



Federal Ministry
of Education
and Research

Research for a sustainable Europe

Results paper for the workshop on February 19 and 20, 2024

Shaping the future of European sustainability research

We are living in challenging times. The overall geopolitical situation is tense and democracies in many countries are under pressure, which equally affects the European prosperity model. Loss of biodiversity and intact ecosystems, as well as soil degradation and scarcity of water resources are progressing. Furthermore, negative effects of climate change are increasing. Impulses towards a sustainable development are thus more urgent than ever. In order to secure the livelihood and standard of living for all people within the EU and beyond on a long-term basis, decisive advances are necessary by taking into account all three dimensions of sustainability, namely social, ecological and economic.

Transformation towards sustainability offers a wide range of opportunities not least for international cooperation and competitive business models and technologies for sustainable business. Research and innovation are key drivers of sustainable transformation. At European level, the Framework Programmes for Research and Innovation play an important role. Preliminary preparations for the 10th EU Framework

Programme (FP10), which will run between 2028 and 2034, are already underway.

Against this backdrop the Federal Ministry of Education and Research (BMBF) conducted a workshop in Bonn on the 19th and 20th of February 2024. Its aim was to derive, which challenges in terms of sustainability would primarily be embedded in the 10th EU Framework Programme, and by what type of funding measures these should be addressed. This workshop included about 30 experts from various sustainability-related fields stemming from science, industry, civil society and administration.

Based on the discussions generated through the workshop and with the involvement of the workshop participants, the current results paper was generated as input for a German position paper on the design of FP10 in the area of sustainability research. The [German Discussion Paper in Preparation for the 10th EU Framework Programme for Research and Innovation](#) published in May 2024 provides an initial positioning at an overarching level.

12 key points for effective sustainability research

How to design the 10th EU Framework Programme in such a manner to achieve maximum effect for a sustainable transformation? In order to answer this question, the following 12 points relay central responses derived from the workshop discussions.

Prioritise sustainability challenges

Progress concerning sustainable development is urgent – as a look into the advances made so far in implementing the UN Sustainable Development Goals (SDGs) shows. Challenges in the protection of climate and resources, the preservation of biodiversity and ecosystem services, a clean environment or circular use of resources all require research-based breakthroughs and impulses. Niche innovations need to be scaled and expanded for a holistic transformation.

Key drivers for Europe's competitiveness, safeguarding its prosperity and sovereignty, are sustainable innovations. Furthermore, advances in sustainable development have positive effects on social cohesion and can contribute to de-escalate conflicts over resources.

Therefore, a strong focus of FP10 needs to be on furthering research and innovation for sustainability.

Approach sustainable transformation holistically

In order to reach the UN SDGs, a profound societal and economic change is necessary. Such change can only come about, if the needs, values and interests of diverse parts of society as well as the general societal development are taken into account. The aim is to

better understand the social context conditions necessary for a successful transformation, and to develop suggestions on how a broad social sponsorship in the sense of participation and support can be developed. This includes the transfer of (technological and social) inventions in conjunction with societal factors, such as social justice, political participation, barriers and motivators of change, as well as political measures in various transformation areas into innovations.¹ However, conflicting aims need to be taken into consideration and solutions need to be identified to overcome these.

Effective sustainability research requires close cooperations

Inter- and transdisciplinary cooperation between natural sciences, engineering and social sciences, as well as between academic research, industry, policy, civil society and further actors is of key importance, in order to attain innovations *and* practical solutions. Additionally, citizen engagement can contribute substantially, for example in projects with use-case references. Cooperation among participating actors should be conducted on equal terms, and already happen in the conception phase of projects. This will ensure that research does not bypass values, needs and circumstances.

Further strengthen transfer to application

For societies and economic activity to become more sustainable, biodiversity and climate friendly, it is important to implement technological and non-technological inventions quickly and at large-scale, so that they can unfold their impact as innovations. In this regard, there is often a lack of transfer from research to application and a lack of scaling of innovations. To reach the widest possible impact, the affected systems need to be analysed with regard to adjustments, and funding should be applied in a targeted manner. On the one hand this will lead to develop practical solutions and on the other hand to accelerate their social and economic implementation on a wider scale. This also brings forth specific requirements for living

labs and demonstrators. A central starting point for effectively bridging from research to application is the direct project involvement of implementation partners or practical partners (see above).

