



NATURANCE

Nature for insurance,
insurance for nature

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the critical risks analysis**

WP6 – Coordination and Management

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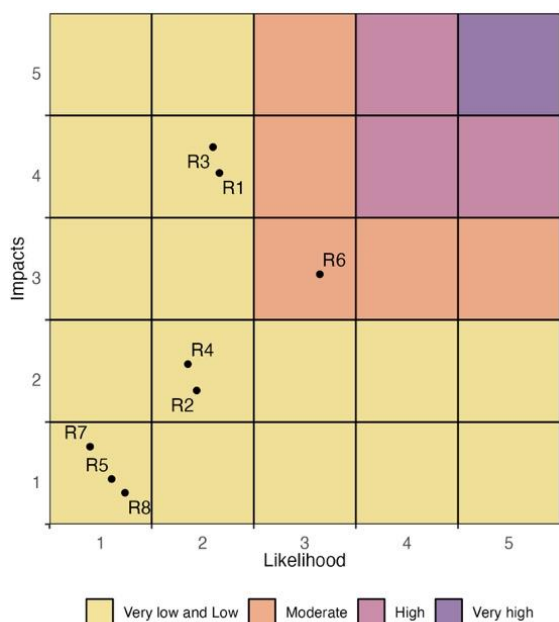
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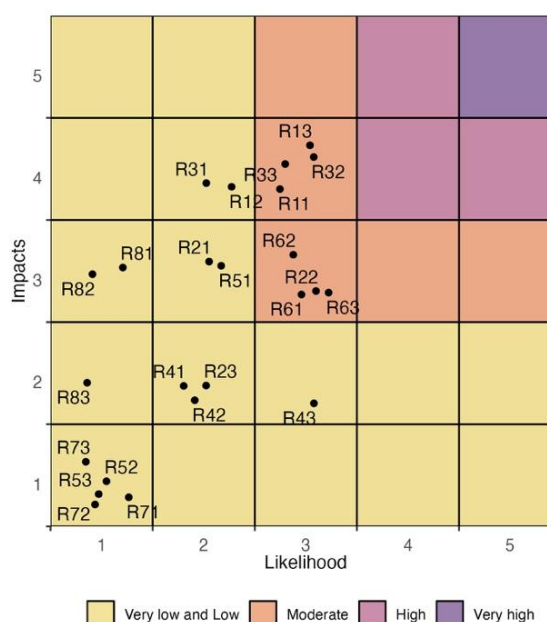
Executive Summary

Research projects navigate uncharted territories with uncertain outcomes and unclear paths to their intended impacts. Contingency risk management helps in identifying potential obstacles and planning for unexpected events, ensuring that the project can adapt and continue moving forward even when unforeseen issues arise. Contingency risk management is a part of the project implementation strategy. It involves identifying, assessing, and preparing for potential risks that could affect the project’s timeline, performance, budget, and overall impact. Within NATURANCE, contingency risk management is a key component of Work Package Six (WP6), led by CMCC as the coordinating entity of the project. It falls under the ongoing monitoring and discussions of the Management Board (MB) and, when necessary, the deliberations of the Project Steering Committee (PSC). In this framework, WP leaders regularly provide updates on challenges that cannot be effectively resolved within their respective WPs.

At the beginning of the project, eight contingency risks were identified that could potentially impact the implementation and the attainment of the project's outcomes and impacts. These risks are spread across the core activities of the project. This report evaluates the extent to which these contingency risks have materialized to date. Building upon the assessment, we have refined and detailed 24 subcategories of contingency risks. The reassessed risks will continue guiding the implementation of project activities and management decisions. Some risks have been re-evaluated (upgraded) from the initial assessment, driven by our understanding and confidence in the consortium's strengths, knowledge and skills, commitment, and networked capacity.



Initial 8 categories of contingency management risks



Revised 24 subcategories of contingency risks along initial 8 risk categories



1 Introduction

The NATURANCE project builds upon thoughtfully designed coordination and support activities, adequate human and financial resources, and various complementary conditions favouring a sound and efficient project implementation. **Contingency risk management** is a part of the planning strategy. It **involves identifying, assessing, and preparing for potential risks that could affect the project's timeline, performance, budget, and overall impact**.

Importance of contingency risk management. NATURANCE explores risk, financial, and business model innovations, transforming how nature-based solutions are designed, evaluated, implemented, and assessed in their contribution to building more resilient societies and healthier ecosystems. This comes with certain levels of uncertainty and risks which affect the implementation of project activities. Contingency risk management identifies potential challenges that could compromise the success of the project. It helps the NATURANCE team to devise risk management solutions in advance and learn from previous experiences. It also helps to allocate resources such as time, personnel, and financial means efferently, thereby preventing cost overruns and delays. Finally, contingency risk management helps in making well-informed decisions and provides a framework for action should the pre-identified risks materialize. It ensures that the project team is well-equipped to handle uncertainty in a responsible manner.

Contingency risk management in the NATURANCE project framework. Contingency risk management is a key component of Work Package Six (WP6), led by CMCC as the coordinating entity of the project. It falls under the ongoing monitoring and discussions of the Management Board (MB) and, when necessary, the deliberations of the Project Steering Committee (PSC), which acts as a collective decision-making body. In this framework, WP leaders regularly provide updates on challenges that cannot be effectively resolved within their respective WPs. Contingency risks are addressed in the context of reports and deliverables specific to individual WPs and through overarching principles like quality assurance of project outputs and periodic assessment reviews. This report contributes to the periodic monitoring efforts and commitment to sound contingency risk management for the project.

Initial assessment of the contingency risks. At the beginning of the project, **eight contingency risks were identified** as potentially impacting project implementation and the achievement of the project's outcomes and impacts. These risks extend across the core activities (and the underlying work packages WPs) of the project. Some of these risks have materialized, although with limited impact, while others have proven to be inconsequential or hypothetical.

- **Engagement with Knowledge Networks (R1).** NATURANCE is working closely with various **knowledge networks** operating in the realms of nature-based solutions (NbS) advocacy, climate risk and adaptation assessment, financial innovation, and regional and local resilience and climate adaptation. Engaging effectively with these networks



is essential for tapping into specialized expertise, sharing insights, and devising innovative but feasible solutions. The contingency risks include partial engagement from these networks, potentially resulting from conflicting priorities or misalignment with the project's goals. Such scenarios could restrict the scope of knowledge, awareness, and commitment that we aim to orchestrate.

