Breaking Silos for Biodiversity

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Brief	Biodiversity as an issue does not respect the boundaries of national borders, ministries, departments, or specialisation. However, the approach the Finnish government takes to biodiversity does not reflect this. Different sections of the government work on biodiversity in a siloed manner which results in ineffective action and a failure to meet targets. Policy coherence is needed to create an integrated approach to the problem of biodiversity loss.
Research	The four-member team responsible for this report was assigned to focus on creating policy coherence between the different departments at the Ministry of the Environment. During research, it was discovered that the ministry primarily works in a project-based manner and that there is a lack of information sharing between projects. Additionally, it was found that the ministry is constrained by resolving these issues by a lack of time and resources. These factors were identified as the primary barriers to policy coherence within the ministry.
Proposal	The team's proposal is a new standard practice that enables seeing beyond project silos at the ministry. It coordinates the system of projects, highlighting where they clash with biodiversity and guiding them towards a shared vision. The new standard practice is composed of two parts: a policy coherence matrix for projects and a steering group. The policy coherence matrix assesses and visualizes projects based on biodiversity indicators which are set under a shared goal with targets. The steering group will lead and support the new standard practice from its pilot stage to ministry-wide implementation.
Course Details	*Breaking Silos for Biodiversity* is a project from the Design for Government course at Aalto University. In Design for Government, multidisciplinary teams work to address project briefs commissioned by governmental ministries in Finland. The course lasts 12 weeks and consists of six teams, three of which worked on the biodiversity policy coherence brief. The biodiversity teams worked closely with stakeholders including the Ministry of the Environment, the Prime Minister's Office, and external agencies.

1. Introduction

" Nature and its biodiversity, the environment and the national heritage are the responsibility of everyone. The public authorities shall endeavour to guarantee for everyone the right to a healthy environment and for everyone the possibility to influence the decisions that concern their own living environment. "

Section 20 from the Constitution of Finland
(Ministry of Justice, 1999, p.5)

Biodiversity as an issue does not respect the boundaries of national borders, ministries, departments, or specialisation. However, the approach the Finnish government takes to biodiversity does not reflect this. Different sections of the government work on biodiversity in a siloed manner, which results in ineffective action and a failure to meet targets. Policy coherence is needed to create an integrated approach to the problem of biodiversity loss. The team responsible for this report focused on improving the Ministry of the Environment's coordination of its biodiversity policies across its departments.

1.1 Biodiversity

The Merriam-Webster Dictionary defines biodiversity as the "biological diversity in an environment as indicated by numbers of different species of plants and animals" (n.d). Human activity, such as farming and urban development, alongside climate change, is causing unprecedented biodiversity loss. This is a problem as biodiversity affects many issues such as the amount of carbon that can be sequestered in the natural environment, the habitats of endangered species, the health of pollinators which are crucial for crop production, the microbial diversity that builds human and animal immune systems as well as utilitarian human needs such as food, shelter and medicine (Vairimaa, 2021; United Nations, n.d).

1.2 Policy Coherence

The Finnish government is committed to halting biodiversity loss. A national action plan is being prepared with the aim of halting the loss of biodiversity by 2030 and turning the trend towards recovery by 2035 (Ministry of the Environment, 2024a). The plan specifies that policy coherence is crucial for achieving this goal. Policy coherence is "an attribute of policy that systematically reduces conflicts and promotes synergies between and within different policy areas to achieve the outcomes associated with jointly agreed policy objectives" (Mortelmans et al., 2021, p.6).

1.3 Stakeholders

The stakeholders involved in this project were Aalto University, the Finnish government, and the external agencies who work with the government on biodiversity policy.

From Aalto University, there was a supergroup consisting of three teams of students working on biodiversity policy coherence. Each team was made up of four people and had a particular focus on a section of the government. The first team worked on horizontal cooperation: collaboration between ministries. The second team, the team responsible for this report, worked on interdepartmental collaboration: collaboration between departments at the Ministry of the Environment. The third team worked on vertical integration: collaboration between agencies, institutes, and other entities working with the ministry on biodiversity policy.

The stakeholders from the Finnish government were the Ministry of the Environment and the Prime Minister's Office. The civil servants from the ministry were from a mix of different ministerial departments. The external agency stakeholders included Motiva, the Finnish Environment Institute, and Metsähallitus. The Finnish Environment Institute is an environmental research institute. Motiva is a state-owned sustainability consultancy. Metsähallitus is a state-owned forestry enterprise.

1.4 Supergroup vision

" Our vision is for Finland to embrace its role in biodiversity, ensuring total coherence in our policies regarding it. By integrating diverse perspectives and working within planetary boundaries at all government levels, we put biodiversity on top of the national agenda and work to realize a future in which humans and nature are one. "

Supergroup vision

1. Introduction

As part of the project, the supergroup crafted a vision statement to establish clear boundaries and to define a common objective to work towards. The statement fostered a shared understanding and provided a compass for the design interventions. The vision was crafted with multiple iterations: first individually, then within each team and finally as a supergroup. The vision was presented at the beginning of the final show for Design for Government on 29th of May 2024 at the National Pensions Institute.
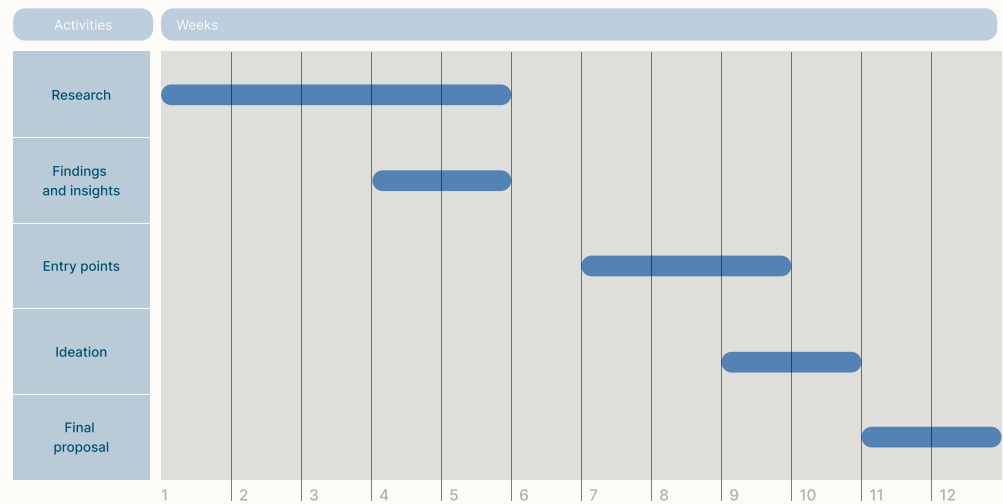
1.5 Project timeline

Figure 1. Project timeline based on weeks and activities

2. Research and Analysis

To begin tackling the brief, the team used a variety of research methods including secondary research, a roundtable, and interviews with civil servants. The collected data was then collated for analysis using systems mapping and affinity diagramming.

