Resources**: Recorded webinars, workshops materials, and step-by-step tutorials for stakeholders.

- **Case Study Documentation**: Evidence-based insights from comparative analyses in both EU and Chinese contexts.

By following this structured timeline through Month 48, BioClima ensures sustained, high-impact communication, dissemination, and exploitation of project results, reinforcing its overall mission to integrate biodiversity and climate resilience strategies for global benefit.

8.2 Responsibilities of Consortium Partners

Introduction and DCE Management Lead

Within BioClima, **Plan4all (P4A)** serves as the **primary lead** for managing and coordinating all Communication, Dissemination, and Exploitation (CDE) tasks under Work Package 5. By orchestrating multi-partner engagements and ensuring consistent alignment with project objectives, P4A facilitates an integrated strategy that maximizes BioClima's external visibility and long-term impact.

Role Distribution

- **Coordinator and WP Leaders**
    - Collaborate closely with P4A to ensure CDE deliverables meet quality standards and deadlines.
    - Oversee strategic alignment of communication outputs across different work packages, fostering consistency in messaging and exploitation approaches.
- **Research and Academic Institutions**
    - Provide relevant, up-to-date scientific content and data, informing peer-reviewed publications, policy briefs, and other dissemination materials.
    - Offer expert insights to shape high-quality workshop and event content, reinforcing BioClima's academic and scientific footprint.
    - Assist P4A and other partners in preparing exploitation materials that translate cutting-edge research into deployable solutions.
- **Industry Partners**
    - Contribute business acumen to refine exploitation pathways (e.g., licensing, commercialization) aligned with market realities.
    - Provide ongoing feedback on BioClima's tools and methodologies to optimize real-world applicability.
    - Support broader outreach by showcasing practical benefits of BioClima outcomes to industry networks and conferences.
- **Communication Partners**
    - Under P4A's guidance, lead the tactical execution of BioClima's communication plan: social media campaigns, press releases, website updates, and more.

- Organize targeted dissemination events—online (webinars, virtual forums) or in-person (conferences, workshops)—to expand stakeholder engagement.

- Collaborate with academic and industry partners to integrate technical content into accessible, high-impact messaging for diverse audiences.

By leveraging P4A's centralized CDE management and the specialized expertise of each consortium member, BioClima ensures robust and cohesive communication, broad-scale dissemination, and effective exploitation of all project outputs.

9. Monitoring, Evaluation, and Reporting

9.1 Performance Indicators and Targets (KPIs)

Performance Indicators (KPIs) for BioClima's Communication, Dissemination, and Exploitation activities are defined explicitly according to the Grant Agreement, structured per reporting period (Yearly - Y1 to Y4):

Digital Engagement KPIs:

- **Website unique visitors:** Y1: 1,000 | Y2: +1,000 | Y3: +2,000 | Y4: +2,000 (Cumulative: 5,000)
- **Number of website articles and news updates:** 30 per year (Total: 120)
- **Average followers on Twitter/LinkedIn:** 150 new followers per year (Total cumulative: ≥550)
- **Social media posts (Twitter/LinkedIn):** Y1: 150 | Y2: 200 | Y3: 250 | Y4: 300 (Total: 900 posts)
- **YouTube videos produced:** Y1 & Y2: 2 each year | Y3 & Y4: 3 each year (Total: 10 videos)
- **Press releases issued:** 2 per year (Total: 8 press releases)

Scientific and Dissemination Activities KPIs:

- **Scientific publications (journals/international conferences):** Y1: 2 | Y2: 2 | Y3: 3 | Y4: 3 (Total: 10 publications)
- **Presentations at third-party events:** Y1: 5 | Y2: 10 | Y3: 15 | Y4: 15 (Total: 45 presentations)
- **Hosting international conferences or innovation events:** Minimum 2 major events, each with at least 80 participants

- **Stakeholders engaged via webinars/training sessions:** Minimum 100 stakeholders throughout project duration

Case Studies and Policy Recommendations KPIs:

- **Number of comprehensive case studies executed and evaluated:** at least 7 case studies scaled up to EU level

- **Policy recommendations developed and presented:** at least 10 recommendations for the spatial implementation of the Green and Blue Infrastructure Strategy in Europe

- **Evaluated scenarios for climate and biodiversity policy interventions:** at least 3 scenarios evaluated across the EU

Capacity Building and Sustainability KPIs:

- **Online e-learning modules:** At least 4 thematic modules for the BioClima e-learning platform

- **Webinars for stakeholder capacity building:** Series of 12 dedicated webinars focusing on biodiversity conservation and climate adaptation

These structured KPIs facilitate rigorous and transparent progress tracking, ensuring timely adjustments and accountability during annual reporting and periodic project reviews.