- **Interest and Support from Financial Organizations (R2).** NATURANCE is investigating a range of nature-based insurance and investment in instruments, including insurance for ecosystem services and adaptations of conventional insurance models to incorporate individual risk reduction strategies through Nature-Based Solutions (NbS). Financial organizations, including investors, insurers, and insurance brokers, play a pivotal role in conceptualizing these instruments, evaluating their operational viability, and ultimately introducing them to the market. A potential risk is their limited interest or involvement, which could stem from scepticism about the instruments' viability, investment returns, or alignment with their business priorities, thereby diminishing the project's impact.
- **Collaboration with Regional Administrations (R3).** Regional and local governments, especially those engaged in comprehensive adaptation programs like the EU Mission on Adaptation to Climate Change, are primary beneficiaries of the project's outcomes and crucial for the practical deployment of these instruments. Their active participation in project activities and interest in the results are essential for raising awareness, facilitating favourable governance and regulatory frameworks, and leveraging synergies with current adaptation efforts. Insufficient engagement from these entities could lead to a low demand for and slow adoption of the solutions developed by the project, or obstacles in implementing the project outcomes at the local or regional level.
- **Conflicts of Interest Among Knowledge Networks (R4).** NATURANCE brings together various epistemic communities, each with its own objectives, perspectives, social norms, and practices. Although at first glance the collaboration between them appears mutually beneficial, it is not guaranteed that all have the same perceptions of what constitutes equitable solutions and how to pursue them. Contingency risks may arise from misaligned goals, conflicting priorities in activities and resource allocation, disputes over the ownership, use, and dissemination of project insights, and competition for recognition of contributions. Conflicts can also arise from the use of different methodologies and standards, confidentiality principles about what can be shared and when, and perceptions of imbalance in the distribution of workloads and benefits.
- **Challenge of Inconclusive Evidence (R5).** There is a broad consensus on the preference for Nature-based Solutions (NbS) over traditional engineering approaches for disaster risk reduction and climate adaptation, and their additional environmental



and social benefits. NATURANCE focuses on closing the financial gap for NbS implementation and explores how insurance and investment mechanisms can support NbS. However, concerns persist regarding whether NbS can meet safety requirements for human life and property as effectively as other interventions, along with potential adverse social impacts, such as gentrification, or ecosystem disbenefits. NATURANCE aims to enhance the knowledge base, demonstrate efficiency, and, by addressing evidence doubts, foster stakeholder support, funding, and wider acceptance. This is pursued through literature and desk reviews, surveys, interviews, and by enhancing knowledge and experience sharing.

- **Post-Pandemic Restrictions (R6).** The project was conceived during the COVID-19 pandemic, which imposed restrictions on travel and interpersonal interactions. Although the pandemic emergency has officially concluded, other disruptive factors could have similar effects, such as a slow post-pandemic rebound, evolving conditions of collaboration, geopolitical conflicts that restrict travel, or shifts in policy and business priorities. Such disruptions can affect project timelines, impede fieldwork, hinder in-person community engagement, and complicate travel for project-related activities, resulting in delays or modification of the project implementation.
- **Project Management Risks (R7).** Many factors can influence the implementation of project activities and the allocation of resources. Examples of traditional contingency risks include high staff turnover among project partners, the management and distribution of efforts over time, the timing of significant project events and activities, or inflationary pressures. These, along with other unexpected challenges, may arise, resulting in delays or the requirement of more substantial resources than initially anticipated.
- **Participation of UK Partners (R8).** When the project started in 2022, the UK had not yet achieved full association with the EU Horizon Europe Program, due to slow progress in the negotiations of post-Brexit relations between the EU and the UK. In response to this situation, UK Research and Innovation¹ (UKRI) stepped in to provide guarantees that matched the research funds allocated to UK partners through the EU's competitive research evaluation process. While the EU withdrew funding for UK partners, UKRI supplemented the same level of funding, independent of the EC's contribution to the project. This meant for the project consortium that the UK partners became associated entities without a budget, while the project critically depended on the contributions from these partners to fully achieve its goals. Eventually, the UK and EU signed an agreement finalizing the UK's association with Horizon Europe and

¹ UK Research and Innovation (UKRI) is a non-departmental public body of the Government of the United Kingdom that directs research and innovation funding. <https://www.ukri.org/>



Copernicus in December 2023². As of 1 January 2024, the UK became an associated country with Horizon Europe³. However, this agreement is not retroactive, and the funding of the project partners from two distinct funding bodies, each with its own rules and principles, continues to pose a contingency risk.

The initial assessment of the aforementioned eight contingency risks resulted in ratings of low to moderate risk levels, as illustrated in Figure 1 Initial assessment of the contingency risks. The risk evaluation was conducted using a scale from 1 to 5, ranging from very low, low, moderate, high, to very high risks. This scale was based on the likelihood of risk occurrence and the potential impacts of these risks. Based on the combination of risk likelihood and impacts, the graph's areas were divided into five combined risk categories, following the same scale as that used for likelihood and impacts. From Figure 1 Initial assessment of the contingency risks, it is evident that initially, all risks except R6 (*Post-pandemic restrictions*) were considered low or very low in terms of both likelihood and impacts, and they were associated with well-designed measures to address them. The potential impacts of R1 (*Engagement with Knowledge Networks*) and R3 (*Collaboration with Regional Administrations*) were considered high. However, when combined with the consortium's capacity to prepare for and manage them, their overall risks were deemed low. Other contingency risks (R5 *Challenge of Inconclusive Evidence*, R7 *Project Management Risks*, and R8 *Effective Participation of UK Partners*) were classified as very low for the same reasons.

