



# Impact stories – BIODIFUL

Mainstreaming biodiversity awareness across society

Ilari Sääksjärvi | Milla Unkila

SRC Impact Report  
2023

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**mainstreaming  
biodiversity  
awareness**

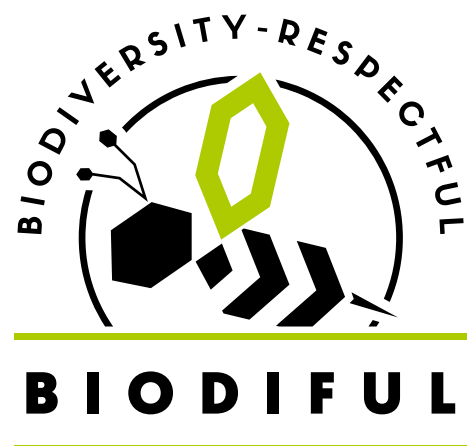
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**SRC Impact Report  
2023**

# Impact stories – **BIODIFUL**

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# Impact stories – BIODIFUL

## Mainstreaming biodiversity awareness across society

### Societal challenge

Biodiversity is a prerequisite for all human life. Despite nature's tremendous benefits to humankind, we are currently facing a rapidly advancing global biodiversity loss mainly due to economic activities that satisfy consumption needs – often excessive, and in high-income countries. According to recent international reports, we have failed to conserve biodiversity, and up to one million species are at risk of going extinct within the next few decades. While research on biodiversity, its loss and its drivers is not new, with ample evidence already available for decades, natural ecosystems' rapid degradation and even collapse continue. The previous international (and national) goals for halting biodiversity loss have not been achieved.

In our opinion, this is partly due to the low level of biodiversity awareness and understanding across societies. Biodiversity loss has aptly been described as a silent killer. One of the problems in acknowledging the severity of biodiversity loss is its systemic nature. The impacts of biodiversity loss materialise through complex interactive webs, which makes tracing the effects of a single cause – or the causes of a single impact – demanding. In a society where the dominant problem-solving logic gravitates towards breaking a puzzle into smaller and smaller constituents and scrutinising each individually, systemic problems that require a reverse

approach, that of integrating knowledge into a bigger picture, remain not only difficult to tackle but also nigh invisible.

Consequently, mainstreaming biodiversity awareness across society is among the most important and overarching impact goals of the BIODIFUL consortium. As rapid human population growth, overconsumption of natural resources, and global economic structures are among the most severe drivers of biodiversity loss, good-quality and understandable knowledge of biodiversity and global biodiversity loss must be embedded within individuals, organisations and societies. In particular, the multiple and often complex ways biodiversity affects human business activities, comprehensive security, economy, health, and well-being need to be clarified. Systemic problems require systemic solutions, which can be achieved only through first increasing the awareness of the nature of the problem.

### Multidisciplinary research and cooperation

The scientific approach throughout the BIODIFUL consortium is interdisciplinary, as we integrate knowledge across sciences, and transdisciplinary, as we co-create



Diversity in nature and people: BIODIFUL researchers in the Turku Botanical Garden

knowledge with our stakeholders, including, e.g. ministries, institutions, associations, cities, companies and activist individuals. To address the lack of prior empirical research on sustainable leadership beyond single-organisation settings, BIODIFUL has adopted a multi-level approach to study biodiversity-respectful leadership via individual (WP3), organisational (WP4), societal (WP5), and, on the other hand, landscape (WP2) levels of analysis. While each WP primarily focuses on one level, all WPs, including our coordinating WPs (WP1 and WP7), study biodiversity-respectful leadership at several levels of analysis - in close collaboration with researchers representing other fields of sciences. In addition, all work packages conduct interdisciplinary literature reviews, integrative theorising, and data collection via co-creative stakeholder engagement.

During the first three years, BIODIFUL has engaged in identifying the maturity level of biodiversity awareness within the various contexts it explores. Consumer surveys highlight that while there is a general awakening to environmental problems and goodwill towards activities aimed at protecting biodiversity, the link between individual actions and the state of nature remains blurry. Our research on firms in the food sector

reveals significant differences in biodiversity awareness, with the forerunners still representing a minority. However, the understanding of biodiversity has increased manifold in the past few years, with most of the larger firms currently at least recognising the issue. The predominant attitude is wait-and-see: firms know biodiversity issues need to be considered but have little understanding of how that pertains to their activities, most waiting for regulations and metrics that could be applied to adopt and operationalise biodiversity-related actions.

In contrast, the research on public decision-making in Finland illustrates a contrary trend. Currently, all environmental themes seem to remain primarily at the speech level, relegated to voluntary actions by firms or land owners, with the focus of political guidance being on economic and security-related issues. Stopping biodiversity loss and reaching a nature-positive society are also the main objectives of Finland's soon-to-be-finalised (2024) national biodiversity strategy. While it is evident that the level of ambition is high domestically and internationally, the question remains: Can these targets truly be achieved in practice? To combat the lack of ambitious action, in its first policy recommendation

(published in February 2024), BIODIFUL made an effort to showcase how biodiversity loss is not only an environmental problem but a problem threatening the very foundations of societal security and resilience, with impacts on food systems and the security of supply, economics, physical and psychological health and social stability.