9.2 Data Collection Methods and Monitoring Tools

The BioClima project will systematically employ multiple methods and dedicated tools for the accurate collection, monitoring, and analysis of data to evaluate progress against established KPIs. Specifically, the following methodologies will be utilized:

- **Web and Digital Analytics Tools:**

    - Use of **Google Analytics** to regularly track website performance metrics, including the bounce rate, number of unique visitors, session duration, geographic reach, and content engagement.

- **Social Media Analytics** tools to quantify follower growth, engagement rate, post reach, and interactions on platforms such as Twitter, LinkedIn, Facebook, and Instagram.

- **Event and Stakeholder Engagement Monitoring:**

  - Structured **attendance logs** at workshops, webinars, conferences, and training sessions, capturing participant numbers, stakeholder categories, and geographic distribution.

  - **Feedback surveys** and evaluation forms collected post-event to gather qualitative and quantitative stakeholder input on content quality, usefulness, relevance, and satisfaction.

- **Periodic Internal Reporting:**

  - Consortium partners will regularly submit structured progress reports using **standardized reporting templates** provided by the Coordinator and WP Leaders, clearly documenting achievements against defined KPIs and deliverables.

  - Centralized storage and sharing of these reports via the internal project document repository or shared platform to facilitate consortium-wide monitoring and oversight.

- **Academic Impact and Publication Tracking:**

  - Regular collection and analysis of publication records through academic databases (e.g., Web of Science, Scopus, Google Scholar), tracking citation rates, altmetrics, open-access status, and alignment with planned publication targets.

- **Policy and Exploitation Impact Assessment:**

  - Compilation and analysis of policy engagement outcomes, including documented policy recommendations, policy dialogues attended, and adoption evidence by relevant authorities.

  - Tracking commercial exploitation progress through regular industry partner feedback, recording instances of commercial agreements,

licensing arrangements, or spin-off activities.

These clearly defined monitoring methods and tools ensure continuous and reliable evaluation of BioClima's communication, dissemination, and exploitation strategies, enabling informed decision-making and effective project management aligned closely with the Grant Agreement.

9.3 Internal Reporting Mechanisms (Consortium-Level)

The BioClima consortium will implement structured internal reporting procedures aligned with Grant Agreement requirements, ensuring systematic documentation and transparency:

- **Semi-annual Internal Progress Reports:**
  Consortium partners will submit internal progress reports every six months, detailing activities and results related to communication, dissemination, and exploitation (CDE). These reports will serve as inputs for continuous reporting via the EC's SyGMa platform.

- **Continuous Reporting via SyGMa:**
  All dissemination and communication activities, including publications, presentations, workshops, training sessions, and other relevant outputs, will be systematically recorded and regularly updated on the European Commission's SyGMa platform to ensure transparent and timely reporting of results.

- **Regular Consortium Meetings and Teleconferences:**
  Scheduled face-to-face meetings and monthly teleconferences will allow the consortium to collectively review progress, evaluate KPIs, discuss potential improvements, and align future CDE activities with strategic objectives.

- **Annual Comprehensive Reports:**
  An annual comprehensive report consolidating monitoring and evaluation outcomes, including detailed KPI assessments and feedback, will be prepared for internal evaluation and periodic review meetings.

- **Dedicated Collaboration Platform:**
  A secure online collaboration and documentation platform will be accessible to all consortium partners to facilitate centralized documentation, real-time data

sharing, and efficient management of internal reporting processes.

These robust internal reporting mechanisms are designed to maintain accountability, ensure alignment with BioClima's strategic objectives, and comply fully with the Grant Agreement's reporting obligations.