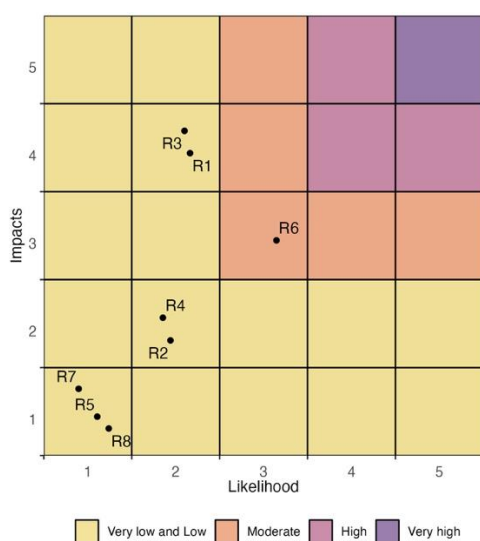


Figure 1 Initial assessment of the contingency risks

Legend. List of contingency management risk categories

- R1 Engagement with Knowledge Networks
- R2 Interest and Support from Financial Organizations
- R3 Collaboration with Regional Administrations
- R4 Conflicts of Interest Among Knowledge Networks
- R5 Challenge of Inconclusive Evidence
- R6 Post-Pandemic Operational Restrictions
- R7 Project Management Risks
- R8 Effective Participation of UK Partners

Purpose and structure of this report. In this report, we revisit the initial contingency risks and the strategies to deal with them. The revised strategy accompanies and complements the Intermediate Societal Impact Assessment (deliverable D6.3) and sets the stage for a well-informed periodic management report. The report builds upon previous discussions in

² <https://www.gov.uk/government/publications/horizon-europe-and-copernicus-programmes-2023-uk-eu-agreement-explainer/horizon-europe-and-copernicus-programmes-2023-uk-eu-agreement-explainer>

³ https://ec.europa.eu/commission/presscorner/detail/en/IP_23_6327



the Management Board meetings and the round of bilateral meetings with all partners. It is meant to prepare the coordination and management choices for the period up to the end of the second reporting period and beyond.

The report is structured as follows:

- **Section 1** (this section) explains the contingency risks and risk management strategies in place so far. It introduces the eight categories of risks identified in the proposal and the Grant Agreement.
- **Section 2** revisits these eight categories and refines them into three subcategories of risks, resulting in 24 fully assessed and elaborated contingency risks. Each subcategory is explained, and the level to which the identified risks have been encountered is described. We reassess (upgrade) some contingency risks compared to the initial assessment, driven by our confidence in the consortium's strengths, knowledge and skills, commitment, and networked capacity.
- **Section 3** summarizes the risks and explains the next steps, including the use of this report and the identified strategies for the next implementation phase.



2 Contingency risks assessment and revised strategy

2.1 Engagement with Knowledge Networks (R1)

A key aspect of the NATURANCE project is its commitment to closely collaborate with knowledge networks (KNs) across various domains of policy and practice. The term "network" is preferred over (knowledge or epistemic) "communities" to better reflect the composition of these entities—made up of numerous organizations working across organizational boundaries to achieve a shared goal for which the "network" was established in the first place. We acknowledge that there is a fluid transition between a single organization with an extensive network of collaborating partners and a network formed explicitly as such. As part of our engagement strategy, we prioritize networks but also collaborate with single organizations that are part of larger, more or less formalized collaborative networks. The project has established methods to facilitate the engagement of KNs. From the organizational perspective, project partners and specific individuals within their organizations serve as "network champions" and constant contact points for network engagement. In project events such as Festivals, which include support for active participation through travel and accommodation cost reimbursement, we ensure there is ample space for Knowledge Networks (KNs) to showcase their work and activities. These events provide opportunities for KNs to contribute to ongoing discussions, fostering a collaborative and inclusive environment. In the revised list of contingency risks below, we have upgraded the likelihood of some instances from **low** to **moderate**.

- **Obstacles to Enrolment** (R11). During the proposal and grant agreement preparation phase, we compiled an initial list of knowledge networks (KNs) that were identified as beneficial for the project's objectives. Throughout the initial phase and continuously thereafter, we have actively reached out to these KNs to establish a basis for mutually beneficial collaboration. This process involved explaining the project's intended outcomes/impacts and demonstrating their alignment with the goals of single KNs. While some KNs have become inactive or operated with reduced intensity, others have embraced the opportunity for collaboration and have become closely affiliated with the project. Notably, some of these have evolved into our flagship network partners, distinguished by their track record of successful collaborations and clear guidelines for working with initiatives like NATURANCE. We acknowledge the importance of continuously seeking new network partners and persistently engaging with those previously unresponsive or less engaged. (**Moderate** likelihood, **High** impact).
- **Decreasing Engagement** (R12). Knowledge networks periodically reassess their priorities, and as a result, their focus on initially agreed themes may not remain constant. NATURANCE needs to remain adaptable and responsive to these changes and continuously identify ways how to contribute to networks' priorities and periodically revised outputs. It is only through this adaptability that collaboration with NATURANCE can stay relevant and impactful, fostering deeper engagement. Moreover, maintaining



effective collaboration requires active participation of NATURANCE team members in KNs events or activities. This involves a greater amount of work and personal commitment than initially anticipated. This pays off, and we have managed to assist some KN in the creation and, in some cases, leading specialized work groups or task forces, and strengthening their capacities. (**Low** likelihood, **High** impact)

- **Limited Participation Intensity** (R13). Knowledge networks primarily rely on the efforts of their individual members and often have few or very limited resources to sustain their activities and infrastructure. This gap is frequently bridged by the personal, often in-kind, contributions of the members. NATURANCE strives to support these networks by covering costs for attending the project's events, but aligning this with their prior professional commitments can be challenging. While participating in virtual project meetings is more feasible, securing their active involvement in project festivals proves to be more difficult. To address this, NATURANCE has earmarked portions of its travel and accommodation budgets for KN representatives and launched a comprehensive campaign to recruit participants. However, the initial experience in organizing the first in-person festival suggests that this strategy alone may not be enough. (**Moderate** likelihood, **High** impact).

2.2 Interest and Support from Financial Organizations (R2)

The primary objective of NATURANCE is to investigate the feasibility and practical aspects of innovative investment and insurance mechanisms that capitalize on positive ecosystem services and generate additional funding for the deployment of nature-based solutions. A close involvement of financial organizations and networks is vital for this end. The collaboration with these organisations is critical both for the specialized knowledge that informs the design of the nature-based investment and insurance solutions (NBIS), as well as for their integration into operational schemes. To this end, NATURANCE collaborates with a wide range of financial entities, including insurance companies and their umbrella organizations, financial regulators, and other financial institutions, to ensure that these innovative mechanisms are both theoretically sound and practically applicable.

The cultural shift toward recognizing the value of insurance combined with nature-based solutions represents a transformative change in how we approach environmental sustainability and risk management. As awareness grows about the interconnectedness of ecosystems and economic health, there is a gradual but significant move towards valuing insurance mechanisms that incorporate nature-based solutions. This paradigm shift underscores the understanding that investing in and protecting natural assets not only enhances resilience to environmental risks but also offers tangible financial benefits. By integrating these solutions into insurance models, we encourage a more holistic view of risk management that aligns economic incentives with environmental conservation, fostering a more sustainable and resilient future. This evolving mindset is pivotal in driving forward-



thinking policies and practices that bridge the gap between ecological stewardship and financial risk mitigation.