The knowledge garnered from diverse levels of analysis is shared and discussed between the researchers in three-day seminars organised twice a year (four so far during 2021-23), in monthly consortia Zoom meetings, and one-day events taking place twice a year bringing the entire consortium's researchers together. Additionally, researchers have self-organised into a matrix, where people working in one work package collaborate with others with the same level of analysis from other work packages, bringing together for example individual level researchers and systems level researchers.

## Societal interaction

In addition to the individual activity of the more than 40 BIODIFUL researchers spanning external presentations, media articles and interviews, social media activity and podcasts, university and executive education, and keynotes on themes of the project, BIODIFUL as an entity has its own wider visibility. The outreach activities are physical and online, and the latter includes both own media and mass media achievements.

In terms of physical events, the main annual event is the BIODIFUL Leadership Forum that, in 2023, gathered more than 100 business and public decision-makers in Logomo, Turku. The 2024 event will be held in May in Helsinki, with the expected participation of at least an

equal number. We have also organised an event with KESKO and will organise another with EY, in addition to participating in the opening carnival of the University of Turku in 2022 and 2023, engaging with hundreds of individuals in conversation. The sessions in our events are also recorded, and the videos remain available on our website. In spring 2024, BIODIFUL will also organise a low-threshold discussion series (with four events so far booked) at Logomo Teatro to engage people in the restaurant in discussions.

BIODIFUL has also organised several webinars, the most notable being the recurring series of BIODIFUL Round Tables that are organised together with EY four times a year. The Round Table discussions bring together researchers from BIODIFUL and business experts to discuss a biodiversity-related theme. The live online audience in the previous four Round Tables has been 50-100, with additional audience gained through the available recordings. Research results have been and will be presented in specific webinars, with companies as the target audience in the fall of 2023 (with 60 participants) and consumers in focus in March 2024 (so far 85 registered participants). Additionally, BIODIFUL organised an intensive course on biodiversity and biodiversity loss for Danish business leaders in January 2024 in Copenhagen and will continue targeting international audiences through BIODIFUL Summer School (August-September 2024), organised together with ABIS ([abis-global.org](http://abis-global.org)), consisting of six sessions where BIODIFUL researchers lecture and discuss various biodiversity-related themes. In the fall 2024 BIODIFUL will also co-host the annual ABIS Colloquium in Turku for international researchers and business actors.

The BIODIFUL website is a hub for our activities, with more than 4700 visitors in the last 12 months (with 17000 unique views during the same period). We have



published 44 blogs and five podcasts and send out four newsletters every year (six so far) to a list of more than 300 subscribers. There are 840 followers (with 2470 reactions) on the BIODIFUL LinkedIn page, which has become the leading social media outlet. Additionally, there are 411 BIODIFUL followers on X (formerly Twitter), 272 followers on Instagram, and 189 followers on Facebook, with a notable engagement rate in each.

The most notable mass media victory for BIODIFUL was the release of our first policy brief, which resulted in significant media coverage via dedicated articles in mainstream media such as Helsingin Sanomat, Turun Sanomat, YLE and Maaseudun Tulevaisuus, with additional media hits in other outlets. BIODIFUL researchers have also been cited in many other mass media publications, and many of them have become the choice of voice for reporters interested in biodiversity-related themes.

BIODIFUL has joined forces with its sister projects, BOOST and BIWE, to write a book as a collaborative effort of the whole BIOD program. The book includes 14 articles, which are co-authored so that in almost every article, there are authors from two or three projects, with topics ranging from the need for radical systemic change, business and consumption to city planning, biodiversity health impacts, and food system. The articles are currently undergoing their final internal review round before being submitted to the peer review process of its publisher, Gaudeamus.

While difficult to quantify, one of the interaction successes of BIODIFUL is a recurring note from our researchers: when they mention BIODIFUL in many contexts, there are always people who respond, "Oh, you are from THAT project! I've heard about it! What an exciting project!" It is not quite a household name yet, but the brand recognition of BIODIFUL goes far beyond that of a regular research project.

< The research conducted at the University of Turku and the Seili island were presented to the representatives of the Nippon Foundation and its sub-foundation the Scandinavia-Japan Sasakawa Foundation at the end of August. Head of the University's Biodiversity Unit, Professor Ilari E. Sääksjärvi described the University's activities and research on biodiversity and sustainability.

1. Discussions in the Turku University opening carnival, autumn 2023
2. How to measure biodiversity impacts? 3rd BIODIFUL Round Table at EY
- 3.-5. Discussing European and Finnish biodiversity related decision-making in Turku, Pori and Jyväskylä.



# Biodiversity respectful leadership model for individuals

## Societal challenge

As described in the first impact story, one of the overarching impact aims of BIODIFUL is mainstreaming biodiversity awareness – as biodiversity loss is in severity on par with climate change, awareness of it should equal that concern. However, acknowledging the problem is but a start. The next step is figuring out how to proceed. This constitutes a societal challenge: what can an individual, as a consumer, citizen, household member, friend, or activist do?