9.4 Continuous Improvement and Corrective Actions

Continuous improvement will be a core element of the BioClima communication, dissemination, and exploitation strategy. Regular evaluations will inform adaptive management and strategy adjustments. Corrective actions will include revisions to communication tools, strategies, and stakeholder engagement approaches, based on monitoring feedback. Consortium partners will proactively identify issues, document lessons learned, and implement necessary adjustments promptly to optimize the project's dissemination impact and sustainability outcomes.

10. Risk Assessment and Contingency Measures

10.1 Potential Risks in Communication & Dissemination Activities

The BioClima project has identified a set of critical risks that could affect the success of its communication and dissemination activities. These risks are documented in the Grant Agreement (Annex 1) and pertain to both operational and strategic dimensions of Work Package 5.

Key Identified Risks:

- **Insufficient stakeholder engagement**, limiting feedback and hindering uptake of project results.
- **Low visibility or limited reach** of dissemination actions due to ineffective strategy or poor channel targeting.
- **Inadequate uptake of training materials**, especially in online or self-guided formats.
- **Limited impact of policy recommendations** due to poor timing, targeting, or alignment with policy frameworks.
- **Communication difficulties** in translating complex technical information into formats understandable by diverse audiences.
- **Technical failures** affecting digital platforms (e.g., website, social media, webinar tools), which could interrupt dissemination flow.

Mitigation Measures:

- Development and use of stakeholder engagement plans, including periodic updates and segmentation by interest and influence level.
- Continuous monitoring of dissemination effectiveness through analytics, with adjustments to communication formats and channels as needed.

- Co-design of training materials with end users and iterative testing to ensure relevance, accessibility, and usability.

- Early and sustained engagement with policy stakeholders, including consultation during the drafting of policy briefs.

- Production of tailored communication materials (e.g., infographics, summary documents, multilingual content) adapted to audience needs.

- Deployment of backup hosting, redundant systems, and continuous technical monitoring to mitigate platform-related risks.

Task Coordination Context:
The **coordination of risk mitigation within Task 5.1**—focused on the development and implementation of the communication and dissemination strategy—is led by **Plan4all (P4A)**. P4A is responsible for overseeing the execution of dissemination actions under Task 5.1 and contributing to cross-cutting risk monitoring and reporting. Oversight of WP5 as a whole remains with the designated WP Leader, as specified in the Grant Agreement.

These mitigation strategies will be reviewed regularly by the WP5 lead and task-level coordinators to ensure responsiveness to emerging issues and alignment with BioClima's strategic dissemination objectives

10.2 Potential Risks in Exploitation and IPR

Identified Risks

The BioClima project recognizes the following key risks that may affect the successful exploitation of results and the management of Intellectual Property Rights (IPR), as outlined in the Grant Agreement (Annex 1, Section 2.2.3):

- **Delays or failure in technology development and implementation**, potentially impacting timely availability and quality of exploitable results.

- **Inadequate commercialization interest** from industry partners, limiting the practical uptake and market deployment of developed solutions.

- **Intellectual Property Rights (IPR) disputes** among consortium partners concerning ownership, access rights, or licensing conditions.

- **Limited market readiness and user acceptance** of tools, platforms, and services developed within the project.

- **Challenges in securing post-project funding or continuity**, which may hinder the long-term sustainability and operationalization of BioClima outputs.

- **Mitigation Strategies**

To address the above risks, the following mitigation measures have been established:

- A **staged technology development process** will be applied, with intermediate validation milestones and systematic tracking of Technology Readiness Levels (TRLs), ensuring timely implementation of tools and services.

- **Industry involvement** will be ensured throughout the development and exploitation phases, including direct engagement in co-design, pilot testing, and feedback loops. Market feasibility will guide business model development.

- IPR management is governed by the **Consortium Agreement**, which specifies ownership, access rights, licensing terms, and procedures for joint results. Pre-defined model contracts reduce the risk of disputes.

- A **user-centered co-development approach** will be implemented through case studies and field demonstrations in both EU and Chinese contexts, improving product usability and acceptance.