- **Recognition of business case** (R21). NATURANCE promotes a cultural shift that emphasizes the understanding that investing in and protecting natural assets not only boosts resilience to environmental risks but also provides tangible financial benefits. The nature-based investment and insurance solutions foster a clear alignment of economic and financial incentives with environmental conservation. This approach extends beyond offering financial services like insurance to contributing to the delivery of public goods, such as enhanced resilience. This, in turn, helps preserve the availability and affordability of insurance which, in some places as a result of increased risk, may not be viable anymore. However, while there is growing interest in exploring the business case for nature-based insurance and investment solutions, this is far from becoming mainstream within green finance. Changing this is both an outcome and the necessary precondition for NATURANCE. In other words, project teams must build a compelling case for nature-based insurance solutions (NBIS) to encourage financial organizations to engage actively within innovation financial labs, set to demonstrate convincingly that these solutions are indeed viable and beneficial. Our incremental strategy builds upon working closely with those who have recognised the NBIS as a viable business case or are inclined to expand their field of operation. Within the broader green finance agenda, there are complementary initiatives that support these shifts, including the Task Force on Nature-related Financial Disclosures⁴, the European Investment Bank's workstream⁵ on NbS, and the United Nations Environment Programme Finance Initiative's Principles for Sustainable Insurance⁶ (PSI). These initiatives bolster the movement towards integrating nature-based approaches in financial strategies. NATURANCE implementation plan is robust on this point and is designed around building a strong case for NBIS and fostering wider recognition. (**Low** likelihood, **Moderate** impact).
- **Endorsement of results** (R22). To realize the desired outcomes and impacts, the project relies on widespread support for the design principles of Nature-Based Insurance Solutions (NBIS) and the adoption of shared metrics to evaluate their effectiveness. Given the project's strategy to engage financial organizations and collaborate across various cases (refer to section 2.3) to examine how NBIS can be conceptualized and implemented, we are confident in achieving this objective. Financial KNs are closely involved in and contribute to the financial laboratories. Providing concrete examples of NBIS schemes embedded in real-world case studies aims to illustrate their tangible

⁴ <https://tnfd.global/>

⁵ Hudson, G., Hart, S., Verbeek, A., 2023. Investing in nature-based solutions: state-of-play and way forward for public and private financial measures in Europe. EIB, Luxembourg.

⁶ <https://www.unepfi.org/insurance/insurance/>



benefits, as well as necessary preconditions for their deployment. (**Moderate** likelihood, **Moderate** impact).

- **Changing regulatory and compliance rules (R23)**. Changes in policy and regulatory compliance rules play a dual role in the adoption of NBIS. Risk disclosure regulations can provide a strong impetus by setting standards and incentives that align financial practices with environmental sustainability goals. For example, regulations that recognize the value of ecosystem services in risk assessment and management can encourage insurers to integrate NBIS into their portfolios. However, unclear policy and regulatory developments may pose significant challenges. Compliance costs and the uncertainty associated with navigating new rules can act as barriers to entry for financial institutions considering NBIS. For example, it is uncertain how quickly the EU Nature Restoration Law⁷ will be adopted, or if it will be adopted at all. This uncertainty poses a challenge in planning and implementing NBIS, as the regulatory environment influences both the feasibility and attractiveness of such investments. Although the drivers related to policy and regulatory changes are beyond the control of the NATURANCE project, we are closely monitoring these developments. However, their direct impact on our activities is limited. Nevertheless, the project is exploring various approaches to promote broader recognition of the role that NBIS can play in transformative adaptation, aiming to advance understanding and implementation despite external uncertainties. (**Low** likelihood, **Low** impact).

2.3 Collaboration with Regional Administrations (R3)

NATURANCE is set to collaborate closely with local and regional administrations involved in the EU Mission for Adaptation to Climate Change and contribute to their efforts. Since the project's inception, Mission Adaptation has funded various projects that focus on orchestrating and demonstrating transformative nature-based strategies. It has also established the Mission Implementation Platform (MIP4Adapt) and initiated projects aimed at enhancing and standardizing climate risk assessment at the regional level (CLIMAAX), as well as using improved climate risk knowledge in insurance contexts (PIISA and SOTERIA). We have formed strong working relationships with these projects and the regions they support. This collaboration is a strategic component of our effort to foster partnerships between local and regional public organizations and the insurance sector. It also serves to encourage practical applications of NBIS and advocate for a nature-positive economy. Despite these close relations, there are various factors that may restrict the capacity of local and regional governments to investigate and implement NBIS.

⁷ The Nature Restoration Law (NRL) is a key element of the EU Biodiversity Strategy, which calls for binding targets to restore degraded ecosystems, particularly those with the most potential to capture and store carbon, and to prevent and reduce the impact of natural disasters.

https://environment.ec.europa.eu/topics/nature-and-biodiversity/nature-restoration-law_en



- **Scale of Ambition (R31).** Governments often encounter a disparity between their environmental ambitions and the available resources or policy support necessary to achieve them. Due to frequently limited resources, governments may lean towards simpler, fully publicly funded solutions like environmental taxes or Payments for Ecosystem Services (PES). Furthermore, many regional and local governments lack the experience or capacity to collaborate with the private sector, and such partnerships can be further complicated by intricate regulations governing internal market competition. There is a risk that governments may prioritize simpler, more straightforward solutions over those that are more complex. (**Low** likelihood, **High** impact).
- **Misaligned scheduling (R32).** Governments with ambitious goals and broad societal support for advancing adaptation efforts may first need to focus on improving their understanding of climate risks before turning to identify opportunities to reduce and manage them. Additionally, while many of Mission Adaptation's orchestrators focus on transformative adaptation using NbS, the relevant financial and business innovation activities are scheduled to occur in the latter stages of the project and program implementation, after the conclusion of the NATURANCE project. Finally, even for those regions that are prepared to explore schemes with NATURANCE within the planned timeframe, the duration of the financial labs may not be long enough to fully engage their constituencies. Consequently, the contingency risk is that these regions may not fully benefit from the collaboration with NATURANCE within the given time horizon. (**Moderate** likelihood, **High** impact).
- **Enabling business conditions and capacity (R33).** Adoption and use of NBIS depend on favourable business climates, technical know-how, entrepreneurial management skills, and the infrastructural capabilities of local and regional governments. Scaling up successful small-scale pilots to larger, more impactful projects requires a supportive legal framework, conducive market conditions, and robust institutional capacities, among other enabling conditions. The governments may be short of personnel with specialized skills or lack the mandate to experiment innovative solutions. The contingency management risk involves local and regional governments not fully taking ownership of the process of exploring NBIS. Instead, they may act merely as stakeholders with little or no commitment to actively driving the exploration and truly implementing the schemes on the ground. (**Moderate** likelihood, **High** impact).