Global challenges demand international cooperation

Environmental destruction, extinction of species and climate crisis do not halt on national borders. Thus, cooperating with third countries within and beyond Europe is imperative. However, in light of the current geopolitical climate, a re-alignment is necessary. Aspects, such as technological sovereignty and reduction of dependence from autocratically governed countries, as well as questions regarding the freedom and security of science and research need to be given more consideration, without losing sight of different rationalities for openness in science systems. Collaboration with countries, which share our values, will be considered first and foremost. Another focus should be placed where, for example, globally decisive developments need to be kept in view in relation to the sustainability context, such as biodiversity hotspots, urbanisation areas or zones that are crucial for climate change, such as the tropical rainforest. Upheld by mutual respect, but also trust in own strengths, projects should be aligned in such a manner, that learning from each other and also creating together, culminates into a high level of effectiveness.

Expand openness for diverse solution approaches

A key measuring aspect for research funding has to be the impact potential (ex-ante) respectively the achieved impacts (ex-post) for a sustainable development. In future, this orientation should be connected with a larger openness in terms of a diversity of solution approaches. Such technologically and methodologically open funding supports creative ideas and competition to achieve best possible solutions. A step in this direction would be, for example, calls and topics on living labs of the Horizon Europe Soil Mission,

¹ *Invention* it is to be understood as a new, research based solution approach. *Innovation* is the implementation thereof (application of new ideas, products or methods). *Transfer* means the transfer of scientific findings into innovations. *Transformation* in turn refers to fundamental changes in political, societal, economic or technological development – as a cumulative effect of innovations (and other factors).

which the EU-Commission deliberately keeps bottom-up within the soil health area. In other Horizon Europe programme parts, such as the EIC, a similar approach is pursued. Experiences with such ‘open topics’ should be applied when designing FP10.

Further develop criteria for research assessment with a view to societal impact

To achieve reliable, convincing and usable results, high scientific quality standards are key. At the same time, focussing on scientific excellence (in particular when based solely on scientific publications) falls short when evaluating research projects. The current understanding of excellence, therefore, is under discussion especially in connection with socially relevant research and innovation. It is important both for the selection of projects and the reputation of the researchers to establish a recognised set of criteria, that appropriately considers different social services of research.²

Simplify procedures

Researchers should focus on high-quality research – not on bureaucratic procedures. Processes for project application and implementation respectively should be designed as lean as possible and combined with an efficient use of the participants’ resources. One such measure for the two-stage procedure could for example be to considerably simplify the requirements for submitting documents of first stage proposals. A reduction in requirements for example regarding governance or branding of projects could simplify submitting an application. Another measure to simplify the procedure could be the use of open-topic approaches (see above) within a limited research field. Furthermore, increased opportunities for smaller projects/consortia should be created in order to improve workability in the projects, to achieve higher plurality of solution approaches and to reduce administrative burden. Collaborative funding and thus

well-established funding measures, such as RIA, IA and CSA³ should be retained, to facilitate orientation and access on the basis of existing experiences to those interested in funding.

Support new target groups in terms of creativity

Researchers or actors from practice, who are first-time participants in an EU Framework Programme, should be provided targeted support. Besides young researchers and start-ups, this includes persons or organisations, who do not belong to the “classic” target group of the research and innovation scene. Nevertheless, latter group are equally important for a holistic view on the challenges and solution approaches. For these groups it is important to provide low-threshold information and financial offers (similar to the BMBF Start-up Financing for Horizon Europe funding initiative), which will facilitate their entry into EU projects. Mixed teams consisting of experienced and less-experienced actors should likewise receive targeted support.

Design permeable and innovation accelerating funding measures and structures

For research results to be turned quickly into innovations and thus unfold their effect for more sustainability, a harmonised set of funding measures is necessary. These will enable support to promising approaches along the entire innovation chain (with phase-based funding rates). When designing each funding programme, the interaction with other measures must be taken into account and potential synergies should be actively addressed. The partial programmes in FP10 should be coordinated with one another as far as possible in terms of content and administration, and the permeability between the pillars of the programme should be increased. Currently, there are projects funded under the European Research Council (ERC), where linkages to the thematic clusters exist. These potentials should more strongly be utilised in FP10.

² Relevant suggestions were for example discussed and developed in the BMBF funded project LeNa Shape (nachhaltig-forschen.de/en/lena-shape/).

³ RIA: Research and Innovation Actions; IA: Innovation Actions; CSA: Coordination and Support Actions.