2.1 Secondary Research

The research began by reading background material about biodiversity, policy, and the Ministry of the Environment itself. These included political strategy plans, reports from think tanks, academic papers, and relevant websites. The team read a draft of the *National Biodiversity Strategy and Action Plan 2035,* which includes some unexpected and disheartening examples of past failures in attempting to halt biodiversity loss. For example, it mentions that over two-thirds of the objectives implemented from Finland's biodiversity strategy 2012–2020 had little positive impact (Ministry of the Environment, 2024a). Another key learning was that though literature often separates policymaking from policy implementation, the two processes are interlinked (Junginger, 2013). The secondary research gave the team an understanding of factors including the organisational structure of the ministry and the relationship between international and national policy. It was also discovered that policy implementation is not a straightforward process.

2.2 Roundtable

The team continued research by hosting a two-hour roundtable at Aalto University. From the ministry, the roundtable was attended by three senior specialists from the Natural Environment Department, the Built Environment Department, and the Ministerial Governance and International Affairs Department. From the Prime Minister's Office, the roundtable was attended by a leading expert. All three student teams from the supergroup were involved in hosting the roundtable. Alongside, the supergroup collaborated to prepare a set of questions covering biodiversity, collaboration, policy implementation, and future and change. After the roundtable, the team's key takeaway was how differently the government functions to what was expected. There are many more informal meetings and communication channels than anticipated, work within the ministry is primarily done via a project-based organisation

structure, and the team was surprised to discover that there is no shared definition or understanding of biodiversity across the government – or within the Ministry of the Environment.

2.3 Semi-structured Interviews

To dive deeper into the ministry and policy, the team organised 11 semi-structured interviews with civil servants from the Prime Minister's Office, civil servants from several departments at the Ministry of the Environment, and experts from external agencies that the Ministry of the Environment partners with to produce and implement policy. The external agencies were the Finnish Environment Institute, Motiva, and Metsähallitus. Each interview was an hour in length and a mix of online and in-person meetings was used. A range of topics was covered, including, for example, how the ministry functions internally, how policy is developed and implemented, and how collaboration with external agencies works.
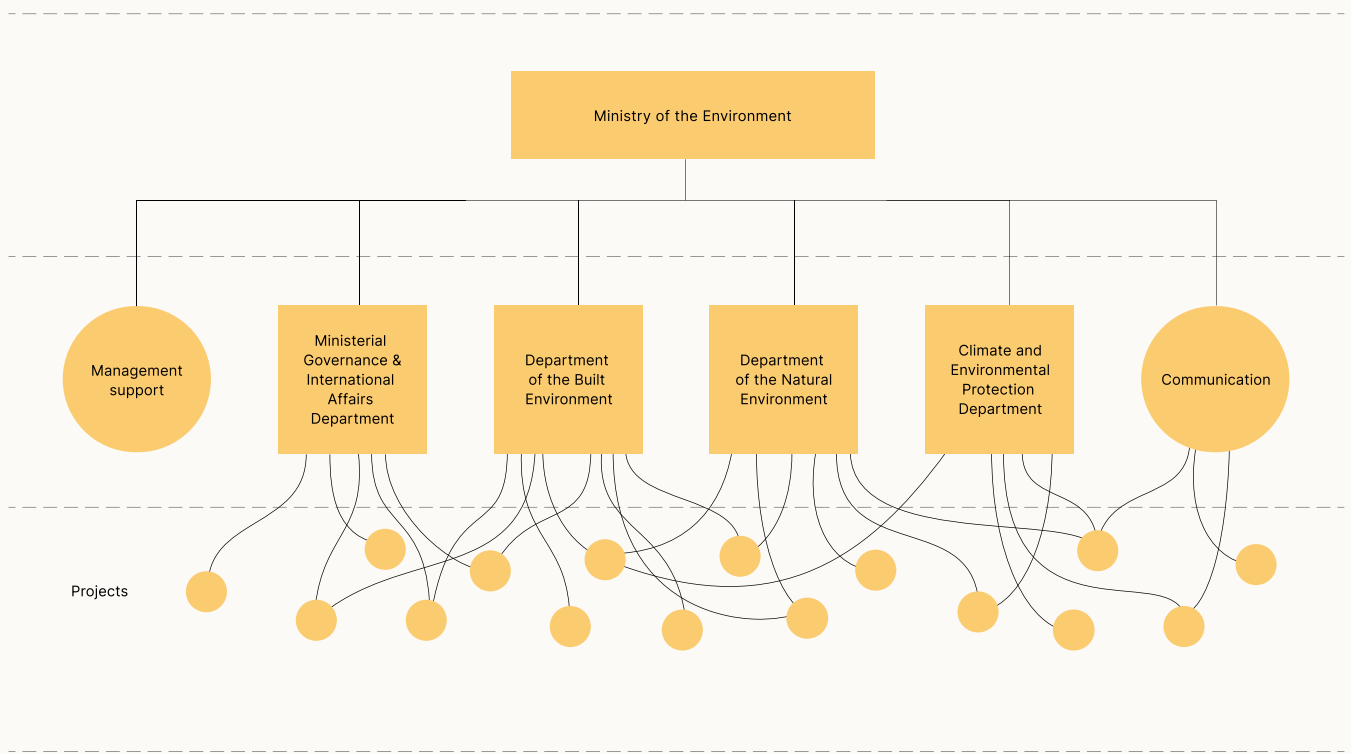
Figure 2: The Ministry of the Environment organisational structure

During the interviews, the team gained important background for the brief. Firstly, there are many different forms of projects within the ministry. The size, timeline, and implementation methods, as well as many other factors, can vary. Secondly, there are clear examples of policy conflicts happening within the ministry: for example, between biodiversity policy, which requires nature preservation, and renewable energy policy, which requires mineral mining. Thirdly, there is a lack of resources allocated to biodiversity within the ministry. This came up repeatedly with the civil servants.