2.4 Conflicts of Interest Among Knowledge Networks (R4)

NATURANCE collaborates with a variety of knowledge networks, each with its own perspective on the utility, purpose, and design of nature-based solutions, as well as the corresponding insurance and financial mechanisms to support them. Misaligned priorities, interests, and ethical frameworks could negatively impact the depth of collaboration and the willingness to adopt the results achieved collaboratively. Managing the contingency risks stemming from these divergences requires meticulous planning, transparent



communication, and the adoption of mutually agreed-upon principles. NATURANCE has worked to establish a shared understanding of expectations, clearly defined roles, open dialogue, and transparent terms of reference. Thus far, these risks have not materialized tangibly but may have been concealed by a lower level of engagement. It is conceivable that these divergences will become apparent later, particularly when discussions turn to the shared metrics and common design principles for insurance and investment instruments.

- **Conflicting Goals and Interests (R41).** Each Knowledge Network (KN) brings its unique expectations to the collaboration with NATURANCE, which might not fully align with NATURANCE's main goals or could be partly incompatible with those of other KNs. For instance, networks specializing in climate risk assessments might prioritize rigorous scientific methods and validation metrics to enhance understanding of how risk levels change as a result of climate change, or how cutting-edge climate forecasts contribute to understanding these changes. In contrast, networks comprising cities and regions may be more interested in developing certified metrics to track adaptation progress or sharing knowledge about successful solutions. Financial networks, on the other hand, may emphasize demonstrating the tangible aspects of risk and the effectiveness of risk reduction strategies. Consequently, the definition of valuable knowledge, including the technical and ethical standards it should meet, may vary among the networks. The contingency risks include divergences regarding what constitutes a sound assessment, leading to varying levels of willingness to adopt shared principles and metrics. (**Low** likelihood, **Low** impact).
- **Responsibility and Ethical Issues (R42).** NATURANCE has to navigate a complex landscape of responsibility and ethics. Concerns may revolve around ensuring that the benefits derived from NBIS are distributed equitably among all stakeholders, including communities directly affected by the interventions. Management of intellectual property rights (IPR) involves establishing clear guidelines for the ownership and sharing of intellectual property related to jointly developed solutions. Ecosystem restorations and NbS may inadvertently exacerbate inequalities or adversely impact vulnerable communities. These consequences need to be identified, assessed, and counteracted, ensuring that explored solutions prioritize environmental justice and do not disproportionately burden marginalized groups. Addressing these issues is crucial to maintaining the integrity of the project. (**Low** likelihood, **Low** impact).
- **Market Reception and Practicality (R43).** The success of NBIS does not solely depend on their technical efficacy and feasibility but also on their market reception. Contingency risk consists of situations in which a market might not be prepared or receptive to these ground-breaking solutions. This may result from a low understanding or lack of trust in how these solutions operate and the advantages they offer. Market operators perceiving NBIS as complex, expensive, or logistically challenging to implement may prefer simpler or more conventional approaches. Also, if these solutions do not align with established



practices or if adapting systems to accommodate them proves too cumbersome, adoption rates will remain low. In other words, if NBIS are not designed with real-world implementation in mind and do not seamlessly integrate into existing workflows and processes, they may struggle to gain traction. (**Moderate** likelihood, **Low** impact).

2.5 Challenge of Inconclusive Evidence (R5)

Gathering, reviewing, and sharing evidence about innovative insurance and investment solutions represent the cornerstone of our work, which is crucial for the project's success. The project work plan is designed to systematically review evidence on the performance of nature-based insurance solutions (NBIS) – focusing on risk reduction and additional benefits (work package WP4), as well as the necessary policy and governance prerequisites (also WP4). Continuous literature and desk reviews conducted within these work packages are essential for monitoring new research and informing the innovation laboratories undertaken in WP2. Previously, there were doubts about whether nature-based solutions (NbS), despite their numerous advantages and overall benefits, are an appropriate area of application for insurance and other financial instruments. NATURANCE is committed to providing unbiased research, tailored to the specific contexts in which NbS are designed and planned for implementation.

- **Recognition of Advantages** (R51). Undoubtedly, nature-based solutions confer numerous benefits ranging from risk reduction and prevention to biodiversity conservation, carbon sequestration, and enhancement of social well-being. By focusing on NbS role in achieving sustainable environmental and economic outcomes, NATURANCE seeks to build a compelling case for their broader adoption. Our research addresses several critical knowledge gaps: Firstly, while the economic benefits of ecosystem services from certain environments, such as mangroves, forests, and coastal ecosystems, are extensively documented, the contributions from coral reefs, urban greenspaces, and riparian areas have received less attention. Secondly, research on the effects of NbS on local economic development, income and environmental disparities, social cohesion, and resilience is sparse and not fully documented in the existing studies. Thirdly, the broader application of NbS and NBIS requires the adoption of transparent evaluation protocols and guiding assessment principles. This is important to uphold rigorous analytical standards and prevent greenwashing. Our research to date has identified areas where existing evidence is robust and where knowledge gaps persist. In certain cases, the evidence may remain inconclusive or not unequivocally support the adoption of NbS, but these instances are limited. (**Low** likelihood, **Low** impact)
- **Economic and Business Viability** (R52). The recognition that nature-based solutions are beneficial in specific contexts does not automatically imply their viability through insurance or investment instruments. A crucial aspect of NATURANCE is to explore the economic and business case for nature-based insurance solutions. This involves



analysing cost-effectiveness, return on investment, long-term financial sustainability, transaction and implementation costs, and the minimum uptake or penetration level required to make the scheme viable. In other words, NATURANCE investigates how NBIS can be structured to be financially attractive to insurers, investors, and policyholders, ensuring that these solutions are economically viable, competitive, and environmentally beneficial. This essentially finance business model innovation is conducted in financial laboratories (WP2) currently under development. Our early experiences underscore the necessity for thorough screening of initial business cases to focus on those that are most promising. This screening is based on an open call for ideas shared among the KNs and a critical examination conducted during the project's festivals. The contingency risk consists of choosing instruments or areas of application that ultimately prove to be either not feasible or not beneficial. (**Low** likelihood, **Low** impact).