Further develop Partnerships and Missions

With the start of Horizon Europe, the European Partnerships were fundamentally reformed by reducing their number and grouping them thematically. However, as a result of this reform partnerships are viewed in many cases as too complicated and administratively too burdensome. Therefore, participation options should be extended, simplified and designed more transparently.

The positive structure-building effects of partnerships and their relevance for the transformation of economy and society should be elaborated in a better way. Moreover, there is a need for a better linkage content-wise between the thematic focused work programmes within a future FP10.

The mission-oriented approach needs to be strengthened further in FP10. The five EU Missions, which started as a new tool introduced in Horizon Europe, have specific goals with defined deadlines to address pressing societal challenges. The current EU Missions should be developed further in such a manner, that they can fulfil their respective claims as comprehensively as possible. To this end, a focus is as important as the strengthening of the diversity of solution approaches, mobilising existing research results and solutions. In addition, a reinforced cooperation with further stakeholders, who are important to achieve the mission goals at national and equally at European level, is necessary. Furthermore, in the sense of efficiency and political coherence, national and

European measures and governance structures in the thematic areas of the missions need to be connected in a much stronger manner across ministries and levels.

Extend interaction between regional, national and EU funding

To optimise this transfer, to avoid any dual funding and for a seamless interlinkage of different funding phases along the innovation chain up to the transfer into application, a coordinated approach of funding organisations is necessary. This claim is directed towards Directorates-General, which are thematically responsible, as well as responsible ministries in Germany, respectively other participating states. In doing so, it must be ensured that the coordination between the levels does not overcomplicate and delay funding procedures.

Attention must be paid to national funding programmes, which can lead to EU funding in suitable cases and are therefore, designed accordingly. Also, synergies with regional funding should be promoted through an appropriate design of funding measures.

A maximum transparency is desirable in regard to existing funding measures, existing projects and across all member states and the EU. A common database, which (in future) could be implemented through Artificial Intelligence (AI) with reasonable effort, would be ideal.

Focus on topics and measures

After finalising the collection of topics, the workshop participants identified six environmentally and climate related thematic areas with high relevance for a sustainable development. Subsequently, these were elaborated on in smaller working groups. The

spectrum covered by the six subject areas was deliberately chosen to be broad. For reasons of capacity further themes, which were discussed within the workshop, were not delved into.⁴

⁴ There was no further prioritisation of the themes; furthermore, the list of discussed themes does not claim to cover all research needs on the path to the sustainable development goals. The following themes were discussed:

- Materials research and raw materials
- Resilient urban spaces
- Climate neutral energy systems/storages

The following depiction supplements and specifies the above-mentioned key points with a view to relevant thematic areas. It also shows exemplary, which research goals FP10 should address in which manner.

Governance for sustainability

Both in public and private-sector areas there is a need for a stronger control and incentives at many levels in order to achieve long-term ecological, social and economic goals. The multidimensionality of the sustainable development goals thus requires to develop integrated governance approaches across different administrative levels, sectors and societal groupings and with a view to the needs of current and future generations. Research is called upon to provide fundamental suggestions and evidence based assessments.

Impact goal:

The aim must be that the necessary knowledge is available to the relevant stakeholders at the right time in order to enable them to make the best possible political and economic decisions regarding all dimensions of sustainability.

This knowledge contains both context specific governance approaches and instruments, as well as methods to evaluate their effectiveness. The coming years should be utilised to develop and establish a suitable governance framework for sustainability. It should accelerate the implementation of the Sustainable Development Goals (SDGs) up to 2030 and support the negotiations for a successor framework.

European added-value:

Within this thematic area, the European dimension is of high relevance as many decisions in administration, policy and law etc are made across levels or have cross-level pre-requisites and consequences.

Research needs:

Knowledge and implementable approaches regarding decision trees and decision formats are lacking, that are needed to expedite procedures and allow for a prioritisation of conflicting sustainability goals across diverse (partially interacting) regional and sectoral scales, as well as under the integration of different social groups. These challenges are exacerbated by difficult geopolitical situations and polarising processes.

Moreover, we are in need of information on how European and international framework conditions for the protection of global goods can be designed effectively and efficiently. The same applies to dealing with multiple crises. Issues regarding political science, economy, and communication sciences need to be – especially in close connection to each other – explored and solutions found. There needs to be a better understanding on what European citizens' trust in governance depends on, and how trustworthy and effective governance can be created and assessed.