> **" The problem is not that people don't understand biodiversity enough but that it is so complex! "**
>
> **Civil servant in the Ministry of the Environment**

2.4 System Map

Drawing on the information discovered in the research so far, the team created a system map, which is a diagram that shows the structure of a complex system or organisation. The map depicted the political structure surrounding biodiversity from the top level of the United Nations (UN) and the European Union (EU) down to the external agencies the ministry collaborates with. It also mapped examples of the flow of policy through these entities. The system map allowed the team to synthesise what was learnt about politics, the ministry's internal structure, and policy into one diagram. Doing so revealed how in the flow of policy from the top-level, shared goals are often lost. This is relevant to the brief as shared goals need to be maintained at all levels to reach policy coherence.

2.5 Affinity Diagram

At the end of the research phase, the team collated the discoveries with the method of affinity diagramming. It is a process of placing findings on post-its, looking for relationships between these post-its, and then sorting them into groups by themes. The process of arranging the post-its into groups is done multiple times to allow for different connections to emerge. The following themes were used to organise the research: organisation, biodiversity, policy, and policy coherence. Finally, the team gained an overview of everything that had been learnt so far.
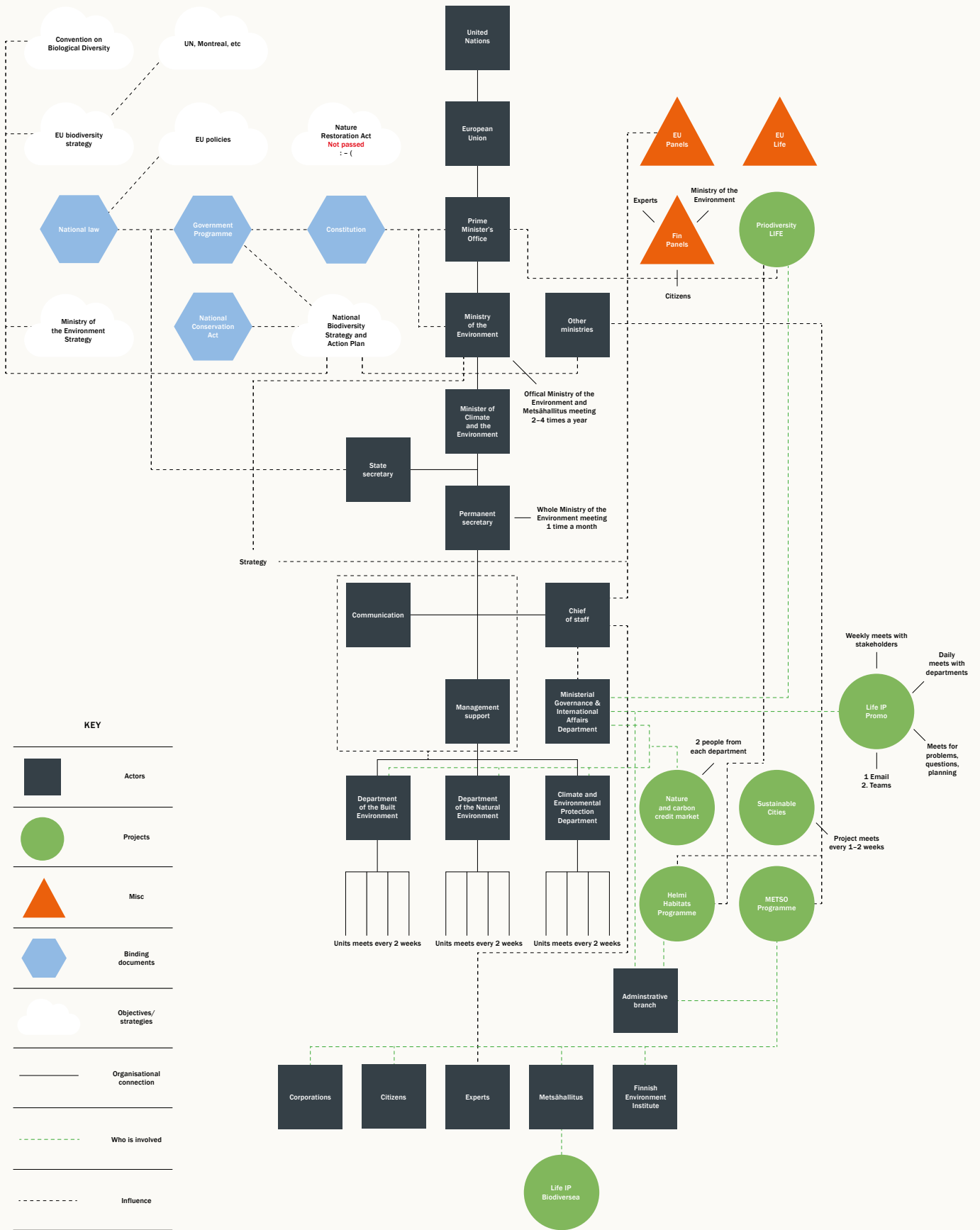
Figure 3. Systems mapping of the team's findings titled "Unravelling influences"

3. Findings

The team identified insights through the affinity diagramming. Each shed light on a barrier to biodiversity policy coherence at the ministry. On the other hand, these insights also paved the way to finding opportunity areas for the project – eventually leading to initial entry points into the system.

Insights → Opportunity areas → Entry points

Figure 4. Steps towards entry points

3.1 Insights

Five main insights resulted from the analysis of the results of the secondary research, the roundtable and the interviews. Insights are discoveries about a phenomenon. They are reached by combining data, organizing findings, and using abductive reasoning. Unlike deductive and inductive reasoning, abductive reasoning does not declare something true or false. Rather, it assesses what could be, which allows for unlikely solutions for solving problems that would not arise from using traditional logic (Martin, 2009). With abductive logic, the team used affinity diagramming to bring together different findings and identify the relationships and patterns to reach insights.