- **Scalability** (R53). Transferability and scalability are fundamental to the impact of NBIS. NATURANCE analyses conditions under which NBIS can be brought from local or pilot projects to broader applications, identifying barriers to scalability and strategies to overcome them. This includes examining regulatory frameworks, market demand, and the capacity of ecosystems to provide consistent and reliable services. By focusing on scalability, NATURANCE aims to facilitate the expansion of NBIS across different regions and contexts, maximizing their environmental and economic impact. There is a contingency risk that the solutions we identify may remain niche or pet applications rather than becoming true game-changers. (**Very low** likelihood, **Very low** impact).

2.6 Post-Pandemic Operational Restrictions (R6)

During its initial phase, the NATURANCE project contended with post-pandemic operational constraints. These constraints have been gradually eased, but they have left a lasting impact on the way we work. The workplace culture, reshaped by the pandemic, hasn't completely returned to what it was before, and it might never do so. This “new normal” brings new challenges and risks that the project has dealt with. At the same time, rising geopolitical conflicts and tensions made collaboration more difficult in some regions of the world. Given that these challenges are likely to continue or even worsen in a world facing multiple ongoing and permanent crises, we have maintained the assessment of the likelihood of the underlying contingency risks at a **medium** level.

- **Difficulties to Interact** (R61). The post-pandemic working culture involved less face-to-face interaction and more reliance on virtual communication, both within and across the partner organisations. This has led to reduced opportunities for spontaneous interactions unique to face-to-face environments and the challenges of sustaining robust working relationships. Worse, the gradual shift back to more frequent in-person meetings has led to increased travel; however, this has not been accompanied by a reduced number of virtual meetings, causing more demanding schedules and appointment clashes. This has been observed in several ways, including reduced interest in



participating in in-person project festivals and a higher rate of no-shows or withdrawals among previously registered participants. For instance, the innovation festivals organized by project partners outside of the NATURANCE project have seen over 30% of unexpected or short-notice withdrawals, which were too late to be filled by other potentially interested participants. This volatility presents a challenge, as the investments made in organizing these events yield a lower impact than expected. For the first in-person NATURANCE festivals, personalized invitations were sent to over 300 science and policy experts, with an average subscription rate of around 10-15%. Similarly, virtual meetings have experienced a high drop-off rate shortly after beginning, significantly limiting the duration of effective interactions. To mitigate these risks, we are gathering various forms of written or recorded contributions, both before and after the events, which are then made accessible to participants through the digital library. (**Medium** impact).

- **Financial Uncertainty** (R62). The challenges of post-pandemic recovery, ongoing geopolitical conflicts, and macroeconomic instability have introduced a higher level of unpredictability into financial planning. This risk refers to the potential for sudden changes in funding availability for research and policy reforms, as well as unforeseen expenses stemming from the dynamic global financial landscape. These factors can affect the willingness to explore and invest in innovative insurance and investment instruments, such as those explored by the NATURANCE project. Moreover, support for and the sustained pace of policy reforms, including the implementation of EU Green Deal policies like the Nature Restoration Law, remain uncertain. These risks may have a lesser impact on the project's ability to implement activities or produce immediate outcomes, but they can negatively influence the achievement of the intended outcomes and impacts over time. (**Medium** impact).
- **Implementation Delays** (R63). NATURANCE is committed to producing lasting impacts, showcased by sustained partnerships between regional and local authorities and the insurance sector. We also aim to initiate demonstration cases in which innovative insurance and investment schemes are showcased, in the period after the end of the project. This may not be possible if disruptions similar to the pandemic and post-pandemic recovery materialise again. These disruptions, ranging from economic downturns to environmental crises, could strain financial stability, alter policy priorities, and constrain the scope of collaborative efforts. These factors may significantly limit the project's ability to maintain momentum and realize the intended impacts. (**Medium** impact).

2.7 Project Management Risks (R7)

Like any other coordination and supporting action, or more generally any research and innovation project, NATURANCE is equipped with instruments and processes to manage contingency implementation risks (see also [Section 1](#)). The management of contingency



risks permeates all management tasks, including quality assurance, ethics, data and IPR management, and monitoring of the project's progress. The operational risks are related to the quality of the results and critical delays in implementing the mutually dependent activities. Budgetary risks are associated with under- and overspending, as well as challenges arising from subcontracts and procurement. Competence risks are connected to the expertise required to produce the results, manage the project, and communicate and disseminate the results. This report exemplifies our commitment to systematic contingency risk screening, monitoring, and periodic evaluation. Here, we focus on major contingency risk scenarios not covered in the other subsections. The likelihood of all scenarios is classified as **very low**.

- **Time Requirements (R71)**. Even with meticulous planning and scheduling of project activities, implementation delays may arise due to staffing challenges within partner organizations or operational delays requiring additional efforts to complete tasks. NATURANCE is structured around three consecutive cohorts of innovation laboratories (WP2), which are conducted with the assistance of knowledge network partners over a period of up to ten months. Other work packages contribute to these cohorts by focusing on governance (WP3), risk and performance evidence (WP4), and the engagement of knowledge networks (WP1). This workflow is flexible enough to accommodate short delays that may occur or to consider requests for further elaboration on the business schemes and models beyond the initially envisaged time period. To date, all project outputs have been managed within the planned time frame, or with slight extensions granted by the EU project advisor. The project's quality assurance mechanism establishes deadlines for the availability of initial outlines of the outputs (three months before the deadline) and for the first draft to be available for internal reviews. The project events were held within the envisaged timeframe or even ahead of schedule. However, during the initial 18 months of project implementation, only 9 out of 42 deliverables were due, indicating a relatively less intense period in terms of outcomes. Figure 2 illustrates the work intensity, measured in terms of outputs or deliverables due per month or quarter. It indicates that while the intensity is balanced for much of the period, the last quarter is marked by a very high workload, with 5 deliverables due in month 40 (Jan 2026) and 9 deliverables due in the final project quarter (Q1 2026, Jan-Mar). This is because the five deliverables due in January 2026 (D1.4, D2.3-D2.5, D6.4) are cumulative reports composed of parts completed beforehand and submitted only at the end of the project. Their degree of completion is monitored, and their content will be gradually reviewed. (**Very low** impact).