As the phenomenon of global biodiversity loss and its direct and indirect drivers are highly complex, the actual impacts of the actions of the individuals are difficult to trace. For example, as consumption is a cause of both problems and potential solutions, how should a consumer act to minimise the negative and maximise the positive impacts on biodiversity? Voting is essential; however, due to the byzantine nature of political processes, how can a citizen know the actual environmental effects of a given vote? Additionally, as members of a family, circle of friends and workplace, each individual has the potential to affect other people's behaviour – everyone can have grassroots-level leadership. How should it be wielded?

To summarise, individuals are powerful and impotent in inducing systemic-level change. Orienting this power is difficult, as the impact pathways are highly complex and challenging to ascertain. Impotence, on the other

hand, has been shown to create environmental anxiety, which in turn can either paralyse and depress or become an engine of action. BIODIFUL explores both avenues.

First, BIODIFUL seeks informed ways of utilising the power of an individual in a biodiversity-respectful manner. For example, on the highest level, the root cause of biodiversity loss is overconsumption, as it 1) exploits natural resources, 2) utilises fossil fuel-based energy, 3) requires transportation with its accompanying problems (alien species, energy use, pollution), 4) results in waste and pollution and 5) contributes to the overheated capitalist economy geared towards the escalation of the aforementioned trajectories. Due to its notable impact, transforming and reorienting consumption has a critical role in reversing biodiversity loss. BIODIFUL creates and shares knowledge about the environmental impacts of individual shopping baskets and actively takes a stand.

Secondly, BIODIFUL takes a deeper look at environmental anxiety and related depression. Human and environmental well-being seem to go fundamentally hand in hand: a system that transforms natural capital into economic capital wreaks havoc on both. BIODIFUL aims to find ways to help individuals overcome environmental anxiety-induced paralysis. Empowering individuals by highlighting the leadership potential within themselves enhances individual well-being. Hopefully, it will result in an ever-widening circle of people who believe in the



possibility of a respectful future for biodiversity and act to make it happen.

## Multidisciplinary research and collaboration

The context in which the individual-level impact possibilities have predominantly been explored thus far in BIODIFUL is food systems. Growing, producing, selling and consuming food each have critical roles in both environmental and social ecosystems, and changes in the food system have widely spanning impacts on biodiversity. To paint the whole picture, BIODIFUL has brought together natural scientists looking into models and mechanisms for measuring biodiversity impacts and social scientists specialising in consumption, well-being, positive psychology, and food systems.

In Work Package 3, research has progressed in several dimensions, from literature reviews to diverse empirical efforts, including interventions, interviews and surveys. For example, a consumer survey (n 1000) revealed that Finns believe that biodiversity loss creates long-term severe negative impacts both globally (83%) and domestically (67%), with a notable portion of people expressing anxiety about the increase of biodiversity loss (63%).

Work Package 4 has executed interviews in firms throughout the whole food system, discussing with

farmers, producers and retailers to uncover the maturity level of biodiversity awareness and the attitudes and values underpinning the actions impacting biodiversity. The results show that individual farmers suffer from structures that render making a living through environmentally respectful agriculture challenging. The change needs to begin within both political structures and higher up the value chain: retailers have a notable role to play. However, their willingness to engage in actions that might diminish their profit margins seems to be a stumbling block.

The work in Work Package 5 includes, in addition to literature reviews and expert interviews, a Delphi study that explored experts' viewpoints regarding the acceptability and effectiveness of diverse novel policy tools and measures. One key Delphi result was that the respondents were quite unanimous about the effectiveness of the measures, but the acceptability of these measures varied depending on the respondent.

Work Package 6 is looking into measuring the biodiversity impacts of given products. Having started with literature reviews to map out the existing models and approaches, the researchers are now well on their way to having a full biodiversity footprint Life Cycle Assessment done on 700 food products the Finnish people consume. The results highlight the impact on nature in Finland and show the biodiversity footprint of Finnish consumers' diets throughout the planet. The researchers have been also working on improving



Bringing all BIODIFUL researchers together at Seili, spring 2023

assessment methods e.g. by calculating characterization factors for invasive alien species.

Bridges between the researchers in different work packages are being built on a continuing basis. Knowledge is shared not only at the monthly Zoom meetings and two three-day live seminars where all researchers have come together but also in research efforts, such as through pooling data collection, subsequently processed in diverse contexts.

## Societal interaction

Basically, all of the awareness-increasing efforts of BIODIFUL, listed in the first impact story, are aimed at individuals in their varying roles. Individuals eat and consume, make decisions in firms, vote and design policies. However, as the notion of leadership in BIODIFUL is twofold, encompassing both the formal leadership gained by a position in business or policy-making and the informal leadership emergent in the everyday actions of each individual, communications and interaction efforts are targeted respectively.