Existing research landscape:

Existing measures on which can be built upon are among others living labs, digital twins as an element of decision support systems, and foresight processes. Possible role models or strong partners are France, the United Kingdom, Spain and Norway.

Digitalization, data and AI for sustainability

Advancing digitalization, increased relevance of data and rapid progress in the development of artificial intelligence have to be employed for a sustainable transformation of economy and society. An aspect herewith is the extended and new possibility of scientific data processing e. g. in areas such as climate modelling and biodiversity monitoring. At the same time, the challenges these technologies bring for society need to be considered and addressed. In a social science research process, the following should be clarified: how and with what societal means (knowledge brokers, education) society learns to utilise AI in the best possible way in daily life in the interests of sustainability.

Impact goal:

European sovereignty, increased added-value and more innovation in the areas of digitalization, data and artificial intelligence (AI), as well as using the potentials of digitalization and AI for all dimensions of sustainability, are the aim.

European added-value:

European cooperation in this context is of high relevance, by using combined forces to hold and expand the position in the international innovation area, secure access to relevant data and exploit possibilities for their extensive utilisation.

Research needs:

We need more knowledge on the possible applications of AI for sustainability (e. g. climate models, biodiversity models, communal planning and decision support, digital twins) as well as regarding the sustainability of AI. We need to connect (national) data infrastructure, and business models in the field of digitalization and AI, also with a view of exploring the use of data as a resource. Adapting education systems to AI and digitalization is a further research topic. Of special relevance in this context are research security and the risks of ‚foreign interference‘.

Existing research landscape:

Existing measures among others are the BMBF action plans “Natürlich.Digital.Nachhaltig” (naturally, digital, sustainable) and “Künstliche Intelligenz” (artificial intelligence), as well as Smart City Model projects (BMWSB⁵). Germany is able to build upon its strengths in the areas of climate modelling, biodiversity monitoring and city planning.

Water security for humans and environment

Water is the basis for human life and essential for growing crops, as well as for sustaining ecosystems and biodiversity. At the same time, it is an indispensable resource for the development of cities and industry. Climate change, pollution, increasing pressure of utilisation and global value chains require strengthened efforts and innovative solutions for the sustainable management of natural water resources, and securing underlying ecosystem services. Thereby unavoidable competition in utilisation needs to be managed. In addition, seas and oceans are also important research areas as sources of raw materials, biodiversity hotspots, and also for CO₂ sinks. This also applies to moors, which contain more carbon than the combined biomass of forests worldwide, and their climate biodiversity and cooling capacity depends on the water balance.

Impact goal:

Of importance here are sweet water and saline water in all forms (also underground) and the therein contained ecosystems and biodiversity. Quantity and quality need to be secured, both for human needs and also

for nature. Europe must develop a (climate) resilient, precautionary and sustainable water management system and, in addition to flood protection, must also do much more to protect against drought. Of further relevance are water related challenges that have been brought about by climate change and socio-economic developments in other countries. In view of global networking and value chains, these also have an impact on prosperity and stability in Europe.

European added-value:

Hydrological cycles and water-related challenges often surpass borders. This holds true e. g. for water pollution of rivers and oceans, cross-border drought or flood events, or the use of fossil water for the growth of export crops. European - and international - R&I approaches are thus especially suited.

Research needs:

Research gaps exist in reference to the extent and management of water scarcity (and resulting conflicts of use), monitoring and improvement possibilities of water quality, regional and global effects of climate change, coverage of (virtual) water streams and the role of green water. There is a need for research on cultural changes, awareness raising and sense of responsibility in society and economy regarding extreme events (droughts, heavy rains, floods, storm tides, etc). Solution spaces for a climate resilient water supply need to be developed, which include increasing instationarity and consider the potentials, implications and implementation of nature-based solutions, as well as technical solutions. For sustainable landscape water balances, water management plans and suitable infrastructure must be enabled. Possible ways to handle the global common resource “water” should be developed. This can for example be achieved through a better understanding (of the effects) of trade with virtual water and through innovative financial instruments with the purpose of protecting water. Gathering and making data available in regard to water supply, use and quality, as well as the development of scenarios and stress tests should be expanded upon. Additionally, research needs exist in reference to WEF (water, energy and food security) nexus, as well as the recording and valorisation of ecosystem services and the restoration of waterbodies, wetlands, floodplains and moors.