1. Disconnection of Policy
Firstly, there is a disconnection of biodiversity policy from the international level, for example the EU and the UN, to the Ministry of the Environment, which could be a barrier to policy coherence. Finland has committed to international agreements and is obligated by EU policies on biodiversity. However, the objectives of working together towards these shared goals can be lost when policy trickles down. A civil servant from the Prime

Minister's Office stated that the problem with policy coherence can be that it isn't understood where objectives come from. A civil servant from the Ministry of the Environment also highlighted that the EU could see a wider picture of biodiversity, which can lead to better understanding of the severity of national situations.

2. Four-year Political Cycle
Secondly, the four-year political cycle disrupts biodiversity policy coherence by reallocation of resources and change of priorities. Meanwhile, biodiversity needs long-term cohesion as it can take decades to create change for it. An interviewee from Motiva stated that the four-year cycle means that it is difficult to achieve coherence on goals. For example, a civil servant from the ministry shared on *Helsingin Sanomat* (Elonen, 2023) that the current national government puts pressure on the *National Biodiversity Strategy and Action Plan 2035* to be less ambitious. However, a civil servant from the Prime Minister's Office pointed out that it can take 25 years of coherent work to change the state of biodiversity.

3. Different Levels of Biodiversity
Thirdly, not all Ministry of the Environment's departments consider biodiversity at the same level, which could hinder policy coherence. For example, the Built Environment Department talks about green environments rather than biodiversity, according to our interviewee from the department. In contrast, other sources, such as the Confederation of Finnish Construction Industries RT (2023) and Demos Helsinki (2023), consider biodiversity very relevant for built environment.

4. Siloed Projects
Fourthly, while projects are interdepartmental, they are siloed by topics. However, biodiversity is an overarching issue that cannot be divided into silos. A civil servant from the ministry admitted that there are no networks for biodiversity between projects. Another civil servant from the ministry identified a past best practice of project round tables for sharing project updates, but these have been discontinued. However, they also questioned the need for thorough communication between projects highlighting time restrictions.

5. Lack of Expert Knowledge

Lastly, there is a recognized lack of opportunity to leverage expert knowledge for biodiversity policy, which can be harmful for effective and coherent action. Civil servants from the ministry explained that there are not enough resources or time for proper impact assessment, which is done by external experts, nor for comprehensive handover of policy to stakeholders. Both are barriers for policy coherence on different levels. A civil servant from the ministry highlighted that there is a will to include more experts from, for example, the Finnish Nature Panel.

3.2 Opportunity Areas

Four opportunity areas for system interference were identified from the insights. Although the four-year political cycle can be a barrier to long-term policy coherence, it is also democracy, as one of the interviewees reminded. Therefore, an opportunity area was not identified for the finding. Rather, each opportunity area tries to tackle the issue from a more manageable perspective.

No.	Insights		Opportunity areas
1	Disconnection of biodiversity policy from the top level (EU, UN) to the MoE	▶	**Flow of policy**
2	The 4-year political cycle disrupts biodiversity policy coherence	✕	
3	Not all MoE's departments consider biodiversity at the same level	▶	**Siloed departmental structure**
4	Though projects are interdepartmental, they are still siloed by topics	▶	**Project awareness**
5	There is a lack of opportunity to leverage expert knowledge for biodiversity policy	▶	**External experts**

3.3 Entry Points

Based on the findings and opportunity areas, three entry points were identified for the project. Entry points act as places to enter the system and spark the first steps of change towards the bigger vision of the future.

The first entry point was the Ministerial Governance and International Affairs Department as a coordinator of interdepartmental collaboration. The second entry point was reframing biodiversity in a more politically digestible way for new political governments.

Finally, the team landed on the initial entry point to go forward with – impact assessment. It was sparked by the insights that not all departments consider biodiversity at the same level and that projects are siloed by topics despite being interdepartmental. Connecting to systems thinking theory, barriers in information flows are a common cause of problems in a system (Meadows, 1999). Lack of impact assessment can stop important feedback in and between the Ministry of the Environment's projects, which hinders policy coherence. Therefore, impact assessment as a more emphasized and shared practice in the policy cycle could be used to enter the opportunity area of awareness between projects.

4. Initial Ideas

The identified entry point was developed further for an upcoming ideation session with stakeholders from the ministry and the Prime Minister's Office. With early and comprehensive impact assessment, the ministry could avoid delayed feedback on the effects of its projects on biodiversity. In addition, better anticipation of the impacts of national policies can improve Finland's alignment with international commitments and objectives. Taking the idea further, the information gained from these assessments could be combined to see a bigger picture of the level of coherence between projects for biodiversity restoration.

4.1 Ideation Session

The developed entry point was presented to civil servants from the ministry and the Prime Minister's Office at a collaborative ideation session. The in-person session was designed to foster dialogue and co-creation to help the team design an effective and compelling proposal for the ministry. In the session, civil servants were engaged with prompts about collaboration and qualitative methods around impact assessment to encourage creativity for fruitful discussion.

Although the civil servants appreciated the idea of more comprehensive impact assessment, significant barriers were brought up. Civil servants at the ministry suffer from a lack of time and resources. Even though impact assessment is done by external experts, the process is very time-consuming and expensive. These barriers were found to be too difficult to overcome within the boundaries of this project, and therefore the team decided to reroute the intervention.

4.2 From Impact Assessment to Project Silos

Continuing to work with impact assessment, the team investigated possibilities to make the proposal less intense. This led to an idea of a pairing system. In the ideation session, the civil servants identified that a system to look at impact assessments together is missing. Pairing projects

together to compare and analyse their actions, goals, and objectives can shed light on the combined effects on biodiversity efforts at the ministry. However, the team encountered another barrier to the idea – lack of incentive. Validating with a civil servant from the ministry, it was found that there would be little incentive for such collaboration and the effectiveness of it for policy coherence was questionable.

The team went back to the board of insights and opportunity areas, to land on the final proposal. Although impact assessment and a pairing system were falsified, the siloed projects remained the most valuable insight. Therefore, the team investigated new ways to enter the opportunity area of awareness between projects. With desk research into established standard practices in other public sectors, policy coherence matrices were discovered. A policy coherence matrix for biodiversity is used in six European cities (Mortelmans et al., 2021). In addition, the team consulted with an expert from Kausal, a Helsinki-based company that helps cities monitor climate actions collectively with data. Although biodiversity is currently much more difficult to assess in quantitative data than global warming, transforming qualitative data to quantitative can be an effective tool for dialogue and comparison.