The communications and interaction efforts aimed to empower the informal, emergent leadership (in other words, individuals in all their daily roles) target the so-called wider audiences. These include the majority of the blog postings, social media activity, podcasts, participation in the opening carnivals of the University of Turku, presentations in the Turku City Theater (Akateeminen vartti, 2022 and 2024) and the low threshold discussion series taking place at Teatro, Logomo, in spring 2024. Also, the joint book effort, undertaken by the whole BIODIFUL program, is targeted predominantly to individuals in their diverse daily roles. There are also ongoing negotiations with another publisher about a popular science book, authored solely by BIODIFUL researchers.

Additionally, BIODIFUL has engaged in educational efforts aimed at undergraduate and graduate students and executives. Examples of the first area include developing a new open massive online course within the University of Turku, Business and Nature, and Kestävä Kehitys (Sustainable development. During the first three years of the projects, BIODIFUL researchers have also given several presentations on biodiversity and biodiversity loss at Finnish schools and colleges (e.g., Turku, Pori and Helsinki). These presentations and discussions have reached at least 600 children.

BIODIFUL  
researchers in  
media 2023

**Turun Sanomat**

Luonnonsuojelu

### Yrityselämä havahtumassa luonnon monimuotoisuuden suojeluun: – "Me emme kuluttajina halua tuntea syyllisyyttä ostamistamme tuotteista"

RIITTA SALMI



Suomen pinta-alasta iso osa on metsää ja Anne Quarshien mukaan osittain siksi luontoa on pidetty itsestäänselvyytenä. – Meillä on ollut illuusio siitä, että luonnolla menee hyvin, siksi ei ole ennen havahduttu siihen, että Suomessakin luontokato on monilla mittareilla mitattuna jopa kiihtynyt viime aikoina.

MAASEUDUN TULEVAISUUS

Helsinki

Tilaa

Etusivu MT Metsä MT Hevoset Lehdet

**Juuri nyt:** Valkohäntäpeuroja saatiin saaliksi aiempaa vähemmän – katso oman maakuntasi luvut


**Tilaa jalle:** Tässä tulee "maanteiden juna" – Ruotsissa ajetaan ennätyspitkällä rekalla

**Euroopan viljelijäprotestit:** Lue MT:n uusimmat uutiset aiheesta

### "Maaseudun aika tulee vielä" – tutkija Irene Kuhmosen mukaan nykymenolla moni tila joutuu kuitenkin sitä ennen liian ahtaalle

Maatiloja kuihduttavasta kierteestä poispääsy edellyttäisi kiireesti tosiasioiden tunnustamista koko yhteiskunnassa, katsoo maatilojen kestävyysriitelmästä väitellyt tutkija.

Jaa artikkeli Kuuntele



Vuotiaan Tuli-Santun (oik.) koulutus on jatkossa Irene Kuhmosen harrastuksista tärkeimpiä, kun väitöskirja ei enää vie aikaa. Kuvassa myös Santun emä Tuli-Helmi. Kuva: Pentti Vänskä

Maatalous | Maatalous  
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Kajaleena Runsten

# Biodiversity respectful leadership model for companies

## Societal challenge

While there is a growing awareness of the environmental crises in general and climate change in particular, the level of understanding regarding biodiversity loss is still somewhat low in businesses, though it has risen notably already since the first year of BIODIFUL. For the most part, firms struggle to trace the biodiversity impacts of their business actions and, as a result, predominantly focus their sustainability efforts towards more easily

measured goals, such as green energy transitions or waste management. However, while many solutions aimed at mitigating climate change are essential also for combatting biodiversity loss, there are more linkages between business actions and biodiversity impacts, which remain unseen and unaddressed. It has, however, been gratifying to see how some corporations and investors have already taken determined measures to reduce the harm they inflict on biodiversity. We can also see the rise in nature-related themes in the biodiversity roadmaps created in different fields and sectors in Finland during the last two years, and these are important for leading the way towards more nature-friendly approaches. At this point, there is plenty of room for new, pioneering activities that aim to stop biodiversity loss, and it is worthwhile for different fields and sectors to strive for these roles.

The most direct impacts on biodiversity have thus far been identified in the agricultural, forest and construction industries. Primarily, this results from their land use: the deliberate monoculture-focused aims of agriculture and forestry and the extraction-based exploitation of natural resources in construction (and city planning) continue to wipe out diversity on the levels of ecosystems and

BIODIFUL Leadership Forum 2023



species, with the use of pesticides having an impact even on the level of the genetic diversity. However, few are the industries where no impact on biodiversity can be traced.

For businesses to play a critical role in reversing the trajectory of mass extinction, three steps are needed. First, companies must understand the urgency of biodiversity loss and rate it as equally threatening as climate change. Secondly, each firm and industry must be able to trace their individual roles in biodiversity loss and take responsibility for the effects of their actions on biodiversity. Third, businesses must have tools, models, know-how and intent to change their operations into biodiversity-respectful actions. BIODIFUL aims to make an impact by realising all three steps.