⁵ BMWSB: Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen is the Federal Ministry of Housing, Urban Development and Building.

Existing research landscape:

Existing measures can be built upon, e. g. within the frame of Research for Sustainability⁶ (“Water as a global resource”), Interreg, Horizon Europe Cluster 5 and 6, Water4All, EU Water Mission, Sustainable Blue Economy Partnership. Role models or strong partners could be the Netherlands, Spain, Israel, the United Kingdom, Norway and France.

Circular economy and material flows

The establishment of a circular-oriented economy, as well as urban and regional development, that retains the value of products, substances and resources and avoids waste in line with the zero waste approach, is a step of vital importance towards more climate and resource protection. At the same time, it contributes to an independence of Europe from imports and a reduction of environmental damages.

Impact goal:

The aim is a substantial reduction of absolute resource use along with an avoidance of waste and pollutants. This requires the closure of the biotic and abiotic material flows across the entire value chains and networks. Strong advancements should be achieved by 2035.

European added-value:

In a globalised world material flows cross borders. Only collaboration between countries can ensure a reduction in the consumption of raw materials and materials at international level and by increasing the circulation of these materials, in turn will reduce the generation of waste. European cooperation in Research and Innovation, including innovation friendly regulatory harmonisation and standardisation, allows for strong impulses for the sustainable design of the cross-border transport of recyclable materials. Additionally, it enables the creation of a regenerative, at best a nature-positive, circular economy.

Research needs:

Research is urgently needed to generate knowledge and prepare innovations for product design, harmonised regulatory framework (“end-of-waste”) and a seamless traceability of material flows (traceability

and availability within the EU27 countries and beyond). Other matters are the holistic design of closed loops via “Second-Hand”, cascades and re-use, as well as recycling methods. This also includes identification and material separation (chemical, mechanical, biological), and the application and processing of recyclates and raw materials (re-use, chemical, mechanical, biotechnological). Moreover, Carbon Capture and Utilisation (which include biotechnological approaches for the use of CO₂) within the context of climate neutrality, as well as Life Cycle Assessments (LCA), are important research topics. In order to better understand barriers regarding acceptance and effective incentives, sociological aspects also play a role here.

Existing research landscape:

Existing measures are among others are the German resource efficiency programme and the EU initiative ‘Safe and sustainable by design’ (SSbD). The bioeconomy strategy of the Federal Government includes a multitude of funding programmes on this subject. In Germany for example, the innovation space “Bioeconomy in metropolitan area – BioBall” extensively deals with the topic of recycling urban waste materials by using the example of the Frankfurt conurbation.

Understanding social transformation through transdisciplinary research

Societal values, behaviours and structures are significant for advancements in sustainable development and for tackling complex challenges, especially in regard to European climate neutrality and biodiversity goals till 2050. The conditions, which are necessary for a societal transformation, must be identified and established. This especially requires transdisciplinary research, that brings together humanities, economics, social sciences, engineering sciences and natural sciences, and involves societal stakeholders on equal terms.

Impact goal:

The aim is to have a considerably better understanding of conditions and pre-requisites, as well as obstacles and barriers of transformation by 2035 and on the path to climate neutrality by 2050, and to derive innovative

⁶ FONA (EN): fona.de/en/

solutions. In order to achieve this, transformative research as inter- and transdisciplinary research, must be strengthened, by involving social sciences, economics, humanities, and natural sciences.

European added-value:

Societal transformation takes place in the context of the European multi-level system. To support the transformation, interactions within the overall system and the diverse local challenges and conditions need to be understood. No single nation and no European governance level can accomplish the transformation on their own.

Research needs:

We require more knowledge concerning behavioural changes (regulation vs incentives vs voluntariness), barriers and how to overcome them, as well as conditions for success of good practice examples. Stakeholder constellations should be analysed according to their interests and preferences, related to the respective political levels of action, for example along the lines of: Who are the inhibitors, proponents and what alliances exist? Which interests, intentions, preferences, beliefs etc propel the stakeholders, what are their success or satisfaction patterns? With a view to the desired transfer to the application, furthermore, there are research needs for easily accessible information and data portals for political decision-makers and civil society stakeholders. These portals should make options of actions understandable in complex situations, by designing scenarios based on scientific and existing data including suitable indicators, which will illustrate consequences of political action (or non-action). At a higher level, prosperity models independent of growth should be explored, taking sufficiency strategies and consumption limits into consideration. In this context the role of media and journalism are to be taken into account as well.