Finally, the team formed the proposal for how to break the silos for biodiversity.
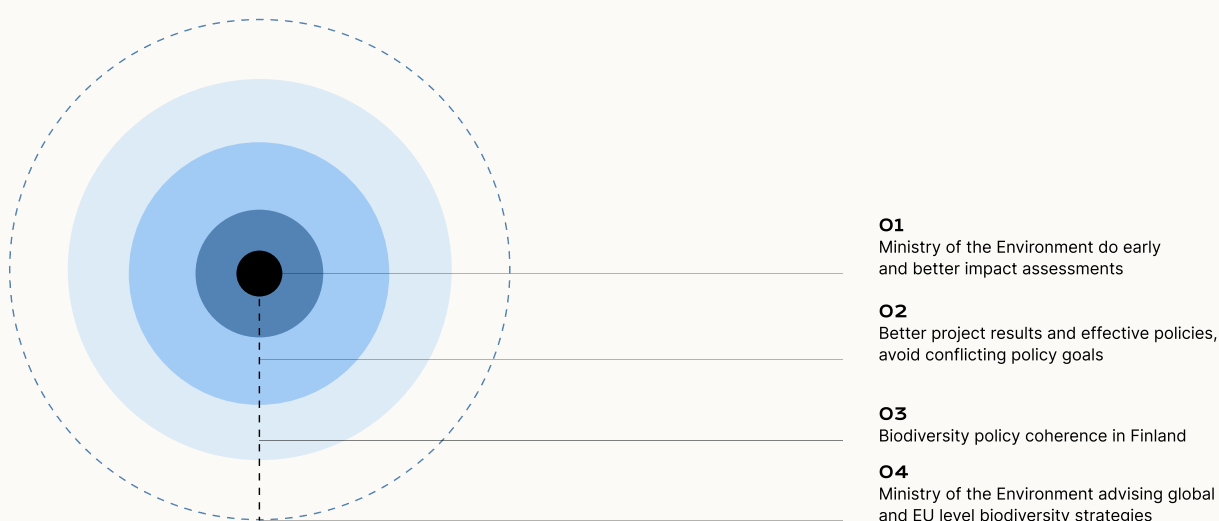

O1
Ministry of the Environment do early and better impact assessments

O2
Better project results and effective policies, avoid conflicting policy goals

O3
Biodiversity policy coherence in Finland

O4
Ministry of the Environment advising global and EU level biodiversity strategies

Figure 5. Unlocking new interventions towards achieving the big vision

5. Proposal

The proposal is a new standard practice that enables seeing beyond project silos at the Ministry of the Environment. It coordinates the system of projects, highlighting where they clash with biodiversity and guiding them towards a shared vision. The new standard practice is composed of two parts – a policy coherence matrix for projects and a steering group.
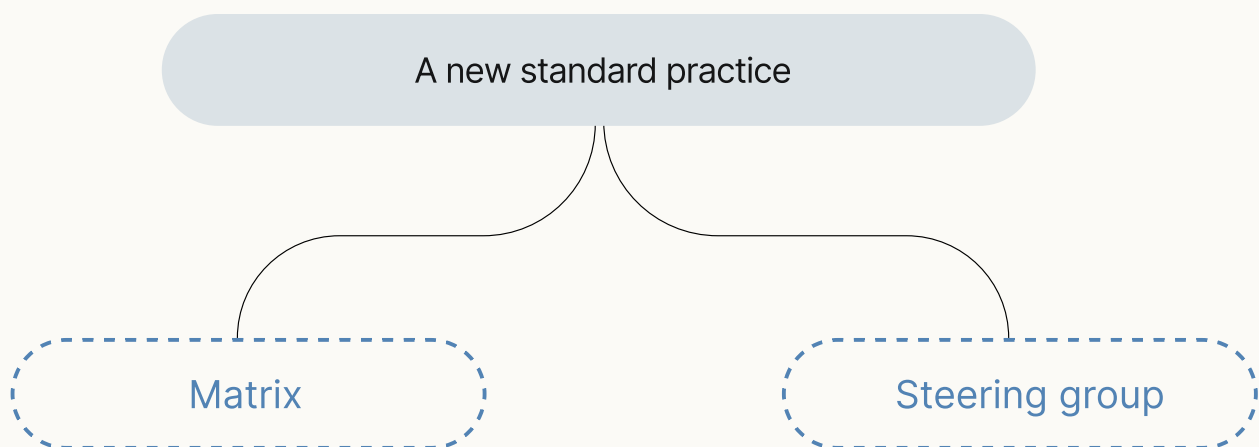

Figure 6. A new standard practice for breaking silos for biodiversity

	Target 1 Pollution is reduced to a level no longer harmful for biodiversity		Target 2		Target 3	
	Indicator 1 Decreasing amount of micro-plastics in water	**Indicator 2** Decreasing amount of pesticides used	**Indicator 3**	**Indicator 4**	**Indicator 5**	**Indicator 6**
Project Helmi Habitats Programme	+2	0	+1	0	+2	0
Project National Chemicals Programme	-1	+1	-3	0	+1	+2
Project	0	+2	0	-2	+1	-1