The impact of BIODIFUL on the first step, increasing biodiversity awareness in businesses, is firmly entrenched into the overarching aim of mainstreaming biodiversity awareness in general (see impact narrative nr. 1). The second and third steps require more focused actions, both traditional research and knowledge co-creation with diverse business collaborators. BIODIFUL is working towards helping to trace and measure the biodiversity effects of a set of firms (predominantly in the food ecosystem) to give companies the metrics necessary for aligning their actions. Additionally, and most importantly, BIODIFUL is working to create biodiversity-respectful business and leadership models that can be implemented into the established BIODIFUL network and further diffused more widely into the business realm.

## Multidisciplinary research and collaboration

As understanding the direct biodiversity impacts of business actions is, at best, nascent, creating knowledge about the complex pathways from business actions to biodiversity results requires advanced expertise from several fields of research. In BIODIFUL, biologists and other natural scientists look into environmental facts, and social science researchers cover the whole realm of business studies, from marketing to strategic management. Research and collaboration within such a versatile group take three forms.

First, BIODIFUL builds on existing research excellence to design and execute theoretical and empirical research, engaging in discipline-based and interdisciplinary research – in other words, there is the part of “research-as-usual”. For example, in the consumer-oriented work

package, there have been two literature reviews, two surveys and one intervention, and in the business work package, in addition to a literature review, analysis has been conducted via interview-based data collection in 2022 and spring 2024, via company sustainability reporting analyses, as well as via scenario workshops. The collaboration between work packages is active as they both view business, but from different sides: demand and production.

The second research and collaboration form in BIODIFUL is at the interface of research and practice. There is an increasing demand for practical solutions for businesses. The network has been vocal in articulating the business needs. Researchers have been active and sought-after speakers in diverse industry and business seminars, executive education, panels and other events. This area of research is bi-directional: not only do we share our insights with the companies, but we also learn about the discussions pertinent to the firms, the problems they find relevant, and the attitudes and assumptions accompanying them.

One of the novel insights this collaboration has brought to BIODIFUL is the more nuanced understanding of biodiversity thinking in firms. As more and more firms have acknowledged the need to act sustainably, the demand for practical and actionable solutions increases. However, while the increase in the demand for biodiversity-related knowledge is a positive sign, there is a twist: the solutions the companies seek need to fit into the mental frameworks they are used to. Put simply, such solutions that do not threaten profits or traditional ways of conducting business are wanted, but others seem inconceivable to act upon. This attitude is also implicit in the vast demand for metrics: while it is unquestionable that having the ability to measure the biodiversity impacts of companies could facilitate implementing biodiversity-related practices, there are already several actions the companies could take, even without exact metrics, to become more biodiversity-respectful. However, as implementing such actions might require notable changes in their business models, some companies see waiting for metrics as a suitable excuse for not taking the immediate actions that would be possible, settling down to wait and see what other firms might do and whether or not that has an impact on their competitiveness.

The third notable collaboration form in BIODIFUL consists of philosophical discussions, including the ontologically oriented debates and the environmental philosophy arguments necessary in a setting of scholars from both natural and social sciences with plural science philosophical underpinnings. This philosophically oriented and deeply digging approach is uniquely

BIODIFUL and has been emerging since the first year as its own area of interest. This area also connects business and societal decision-making discussions, ultimately forming the question: at what level is the necessary change needed?

The more understanding is created in BIODIFUL, the more pronounced becomes the need to assess whether it is possible to reach the overarching aims of a biodiversity-respectful world through transitions within the established economic and societal systems or whether a more profound transformation of the very fundamentals of those systems would be needed? In short, in communicating and collaborating with businesses, can we express faith in the possibility of green growth, or should we advise degrowth, regenerative business or some other fundamental overhauls to the economic logic employed? These ongoing discussions engage both BIODIFUL scholars and the wider network.

The longer the debate between the possibility of green transition (change within the current economic system) and the necessity of sustainability transformation (change of the current economic system) has been going on within BIODIFUL, the more it seems that most of our researchers lean into the latter category. This has resulted in conceptual research approaches, scrutinising the origins of the unsustainability of current business and the

search for foundational axioms that could underpin a more sustainable economic system. However, as system-level change is slow, and the urgency of requisite change is high, the currently adopted approach of BIODIFUL is to attempt change within both paradigms. In practice, this means that we are informing firms of practical and immediately implementable actions that can improve their relationship with nature while, at the same time, engaging continuously wider spheres in a discussion that criticises and questions the basic assumptions of the *raison d'être* of the firms. There is a direct link between the economic systems and the firm actions, so more about this discussion can be found in the fourth impact story.

## Societal interaction

Before submitting the funding application, BIODIFUL organised its first network kickoff event for stakeholders and interested parties ranging from big and small companies to social organisations, associations,



BIODIFUL Leadership Forum  
23.5.2023 at Logomo, Turku.



Keanote speakers at the event were chair and co-founder of the Baltic Sea Action Group foundation Saara Kankaanrinta, Member of the European Parliament Ville Niinistö, director of BIODIFUL Ilari Sääksjärvi and vice director of BIODIFUL Satu Teerikangas.



ministries and other public decision-making parties. After receiving funding, the network gathered again to share and discuss questions, demands, possibilities, and insights before launching the research project properly. The active collaboration with the network has continued, with new collaboration models continuously being developed.