Existing research landscape:

Many of the existing measures focus mainly on technological solutions. Social sciences are often treated as “acceptance procurers” or “appendages”. What is needed are “real” integrative natural science and social science projects, as well as transformative research formats (e.g. EU Missions). This requires a broader scope of excellence among others, with a view to a successful transfer (respectively the successful transformation,

if you want to look at the impact). Positive examples in Germany are to be found in the BMBF concept “Bioökonomie als Gesellschaftlicher Wandel” (bioeconomy as societal change), the BMBF call transformation cluster “Soziale Innovationen für nachhaltige Städte” (social innovations for sustainable cities) and the BMBF research funding programme “Wertschätzung und Sicherung von Biodiversität in Politik, Wirtschaft und Gesellschaft” (valuing and safeguarding biodiversity in politics, economy and society).

Multifunctional land use: Connecting nutrition, biodiversity and climate protection

Different land uses are increasingly in competition for land and resources. At least 30 per cent of land and ocean surfaces are required to be placed under special protection for biodiversity at national, as well as European and international level. Therefore, it is necessary to establish all-encompassing approaches and solutions in line with a biobased, regenerative economy. These have to fulfil the needs concerning agricultural production, settlement development, raw material supply, energy and food security. At the same time, ecosystem services need to be preserved, besides nature conservation and environmental protection (which includes the protection of soil, water, biodiversity, air quality, and climate).

Impact goal:

This thematic area was purposely chosen to be broad, because all of these themes are closely linked and therefore, have to be considered systemically. The aim is to establish land use concepts on an interdisciplinary basis, and consequently lead to a sustainable agriculture, forestry and land use as a whole. Connected to this are preserving and improving sustainable food industry and nutrition, energy production, soil health, biodiversity and ecosystem services, as well as counteracting climate change.

European added-value:

In order to safeguard the supply of foodstuffs, raw materials and energy, one must view Europe as a common production and consumption area, that protects biodiversity, ensures ecosystem services, uses regional

potentials and takes local needs into account. In an international context, Europe can pave the way through coordinated (trade) rules, standards and norms for a sustainable, multifunctional land use, also beyond Europe, minimise Europe's footprint and prevent a shift of negative environmental impacts into other world regions.

Research needs:

Concepts have to be developed on how land use can be set up and optimised in an interdisciplinary way, in order to balance the many diverse and competing needs. We require knowledge on restoring nature, sustainable agriculture and forestry and sustainable land use in urban areas, regional value chains, cycles and networks, and "renaturalised" production, i. e. a competitive production, which in equal measure supports biodiversity and soil health. An important aspect is diversification of production (including new plants and processing), which plays a major role concerning ecosystem services, soils, biodiversity and resilience. Land use, including indirect land use (changes) and telecoupling must be explored. Further research areas are reliable indicators and measurement systems for ecosystem services, functionality of biodiversity, (soil) microbiomes, and soil health. An important goal is to find and understand paths to Planetary Health Diet on how land use should look like when implemented. Thereby, theoretical and practical (political & economic) implementation must be researched. Modeling, scenarios and digital twins are relevant.

Existing research landscape:

There are a range of measures in place for this major topic area. Of exemplary character are systemic approaches, in Germany these would be among others the following BMBF calls: "Soil as a Sustainable Resource for the Bioeconomy – BonaRes" and "Agrarsysteme der Zukunft". At European level such a role model is the EU Soil Mission. The following countries could serve as role models or strong partners on individual aspects: the United Kingdom (in regenerative agriculture), France, the Netherlands, and Spain. Within this thematic area, Germany belongs to the group of countries with strong research capabilities.

Contribution

The following experts contributed to the workshop and the preparation of the results paper:

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In line with a co-productive approach, representatives of the BMBF, commissioned project management organisations and the National Contact Point Bioeconomy and Environment were involved in the discussions. The workshop was moderated by Dr. Sebastian Sonntag (DKN Future Earth/Science Platform Sustainability 2030) and Dr. Andreas Schmidt (BMBF, Division Policy Issues, Digitalization and Transfer, Directorate-General Provision for the Future – Basic Research and Research for Sustainable Development). The paper documents the workshop discussions and the recommendations of the experts. It does not represent a consensus position of the participants. The contents of the paper do not necessarily reflect the positions of the BMBF.

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