Figure 7. A filled in matrix mapping the Ministry of Environment projects

5.1 Matrix

The policy coherence matrix assesses and visualizes projects based on biodiversity indicators, which are set under a shared goal with targets. The x-axis of the matrix represents these targets and goals, while the y-axis represents projects. The matrix is built and filled through workshops between various participants. Following, the matrix is explored in more detail through examples.
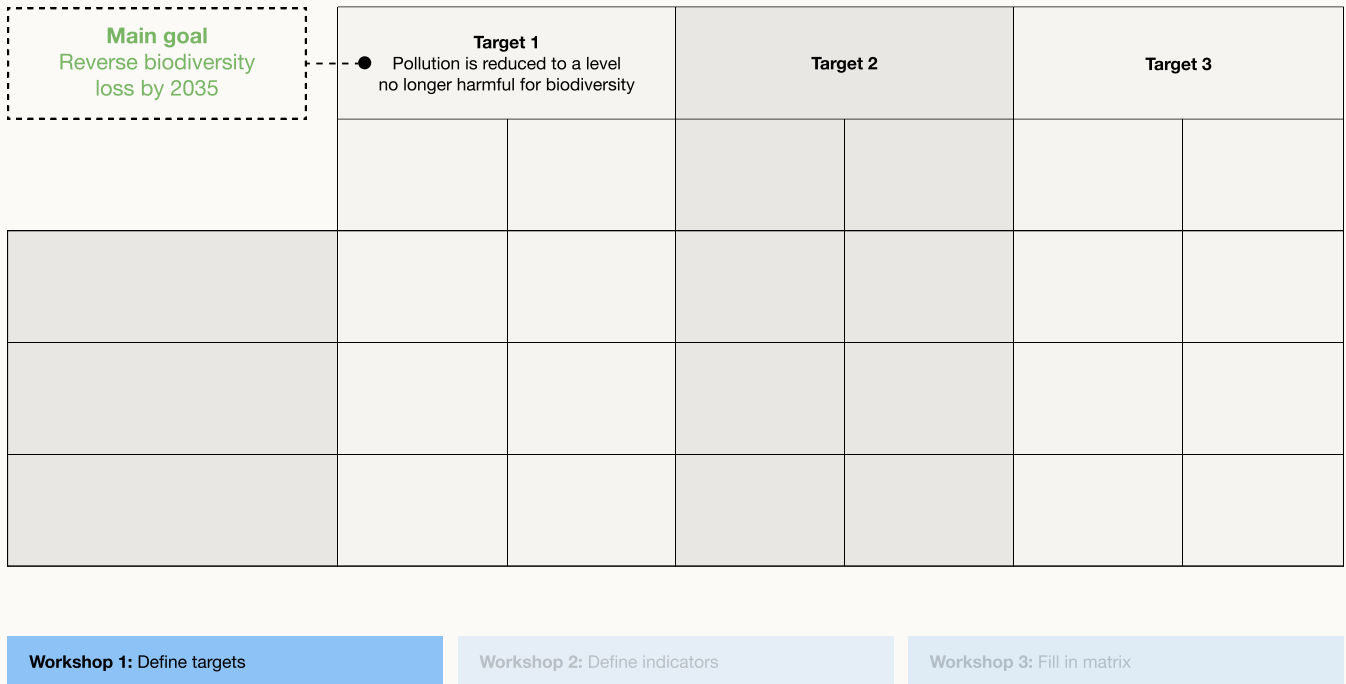
Figure 8. Target 1 mapped on the policy matrix for biodiversity

The matrix building starts with a workshop between the Ministry of the Environment, the Prime Minister's Office, and external scientific experts from, for example, the Finnish environment institute. The purpose of the first workshop is to identify a high-level biodiversity goal with targets. These will act as a guiding star for the matrix and broader biodiversity work.

Here, the upcoming *National Biodiversity Strategy and Action Plan 2035* has been used to draw examples. The goal could be, for example, "reverse biodiversity loss by 2035". Inside it are then targets, an example of which could be "pollution is reduced to a level no longer harmful for biodiversity". There would be multiple targets, of which three are visualized here.

	Target 1 Pollution is reduced to a level no longer harmful for biodiversity		Target 2		Target 3	
	Indicator 1 Decreasing amount of micro-plastics in water	Indicator 2 Decreasing amount of pesticides used	Indicator 3	Indicator 4	Indicator 5	Indicator 6

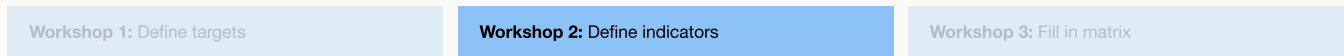| Workshop 1: Define targets	Workshop 2: Define indicators	Workshop 3: Fill in matrix

Figure 9. Targets and indicators mapped on the policy matrix for biodiversity

After setting the goal and the targets, the second workshop is between the Ministry of the Environment civil servants and scientific experts from, for example, the Finnish Environment Institute. The purpose is to identify science-based indicators for each target. The projects will be evaluated based on them. Two example indicators have been identified for the target "pollution is reduced to a level no longer harmful for biodiversity". However, defining these indicators requires biodiversity expertise, which the team of designers does not have. Therefore, these specific indicators are illustrating examples.

The indicators could be "decreasing amount of microplastics in water" and "decreasing amount of pesticides used". Similarly, there would be indicators for each target. The indicators are then re-evaluated annually by experts to match the most recent scientific knowledge on biodiversity.

	Target 1 Pollution is reduced to a level no longer harmful for biodiversity		Target 2		Target 3	
	Indicator 1 Decreasing amount of micro-plastics in water	Indicator 2 Decreasing amount of pesticides used	Indicator 3	Indicator 4	Indicator 5	Indicator 6
Project Helmi Habitats Programme						

Workshop 1: Define targets	Workshop 2: Define indicators	Workshop 3: Fill in matrix

Figure 10. Introducing a ministry led project to the policy matrix for biodiversity

Once the matrix has been set up, the new standard practice can begin. At the planning stage of each new project at the Ministry of the Environment, the project is added to the matrix through a workshop. The participants are civil servants from the project and an external expert from, for example, the Finnish Environment Institute.

As an example, the Helmi Habitats Programme is inserted into the matrix here. It aims to strengthen biodiversity and protect vital ecosystem services in Finland and is led by the Ministry of the Environment (Ministry of the Environment, 2024b).

Project Helmi Habitats Programme	Target 1 Pollution is reduced to a level no longer harmful for biodiversity		Target 2		Target 3	
	Indicator 1 Decreasing amount of micro-plastics in water	Indicator 2 Decreasing amount of pesticides used	Indicator 3	Indicator 4	Indicator 5	Indicator 6

-3 -2 -1 0 +1 +2 +3

Workshop 1: Define targets	Workshop 2: Define indicators	Workshop 3: Fill in matrix

Figure 11. The seven-point scale to assess projects against the target and its indicators

The project is assessed on each indicator in the matrix. The scale is from a negative three to a positive three with negative three being very contradicting to the indicator, a positive three indicating good work towards the indicator, and a zero being neutral. The seven-point scale was chosen for its comprehensive number of options without being too overwhelming.