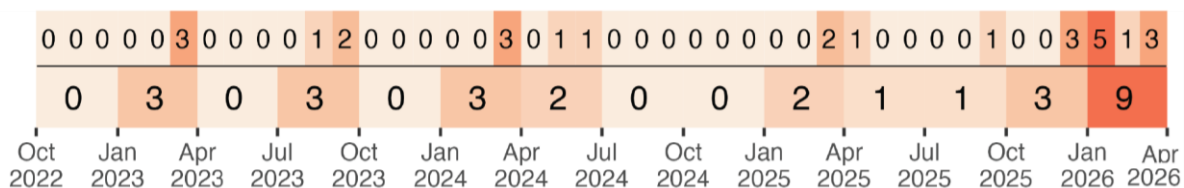


Figure 2 Number of deliverables: monthly and quarterly breakdown

- Increased Costs (R72).** Some activities, such as organizing in-person festivals, conducting tailored workshops, and covering travel expenses for major network and dissemination events, may incur expenditures that exceed the budgeted amounts, potentially leading to budget overruns. The inflation over the past three years or more has eroded the real value of the personnel costs underpinning the efforts allocated for various project activities. This risk was foreseen, and provisions have been made to mitigate it to a degree. In the event of continued inflation, labour costs may rise further, and without additional supplemental funding, the project may be compelled to reduce some activities, which could adversely impact the achievement of the project's intended outcomes. The project has reserves that can be deployed to counteract these financial risks. For instance, the scale of the organized festival could be reduced, or it could be made at least partially virtual to cut costs. Participation in various dissemination events can be rationed and optimized to ensure the project's outreach activities are not compromised. Conversely, underspending—such as that resulting from prolonged personnel hiring processes or the employment of less experienced personnel—also poses financial risks, yet it creates a buffer that can be accessed if necessary. Financial risks are monitored annually, though partner organizations with extensive experience in EU financing and financial reporting are less inclined to complete financial reports more frequently than necessary. This reluctance is due to a preference for minimizing additional administrative burdens unless they are strictly required. **(Very low impact).**
- Suboptimal Performance by Individual Partners (R73).** There are various reasons why the performance of individual partners may be suboptimal. A high turnover of personnel assigned to the project—which has occurred in some partner organizations—can lead to gaps in institutional knowledge, as new members require additional time to become acquainted with the project's details and to adequately prepare for upcoming activities. The learning curve can slow down progress and affect the overall momentum of the project. The established collaboration with and across knowledge networks can be compromised when key personnel from either side leave. Continuity in staffing is therefore key to maintaining consistent performance levels. Another reason for suboptimal performance is the involvement in multiple initiatives. Although this engagement can enhance cross-project collaboration, it may also lead to a diversion of focus from the implementation of NATURANCE. Furthermore, differences in organizational culture and priorities may result in varied levels of commitment and



inconsistent participation. Sound project management practices, including meticulous planning and explicit role definitions, can mitigate these contingent risks and sustain high levels of productivity. (**Very low** impact).

2.8 Effective Participation of UK Partners (R8)

UK Partners LSE and CISL are among the most important partners within the consortium and play a vital role in the management bodies as the leads of Work Package 2 (WP2). Additionally, CISL serves as a Knowledge Network (KN) champion, with a focus on financial organizations. The flagship ClimateWise KN is organised and managed by CISL, providing a basis for the adoption of the NATURANCE results and hence contributing significantly to reaching the intended outcomes and impacts. Thus, UK partners' active and consistent participation in project activities is essential and highly valuable. In addition to the shared responsibilities of LSE and CISL for all deliverables of Work Package 2 (WP2), LSE is leading Task T3.2 (Financial/insurance mechanisms to support NbS) and the subsequent deliverable D3.2, scheduled for completion by the end of 2025. Under the Grant Agreement, LSE and CISL are associated partners of the consortium without any financial contribution from the European Commission (EC). The matching funds are provided under similar conditions by UK Research and Innovation (UKRI), as detailed in section 1. To date, the outlined contingency risks have not materialized, and there is no indication that any changes are forthcoming. On the contrary, LSE and CISL have consistently contributed to the project's implementation, actively participated in project events, and provided high-quality input. The relations between the EU and the UK regarding science, technology, and innovation have substantially improved since the start of the project, which is demonstrated by signing of the EU Horizon Europe association agreement in December 2023. Therefore, the refined contingency risk scenarios below remain hypothetical and are classified as **very low** in terms of likelihood.

- **Withdrawal** (R81). Both LSE and CISL remain highly committed to continuing their contributions to the project activities. This commitment stands firm even in scenarios where potential changes to the rules, working principles, or operational capacity of UKRI could threaten the funding of their contributions. The key staff members from both institutions have close relationships with other consortium partners and can get affiliated with them if the above exceptional circumstances materialise. The workload assigned to UK partners could be redistributed among the other partners, possibly with support from the Contingency Reserve established under Horizon Europe. Additionally, funding potentially lost due to changes involving UKRI could be offset by extending synergies and cross-project contributions from other EU-funded initiatives. (**Moderate** impact).
- **Lack of Effective Participation** (R82). Under certain conditions, LSE and CISL could encounter significant challenges in contributing to project activities and participating in project events, even in scenarios less severe than those previously mentioned. These



situations may involve institutional and administrative hurdles, including bureaucratic delays and lengthy financial and management reporting processes to UKRI, potentially misaligned with the EU's review cycles. New regulations, such as those pertaining to data protection, ethical considerations in research, or legal restrictions on intellectual property rights, could introduce additional administrative burdens. Fluctuations in the EURO-UK Pound exchange rate could effectively reduce the available financial means. The reintroduction of travel restrictions or increased travel burdens could obstruct project teams' ability to attend meetings in the UK or the EU. Cumulatively, these changes could moderately impact the project's ability to achieve its intended outcomes and effects. Some of these risks have already been accounted for in the project grant agreement. For instance, significant project events, such as festivals, are scheduled in Europe, with their budgets designated for the EU partners. Other challenges have been recognized, and strategies have been developed to address them. For example, the differing standards for the approval of project deliverables, as enforced by UKRI and the EU's CINEA, may necessitate revisions to deliverables for which the UK partners are accountable, and vice versa. This could occur under timelines that do not align with the various partners' availabilities. (**Moderate** impact).