- Each partner has developed an **individual exploitation plan** (annexed to this report) outlining post-project responsibilities. Long-term sustainability will be supported via public-private partnerships, licensing options, and continued platform maintenance.

These mitigation actions are implemented under the oversight of the WP5 Lead and are consistent with the BioClima exploitation framework and the conditions established in the Grant Agreement.

11. Conclusions and Next Steps

11.1 Summary of Key Points

This deliverable outlines BioClima's comprehensive strategy for **communication, dissemination, and exploitation (CDE)**, in accordance with the objectives and obligations defined in the **Grant Agreement (Annex 1, Sections 1.1, 1.2, and 2.2.3)**. The plan emphasizes targeted stakeholder engagement across Europe and China, supports international scientific and policy cooperation, and details actions that ensure long-term sustainability and visibility of project outcomes.

Responsibilities for CDE activities are distributed in line with the task structure in **Work Package 5**, with **Task 5.1** led by Plan4all and other tasks (e.g., exploitation planning and stakeholder engagement) coordinated by the designated WP5 lead and supporting partners. The strategy includes clear performance indicators (KPIs), a structured timeline aligned with project milestones, and monitoring and reporting mechanisms consistent with the continuous reporting obligations under the **SyGMa platform**.

In line with the BioClima DoA and the Horizon Europe requirements, this plan integrates:

- Transparent internal reporting processes
- Open-access dissemination commitments (e.g., via Zenodo and EOSC-aligned platforms)
- Defined IPR and exploitation frameworks
- Coordinated activities across scientific, commercial, and policy domains

Together, these measures establish a robust foundation for achieving the project's communication and exploitation goals while supporting its strategic contribution to biodiversity and climate resilience through EU–China collaboration.

11.2 Plan for Updates and Revisions

The communication, dissemination, and exploitation plan will be reviewed annually and updated accordingly. Regular consortium meetings and feedback loops with stakeholders will facilitate ongoing refinements, ensuring the strategy remains aligned with evolving project needs and external developments.

11.3 Final Remarks on Alignment with Project Goals

The activities and strategies presented in this document are fully aligned with the **core objectives and expected impacts** defined in the BioClima Grant Agreement (Annex 1, Sections 1.1 and 1.2). They directly support the project's mission to advance integrated biodiversity and climate monitoring by delivering harmonized tools, data services, and policy-relevant outputs across both European and Chinese ecosystems.

The CDE plan reinforces BioClima's contribution to:

- The operationalization of **Essential Biodiversity Variables (EBVs)** and **Essential Climate Variables (ECVs)**,
- The deployment of **AI-driven monitoring tools**,
- The development of a **joint EU–China digital platform**, and
- The promotion of **policy uptake and stakeholder-informed decision-making**.

Through structured dissemination, stakeholder engagement, and tailored exploitation pathways, the project ensures the **long-term usability** and **impact** of its results. Continued adherence to this strategic framework will facilitate not only the fulfillment of BioClima's formal deliverables but also its **legacy contribution** to international environmental monitoring, EU–China scientific cooperation, and sustainable ecosystem governance beyond the project's duration.

Annexes

No.	Individual Exploitation Plan	Description (M4 - baseline)	Description (M18)	Description (M42)
1	Organisation name:			
2	What do you want achieve with BioClima? (Brief description your goals)			
3	Key outputs to exploit (e.g., products, technologies, data)			
4	Who will be benefit from these outputs? (e.g., customer, researchers, policymakers)			
5	How do you plan to use these outputs? (e.g., commercialization, research, policy influence)			
6	Any IPR concerns? (Yes/No, and brief explanation if applicable)			
	Your involvement and membership in:	**Description (M4 - baseline)**	**Description (M18)**	**Description (M42)**
1	International global initiatives, associations and organizations (e.g., GEOBon, OGC, GEO ..)			
2	International governmental bodies (e.g., controlling, working and advisory bodies of the EU, UN, OSN, ... UNFCCC, UNCCD and CBD ..., standardization organizations EN, ISO, ..)			
3	National or regional associations and interest organizations, NGO, CSOs			
4	National governmental bodies (e.g., controlling, working and advisory bodies of your country, ..., standardization organizations)			

Example of the Individual Exploitation Plan

Reference

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