	Target 1 Pollution is reduced to a level no longer harmful for biodiversity		Target 2		Target 3	
	Indicator 1 Decreasing amount of micro-plastics in water	Indicator 2 Decreasing amount of pesticides used	Indicator 3	Indicator 4	Indicator 5	Indicator 6
Project Helmi Habitats Programme	+2	0	+1	0	+2	0

Figure 12. A project assessed for all the indicators of the policy matrix for biodiversity

Helmi Habitats Programme is assessed on each indicator. However, the numbers presented here are illustrating examples and not based on actual assessment. Helmi could, for example, get a positive two on the microplastics indicator, which means that it is doing quite well in reducing microplastics in water. For the next indicator, it could get a neutral zero. This indicates that it does not have significant impact in either direction on the use of pesticides. The project is then assessed on every indicator.

	Target 1 Pollution is reduced to a level no longer harmful for biodiversity		Target 2		Target 3	
	Indicator 1 Decreasing amount of micro-plastics in water	Indicator 2 Decreasing amount of pesticides used	Indicator 3	Indicator 4	Indicator 5	Indicator 6
Project Helmi Habitats Programme	+2	0	+1	0	+2	0
Project National Chemicals Programme	-1	+1	-3	0	+1	+2

Workshop 1: Define targets	**Workshop 2:** Define indicators	**Workshop 3:** Fill in matrix

Figure 13. Two projects assessed for all the indicators of the policy matrix for biodiversity

A similar workshop and process is done for the next project, which is here the National Chemicals Programme. The project re-evaluates and updates the national chemicals programme to better protect health and the environment (Ministry of the Environment, 2024c). As with the previous project, it is assessed on each indicator. For its effects on microplastics in water, the National Chemicals Programme gets a negative one indicating slight negative impact on the efforts to reduce microplastics. And so on.

	Target 1 Pollution is reduced to a level no longer harmful for biodiversity		Target 2		Target 3	
	Indicator 1 Decreasing amount of micro-plastics in water	Indicator 2 Decreasing amount of pesticides used	Indicator 3	Indicator 4	Indicator 5	Indicator 6
Project Helmi Habitats Programme	+2	0	+1	0	+2	0
Project National Chemicals Programme	-1	+1	-3	0	+1	+2
Project	0	+2	0	-2	+1	-1

Workshop 1: Define targets	Workshop 2: Define indicators	Workshop 3: Fill in matrix

Figure 14. The policy matrix for biodiversity filled with the Ministry of the Environment projects

The process goes similarly for all projects. Following the filling of the matrix, workshop participants also reflect on the reasons behind the ratings, especially alarmingly negative ones.

As the matrix fills with projects, a visual beyond project silos starts to appear. The ministry gains a more comprehensive picture on its projects' effects on biodiversity efforts. Contradicting projects are highlighted, and their direction can be corrected. The matrix also helps identify which projects might have best practices for biodiversity work.

5.2 Steering Group

As the matrix compiles a complicated system of projects, a steering group should be established to guide the new standard practice in the ministry. The group leads and supports the practice from its pilot stage to ministry-wide implementation.

The steering group includes representatives from each department of the ministry. In addition, to include a different layer of authority, the steering group also benefits from representatives from the Prime Minister's Office. External experts from the Finnish Environment Institute should be included for scientific expertise on biodiversity, as well as a representative with expertise in international policy.

The steering group leads the piloting of the new standard practice at the ministry. It oversees and facilitates the development of the matrix according to the previously described process, identifies five pilot projects from the ministry, and facilitates the workshops of matrix filling. Finally, the group evaluates the pilot.

- ● Ministry of the Environment
- ■ Prime Minister's Office
- ⬡ Scientific expert
- ▲ Expert on international policy
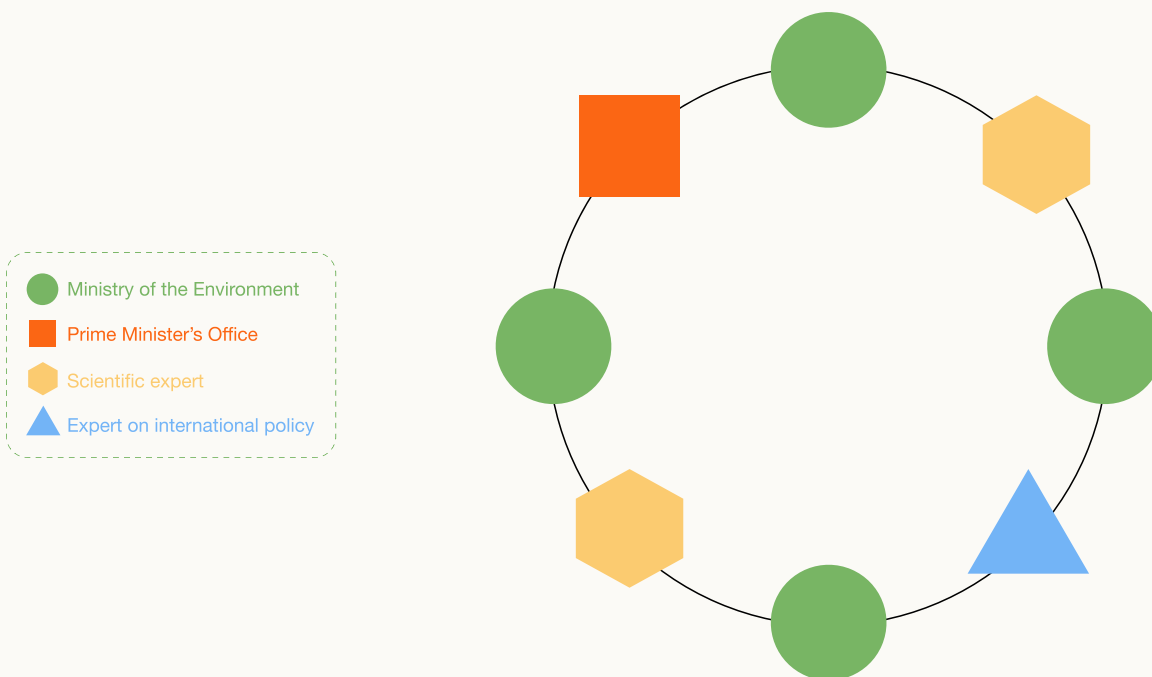
Figure 15. A steering group that leads the new standard practice at the Ministry of the Environment

Once the pilot is successful, it is implemented ministry wide. Here, the steering group members coordinate the matrix filling process and communicate between their respective organization and the ministry. To enable the benefits of the new standard practice for biodiversity policy coherence, the steering group also analyses and reports findings from the matrix. These are reported twice a year at the ministry-wide meeting held by the Permanent Secretary.