- **Changes in EU-UK Partnership** (R83). Given the challenges encountered during the signing of the EU-UK Horizon Europe Association Agreement, we reckon that, while highly improbable, other disruptions cannot be entirely excluded. The complex and evolving nature of the EU-UK relationship post-Brexit, especially in the context of collaborative research and innovation initiatives, may lead to further unforeseen complications. Wider political, regulatory, or legal adjustments could affect future cooperation. While we do not elaborate on any specific scenarios, we stay vigilant and prepared to address changing conditions, maintaining a horizon scanning framework that continuously identifies unforeseen developments. (**Low** impact).



3 Conclusions and next steps

In this report, we assessed the extent to which the contingency risks identified at the onset of the project have materialized during its initial implementation phase. Furthermore, we have refined and detailed these risks, leveraging our current knowledge and anticipatory skills. The reassessed risks will now inform our project activities and management decisions, placing greater emphasis on those elements within our control. For risks beyond our control, we will maintain close monitoring and propose solutions to mitigate their impact, ensuring the project achieves its intended outcomes and impacts.

The review has demonstrated that while the project implementation plan is robust in mitigating the negative impacts of the revised risks, increased emphasis and effort will be necessary in the upcoming period to overcome the identified challenges. Figure 3 illustrates the distribution of the refined risks across a likelihood and impact continuum, ranging from very low (1) to low (2), moderate (3), high (4), and very high (5). The colour coding for the associated risks corresponds with that used in Figure 1. The figure indicates that 8 out of the 24 contingency risks, which constitutes one-third, fall into the moderate risk category. This suggests that the associated activities will require increased scrutiny and attention moving forward.

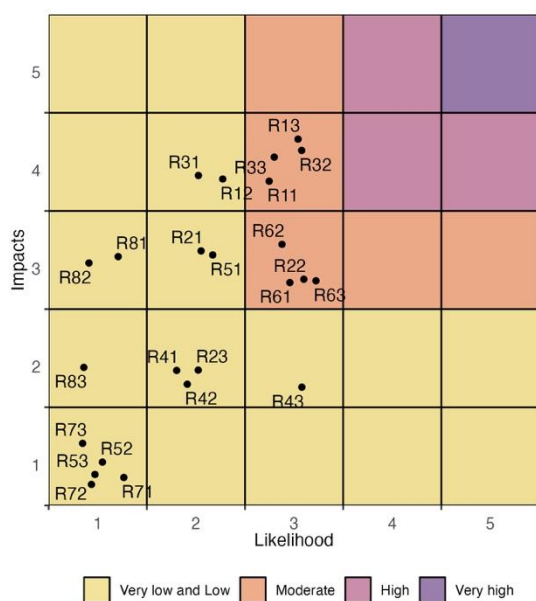


Figure 3 Revised and refined contingency risks

- R11 Obstacles to Enrolment, R12 Decreasing Engagement, R13 Limited Participation Intensity
- R21 Recognition of business case, R22 Endorsement of results, R23 Changing regulatory and compliance rules
- R31 Scale of Ambition, R32 Misaligned scheduling, R33 Enabling business conditions and capacity
- R41 Conflicting Goals, R42 Responsibility and Ethical Issues, R43 Market Reception and Practicality
- R51 Recognition of Advantages, R52 Economic and Business Viability, R53 Scalability
- R61 Difficulties to Interact, R62 Financial Uncertainty, R63 Implementation Delays
- R71 Time Requirements, R72 Increased Costs, R73 Suboptimal Performance by Individual Partners
- R81 Withdrawal, R82 Lack of Effective Participation, R83 Changes in EU-UK Partnership

It is crucial to maintain vigilance and diligently continue to expand our new partners' knowledge networks. It is equally important to encourage their active engagement and amplify their participation (R1.1, R13). The involvement of regional and local governments is especially significant, given their role in demonstrating and applying the project's objectives in real-world settings, and in fostering ongoing partnerships with the insurance industry (R3.2, R3.3). Similarly, the project's success hinges on the active involvement of financial organizations, including insurance providers. Their support for the project's design



principles and commitment to the agreed-upon metrics is fundamental to the efficacy of the nature-based insurance and investment solutions (R2.2). Given the multiple and overlapping prolonged crises and disruptions stemming from geopolitical, economic, and trade tensions, along with a slow post-pandemic recovery, and also having learned from the COVID-19 pandemic restrictions, we remain particularly vigilant regarding similar conditions in the future (R6.1-R6.3). But also lower classified risks deserve full attention and will be closely monitored throughout the Management Board and WP Lead meetings and deliberations.



Annex – List of contingency risks

TITLE	WPS	LIKELIHOOD	IMPACT
R1 Engagement with Knowledge Networks			
R11 Obstacles to Enrolment	WP1	Moderate	High
R12 Decreasing Engagement	WP1	Low	High
R13 Limited Participation Intensity	WP1	Moderate	High
R2 Interest and Support from Financial Organizations			
R21 Recognition of business case	WP2	Low	Moderate
R22 Endorsement of results	WP2	Moderate	Moderate
R23 Changing regulatory and compliance rules	WP2	Low	Low
R3 Collaboration with Regional Administrations			
R31 Scale of Ambition	WP2	Low	High
R32 Misaligned scheduling	WP2	Moderate	High
R33 Enabling business conditions and capacity	WP2	Moderate	High
R4 Conflicts of Interest Among Knowledge Networks			
R41 Conflicting Goals	WP1, WP2	Low	Low
R42 Responsibility and Ethical Issues	WP1, WP2	Low	Low
R43 Market Reception and Practicality	WP1, WP2	Moderate	Low
R5 Challenge of Inconclusive Evidence			
R51 Recognition of Advantages	WP3, WP4	Low	Moderate
R52 Economic and Business Viability	WP3, WP4	Very low	Very low
R53 Scalability	WP3, WP4	Very low	Very low
R6 Post-Pandemic Operational Restrictions			
R61 Difficulties to Interact	WP1-WP6	Medium	Medium
R62 Financial Uncertainty	WP1-WP6	Medium	Medium
R63 Implementation Delays	WP1-WP6	Medium	Medium
R7 Project Management Risks			
R71 Time Requirements	WP1-WP6	Very low	Very low
R72 Increased Costs	WP1-WP6	Very low	Very low
R73 Suboptimal Performance by Individual Partners	WP1-WP6	Very low	Low
R8 Effective Participation of UK Partners			
R81 Withdrawal	WP1-WP6	Very low	Moderate
R82 Lack of Effective Participation	WP1-WP6	Very low	Moderate
R83 Changes in EU-UK Partnership	WP1-WP6	Very low	Moderate