In addition to the ongoing communications via the project website, active blogging, and social media accounts (LinkedIn, Twitter, Facebook, Instagram), and engagement in ongoing societal interaction via keynote speeches, presentations, and panels, researchers have also become more deeply involved in the biodiversity-related strategy work of different companies. In the fall of 2022, BIODIFUL organised a research event at a farm and a business network event at Kesko, one of the network participants. Two different types of business event series, BIODIFUL Round Table and BIODIFUL Leadership Forum, were launched in spring 2023.

BIODIFUL Round Table (BRT) is organised four times a year. The first four themes discussed were biodiversity in general (January 2023), biodiversity regulation (May 2023), measuring biodiversity (September 2023), and biodiversity and global supply chains (December 2023), while the next upcoming themes are biodiversity reporting (March 2024) and biodiversity and food systems (June 2024). The idea is to bring 6-8 individuals together for a meaningful dialogue on diverse biodiversity-

related themes. The discussants include 2-3 researchers from BIODIFUL, business representatives and political decision-makers, and the idea is to co-create a deeper understanding of the linkages between biodiversity and business. BRT is streamed live and organised in collaboration with EY to gain a broad business audience.

BIODIFUL Leadership Forum is an annual event. The first event was organised on March 9th, 2023 (with 120 onsite participants), and the next is scheduled for May 29th, 2024. A more typical leadership conference, the event presents the latest academic insights, promotes networking between companies and politicians interested in biodiversity-respectful business, and provides further questions and ideas for researchers to delve into. The material for the first event, including a comprehensive set of research posters, is available on the BIODIFUL website.

The first webinar on the results of the firm-specific research (within the food system) was held in the autumn of 2023. The webinar is also available on the BIODIFUL website.

Additionally, BIODIFUL researchers have presented their work to, for example, Finnish Chambers of Commerce, Kemianteollisuus, Kaupan liitto, ProLuomu, Perheyrittysten liitto, Turku Chamber of Commerce, Turku Climate Forum, Companies located in the city of Lahti, Metsä Group, Sitowise, and several other business associations.



One of the ongoing discussion themes, especially within the communications and interaction team, is the mismatch between demand and resources in terms of helping specific companies with their biodiversity-related work. As an academic endeavour, the research project aims to create knowledge that can be applied in diverse contexts, instead of being targeted towards solving a specific problem of a specific company. However, several companies have turned to BIODIFUL to ask for consulting, but as 1) we are funded to engage in research as a full-time job and 2) not all researchers have the consulting skillset required to help specific companies, there is no consultant army on offer for helping out individual firms.

However, there is a need for a mechanism to enable diffusing and applying research findings into firm practices at the level and scope of an individual firm. Creating this mechanism is one of the ongoing ambitions of the BIODIFUL interaction and communications team, and currently, there are three novel approaches in development.

First, BIODIFUL collaborates with an international organisation, the Academy of Business in Society (ABIS), that has experience in producing international summer schools for business practitioners to present BIODIFUL Summer School in August-September 2024. Additionally, BIODIFUL will co-host an international ABIS colloquium in Turku in the autumn 2024.

Secondly, several BIODIFUL researchers with ample experience in sustainability-related executive education are continuously collaborating with the Executive education department of the Turku School of Economics (TSE EXE) to create an executive course on sustainable business launched in the fall of 2024. In addition, BIODIFUL researchers have helped TSE Exe embed sustainability into the existing EMBA and JOKO executive programs. Moreover, they lecture and teach in a number of EMBA and JOKO program modules and executive events pertaining to sustainability and futures thinking. Recently, the effort made to launch the first summer school will work as a cornerstone for a proprietary BIODIFUL Executive Education module that can be offered in the future through other organisations focused on executive education. Additionally, the Business&Nature online course is targeted to current and future business practitioners.

Thirdly, BIODIFUL will pilot a joint workshop between BIODIFUL researchers and consultants from EY, where the researchers share their findings and discuss with the consultants how the novel insights could best be put into practice in the work done by the consultants. The timing is under discussion, but the event will take place either in the early summer or early fall of 2024.

# Biodiversity-respectful leadership model for societal decision-makers

## Societal challenge

In political decision-making, there are three levels of problems. First, politics includes issues that are incommensurate: it is impossible to position the diverse aims onto one scale. How could one prioritise between children, healthcare or infrastructure? This plurality of goals calls for value discussions and cannot be solved through economic metrics. This means that decisions related to environmental issues must also be reflected against the other goals a society deems worthy.

Secondly, making informed and impactful decisions that have the desired effects through the complex pathways of political processes requires deep and wide knowledge and understanding. Science and research are necessary to assess the subject matter and map out the effects emerging far from the decision-makers, be the distance an issue of time, space or social position.

Thirdly, as the political positions are achieved through the process of voting, the decisions, both in terms of value assessments and actions, are subject to the attitudes and aspirations of the voters. Therefore, a political decision-maker takes into account not only the direct impacts of their decisions but also how the decisions are perceived.