5.3 Validation

The use of policy coherence matrices is new but slowly becoming a common practice among civil servants. A stakeholder from the ministry confirmed that simple matrices and monitoring tools are already used on small scale at the ministry, which confirms that the new standard practice is not completely unfamiliar to the civil servants. The use of digital tools for analysis and measurement has also become a common practice in project and task management across disciplines.

While interviewing an expert from Kausal, the team got validation for the importance of comparing projects based on biodiversity despite there being a lack of quantitative methods to measure biodiversity. The interviewee highlighted the value of quantifying the seemingly unquantifiable to create dialogue and collaboration. The new standard practice allows civil servants to engage in dialogue between projects.

It is rather impossible for a single stakeholder to have a comprehensive picture of the impacts of various policies at once. The topic of biodiversity monitoring is also often identified as a complex task. The new standard practice gives way to having more dialogue around the topic of biodiversity and its role in various projects done at the ministry

6. Opportunities

The new standard practice brings many opportunities by providing a comprehensive view of projects from a biodiversity perspective.

Firstly, quantifying things that are difficult to quantify can spark discussions and act as conversation starters for more biodiversity related dialogue. Secondly, de-siloing projects can further improve project efficiency by recognizing early incoherence related to biodiversity. It helps overcome the time and resource struggles of the Ministry. In addition, project actions could be combined for higher efficiency by recognizing more effective projects for biodiversity and identifying overlaps. Thirdly, the standard practice helps visualize and inform the efforts of the ministry regarding international commitments that Finland has made.

6.1 Future Opportunities

The proposal also paves way on the path to the supergroup vision. Once the new standard practice has been established at the Ministry of the Environment, it can be shared and implemented across all ministries to pursue government-wide biodiversity policy coherence. With the new standard practice, biodiversity can move higher on the national agenda. The proposal helps Finland meet its obligations to international commitments and can act as a best practice for countries across the world. Global cooperation is crucial for the restoration of biodiversity. With coherent and collective action, people and nature can hopefully be one in the future.
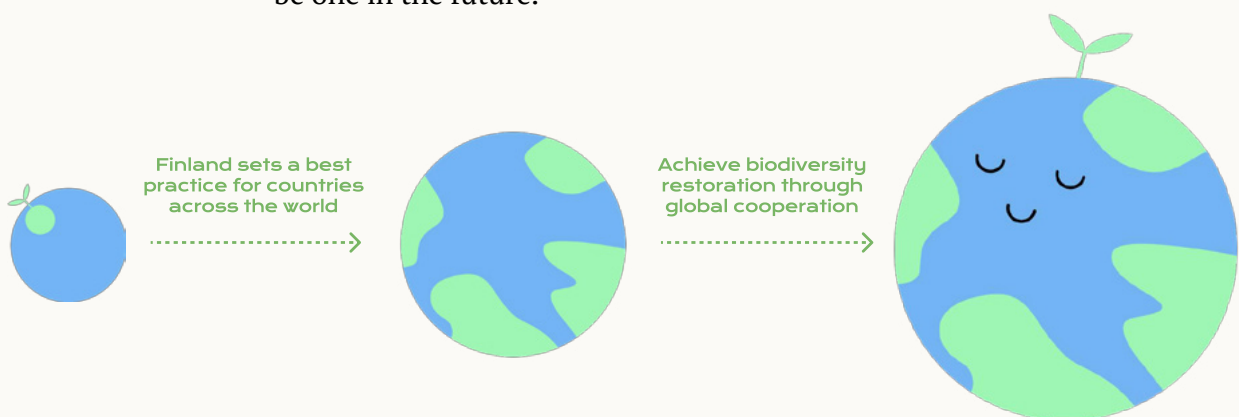

Figure 16. Future interventions to achieve the big vision of a happy planet

7. Final Remarks

Biodiversity is essential for maintaining the health and stability of the planet. It supports ecosystem services, which human existence and well-being also rely on.

This project focused on enhancing policy coherence to reverse biodiversity loss, which presented two complex topics for the team to consider: biodiversity and policy coherence. There is much more research to be done on monitoring of biodiversity, which makes the issue trickier. Although quantitative analysis of the state of and actions for biodiversity is an unfinished method, the work needs to start somewhere. Design can provide multidisciplinary approaches to this problem, which the team enacted by thinking in the shoes of both, civil servants and research scientists. However, to avoid design solutionism, this proposal should not be described as a solution but rather as a tool to open doors for further change.

As systems thinking was very relevant to the project's design approach, the team saw how biodiversity, policy development and the ministry's organizational patterns are all intertwined on this matter. Using systems thinking theory in identifying entry points helped the team identify which ideas could be effective as well as better understand the scope of the project. The aim was not to offer a solution to all issues but rather identify an effective first step on a road to transformation. Scope was also an important discovery in the research phase as the team often got overwhelmed by the confusion surrounding the unfamiliar world of the government. Defining boundaries and a research plan enabled focusing on the right questions. On the other hand, it was important to embrace the confusion. It enabled thinking outside the box to find ideas that would otherwise not surface.

This was the first project around policy for all team members, which meant work in a completely new context. Initially, the team started looking into policy coherence. Along the way however, the team had a revelation that they needed to identify barriers to biodiversity policy coherence and design a way around them. Lack of time and resources for the civil servants came up continuously, which was a constraint in the bad and the good. It put

most of the team's ideas in a trash bin. However, as the team realised its importance, it guided the project in the right direction. Combined with the project silos, the team landed on a proposal.

The team were no experts in the matrix filling but proficient to develop and explain the idea and how it could work in the future when the right stakeholders are involved. Monitoring and quantifying the hard-to-quantify holds value in inspiring dialogue. The new standard practice also enables the ministry to see the big picture of its projects' effects on biodiversity efforts and guides towards better alignment with international commitments and objectives.

Let's break the silos for biodiversity!

8. Appendix

8.1 References

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