BIODIFUL aims to contribute to the political decision-making processes on all three levels. It calls for value discussions and provides forums for such

exchange. It creates knowledge about the genuinely impactful decisions that support biodiversity and shares the knowledge in collaboration with researchers from other projects with similar, biodiversity-respectful goals. It also assesses the acceptability of such decisions and encourages politicians facing difficult choices.

## Multidisciplinary research and collaboration

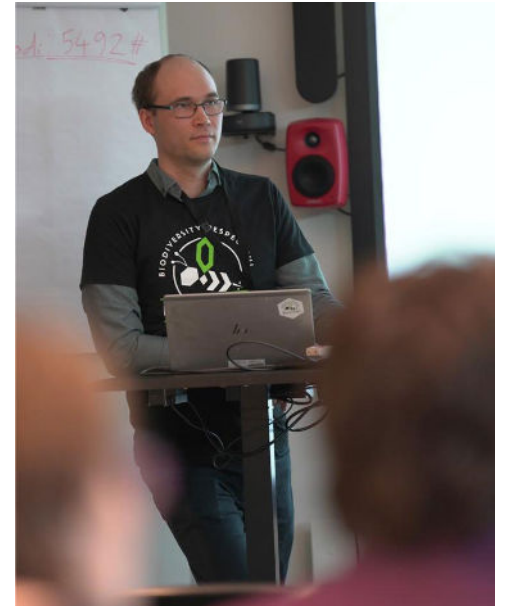
While biodiversity loss is a tangible biological phenomenon, in the era of the Anthropocene, its root causes are far from being natural phenomena. Biodiversity is being lost because of human actions. Therefore, to reverse it, it is essential to genuinely understand the drivers lurking within the social and economic systems guided by political decision-making and governance. This means exploring the formal roles and models and advancing understanding of epistemic governance: the same information can be utilised in diverse ways to advance even quite opposite aims.

Logically, the first part of BIODIFUL research, oriented towards creating biodiversity-respectful societal decision-making, has focused on understanding and uncovering the deeply set drivers beneath the direct





Workshop at BIODIFUL Leadership Forum



and indirect drivers identified by the IPBES. In short, if our current systems are responsible for biodiversity loss, why and how have the systems become such? For example, in the Finnish context, the debates around forestry highlight these path dependencies. Therefore, one of the research areas into which BIODIFUL has entered seeks answers to the root causes of biodiversity loss in Finnish forests. The mismatch between scientifically evidenced facts and political decision-making has recently been evident in the debate regarding Finnish forestry and the EU Restoration Act. The Finnish opposition is based on deliberately promoted myths about the special forest relationship of Finns, grounded on the demands of the forest industry, which in turn are grounded on the values of the contemporary economic system.

Understanding the future possibilities depends on understanding the historical paths that have led to the contemporary situation. What are the axioms underpinning our societal system, how have they contributed towards unsustainability, and what kinds of alternatives could there be? One of the articles in the BIOD program book, co-authored by BIODIFUL and BOOST researchers, explores these themes, explicating the roots of a currently unsustainable social system and arguing for a radical systemic transformation. While the research done on explicating the historical paths does not directly translate into actionable steps, we at BIODIFUL deem such research essential for understanding the systemic nature of the current environmental crisis – especially concerning biodiversity loss.

Making informed suggestions for political decision-makers depends on understanding the future possibilities – including how a given proposition could be perceived. Politics is, after all, a game of perceptions: whether any ruling has an impact depends on how it is

received and implemented. The way the biological facts of environmental crisis have thus far been considered is proof enough – it's not that we actually need more proof of the environmentally destructive facts; it's that the evidence is not alone sufficient to promote behaviour that could stop the destruction. This is apparent in our research delving into the acceptability and impact of already existing political guidance methods: put simply, not only are there impactful methods with which policymakers could encourage and even enforce biodiversity-respectful actions, but such methods are also already known – the only thing missing is the willingness and courage to implement such methods for fear of countering adversity. Acceptability trumps impact – at least as long as it comes to acts aimed at countering biodiversity loss. The contrary is true when guidance can be argued with economic values – the necessary courage seems to be available when the aims can be explained as economic growth.

Understanding human nature and worldview-related root causes is, therefore, the first step towards engaging societal decision-makers in essential value discussions and making biodiversity-respectful action suggestions that can succeed in creating a difference. Regarding biodiversity, it comes down to framing: if biodiversity loss is boxed into the category of environmental problems, it carries less weight than if it can be discussed in contexts that are in the current political atmosphere considered more valuable, such as economy or safety. This is what BIODIFUL did with its first policy brief. We highlighted that biodiversity loss is not only an environmental problem but also a social one, threatening such fundamental building blocks of society as economy, physical and psychological health, security of supply, and societal stability.





and showcased the necessity of courageous leadership in tackling these societal risks through protecting biodiversity. We outlined four action points:

1. Protecting biodiversity cannot remain voluntary. Instead, the political decision-makers need to take responsibility for setting and holding the line.
2. We need a nature law that would enable regulating and monitoring biodiversity-related actions.
3. The national biodiversity strategy should be related to the national risk assessment and security strategy, and include actions that would be monitored and ensured.

4. there should be a specific official position to a public officer with the responsibility of looking after the interests of the silent stakeholders, nature and future generations, in public decision-making.

Our policy brief gained a lot of interest, both from mass media and social media, with Helsingin Sanomat, Turun Sanomat and YLE publishing big articles about it. What we considered especially a notable success was that the article in HS was published in the section of Homeland Security, not in the Environmental section. As we aimed to reframe the biodiversity discussion, bringing it into the necessary fields in the current political atmosphere was considered a good start.



Our first policy brief gained notable media attention, February 2024



# BIODIFUL Movement

## Societal challenge

To be honest, we do not need more information to conquer the environmental crises. There are facts aplenty. However, acting on them is the genuine Achilles heel of society. At least from the 1960s onwards, it has been known that how our economy and societies function is utterly unsustainable. Despite producing volumes of research-based knowledge, we still do not seem wise enough to understand that crossing the planetary boundaries leads to a critically inhospitable environment for all life forms – including us humans.

The unfortunate fact is that humanity has been unable to halt the pace at which biodiversity loss continues to spread worldwide. This results from many factors, particularly a lack of country-specific binding obligations, systematic monitoring, and adequate funding, underpinned by a worldview that supports the current economic systems and the social structures dependent on them. Finland, too, has allowed its biodiversity to deteriorate for decades without enacting sufficient measures to restore what has been lost.

At its core, the issue is the same regardless of whether we're dealing with an individual or the whole of humankind. We know how to live healthy lives: one should eat nutritious food, exercise regularly, sleep enough, and avoid alcohol and nicotine. However, despite our knowledge, few of us are walking paragons of health. We know how to moderate climate change and biodiversity loss: let nature have its way in big enough



BIODIFUL camp November 2023 at Turku Botanical Garden.



areas, leave natural resources in their natural forms and forget the fiction of financial value being more precious than other types of value. Despite that knowledge, the data about the state of nature speaks loudly about the knowledge-action gap we urgently need to bridge.

The answers are fundamentally simple – but they are far from easy. The crux of the problem is that it is not even enough to change the societal and economic systems; we need to change ourselves. Just as it is impossible to decouple humans from the ecosystems of the rest of nature, it is impossible to decouple us as individuals from the social systems we together constitute. Each of us is a part of both the social and ecological whole.

However, therein lies also the power BIODIFUL seeks to tap into. As each human is a part of the whole, changing the whole can begin with the individuals. This idea underlies the impact aim of starting a BIODIFUL movement. It is grounded on the notions of chain reaction and exponentiality: if each one of us can change our own lives to become biodiversity-respectful and then inspire the same change in two other people, who in turn inspire each two more, it is possible to reach such a mass of individuals that together we might reach the tipping point and push our societies onto a new, biodiversity respectful trajectory.

## Multidisciplinary research and collaboration

As stated, the change begins with each one of us. During its whole duration, BIODIFUL has put much effort into face-to-face meetings between the whole consortia and smaller teams. In addition to engaging in direct research-related discussions, a notable amount of time has been deliberately reserved for more informal discussions that are vital for creating shared understanding. Starting with the deliberate efforts from the very first year onwards, BIODIFUL has managed to build a safe space for its researchers to share questions and uncertainties and explore difficult themes genuinely. A practical example of this is the informal BIODIFUL Whatsapp channel, where both current project researchers and former researchers share thoughts, jokes, laments and other personal insights creating and enforcing a sense of belonging. This has borne fruit: empowered by the support of colleagues, BIODIFUL researchers are braver in their research, interactions and public outreach.

The chain reaction has started with the BIODIFUL researchers. From the first year onwards, it has been spreading out to diverse pockets of colleagues and other people within the sphere of influence of BIODIFUL researchers. This impact is complex and nearly impossible to measure, as it evidences itself gradually through slowly emerging thoughts carried out into everyday



In spring 2024, BIODIFUL will organise a low-threshold discussion series. The first discussion was at the Logomo Teatro 29. Feb 2023.

lives. However, one of the visible effects is the interest BIODIFUL has garnered in researchers – as stated in the first impact story, our project is well-known in various contexts.

## Societal interaction

During the first year, the focus was on creating the heart of the chain reaction BIODIFUL aims to unleash. Subsequently, we have widened our outreach in the

number of live and online events and discussions listed in the first impact story, with positive results.

However, as is the nature of exponentially progressing phenomena, the bubbling under the first part of the process is invisible, with the evident results becoming evident only after a certain tipping point is reached. We hope that we have managed to kindle such fires of biodiversity-respectful leadership and that the results will become apparent in the long run, potentially during the running of this research project, but hopefully reaching well beyond it. 🌱



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Funded by the Strategic Research Council (SRC), BIODIFUL is an interdisciplinary research project exploring and developing biodiversity respectful leadership in individuals, organisations and society. In the project, there are more than 40 researchers from four research institutes (UTU, LUT, JYU, LUKE) and more than 70 network partners (firms, organisations, municipalities and activists). BIODIFUL is a part of the BIOD program by SRC (2021–2027).

