

Developing, communicating and utilising knowledge
for sustainable transformation

SCIENCE PLATFORM SUSTAINABILITY 2030

Goals and Benefits of the Science Platform
for the German Sustainable Development Strategy

AT A GLANCE

In September 2015, the leaders of all 193 UN member states adopted a comprehensive package of sustainable development goals for 2030. These goals represent a pact for the future of the global community, and one that points the way forward in all spheres of German politics and society. But despite Germany's notable successes and unstinting dedication, much more effort will be needed to make those goals a reality. The German public is largely unaware of its government's Sustainable Development Strategy, and the 2030 Agenda has yet to shape the political discussion or figure prominently on party platforms. At the European level, stringent and robust policies that support member states in achieving their sustainability goals are lacking.

The implementation of the 2030 Agenda must be continued and pursued with even greater urgency in the new electoral term, both *in* Germany, in cooperation *with* the international community, and *by* Germany as it seeks to align modern lifestyles and a globalised business environment with the sustainable development paradigm. In the most recent version of its Sustainable Development Strategy, the Federal Government called on the scientific and academic community to create a platform linking science with the new sustainability architecture promoted by the 2030 Agenda. In response to this, the Science Platform Sustainability 2030 was launched on 8 May 2017 and was presented to the public one day later at the 13th BMBF Forum for Sustainability.

In the coming years and decades, society will undergo stark changes driven by the digital transformation, globalisation, urbanisation, and rural structural change. The energy transition, decarbonisation, multiple transformations to the food system and sustainable mobility are among the

more prominent challenges that must be pursued while maintaining a globally competitive economy. Science, politics, the economy and other sectors of society must actively work together to find sustainable solutions to these challenges. The sustainable development agenda provides a framework for confronting them in a manner that is systematic, coherent, innovative and responsible.

Knowledge is a key resource of sustainable development. To be effective, all kinds of knowledge and all forms of scientific research must be mobilised, from basic to applied research, and from transformation to transformative research. Orientational knowledge is needed to navigate the upcoming changes, uncover interactions between socio-economic, technological, cultural and natural system levels, and render visible real or supposed interests, conflicts and path dependencies. A committed, responsible approach, coupled with the openness to revise previous positions when new insights emerge, is a quality that underlies good sustainable development policy in general and the Science Platform Sustainability 2030 in particular.

The Science Platform Sustainability 2030 has been designed to support sustainability-focused disciplines and programmes as well as inter- and transdisciplinary research and knowledge transfer. It will shed light on connections between specific Sustainable Development Goals (SDGs) and identify key fields of action. The onus is on the scientific community to increase its sustainability efforts, creating the kind of innovations needed to initiate transformations. The Science Platform will exploit the potential of Germany's pluralistic system of research and scientific funding, and it will enhance cooperation between science, politics and cultural institutions while helping univer-

sities train the next generation of sustainability leaders – all areas called for in recent debates on transformative research, citizen science, sustainable science and the interfaces between science, policy and society.

The mission of the Science Platform Sustainability 2030 is to reflect upon sustainable development policies and create new impetus in politics and society on the one hand, and research and education on the other. Because sustainable development is a challenge on multiple levels, the platform's work will focus not only on the local and national levels, but will also extend to European, international and intercultural partners and topics.

At home, the platform will concentrate on sustainability-related fields where Germany is lagging behind and on topics where the public and political debates have yet to reach an intensity and scope befitting their urgency. Moreover, the platform will observe transformation processes and provide proposals for their organisation, acceleration or adjustment. Finally, the platform will devote itself to the cross-sectoral themes that characterise the 2030 Agenda and have much to gain from integrated scientific analysis. In the course of its work in all these areas, the Science Platform will reflect on the framework for governance set out in the 2030 Agenda and Germany's Sustainable Development Strategy.

A central task of the Science Platform will be to generate, organise and moderate dialogue within the research community on the one hand, and between representatives of politics, business and civil society on the other. To this end, it will make contact with a host of decision-makers in academia, in business and civil society organisations, and science policy advisory institutions. It will launch working groups, formats of exchange and cooperation to pull together a broad spectrum of stakeholders and members of the scientific community. A variety of recurring formats will be used to publish its findings, ensuring that the platform develops a brand identity. These will include

studies, position papers for political committees on sustainability architecture, and interactive formats for a wider public such as open hearings.

The platform is supported by three organising institutions: the Sustainable Development Solutions Network Germany (SDSN Germany), the German Committee Future Earth (DKN Future Earth), and the Institute for Advance Sustainability Studies (IASS), which hosts the platform's secretariat. A steering committee consisting of 26 members from science, business and civil society is responsible for the platform's working programme and operative management. The secretariat helps the platform implement its programme, while additional support is provided by a circle of government agencies (open to all federal ministries) – currently including the BMBF, the BMUB, the BMZ, the BMEL and the Federal Chancellery.

1 | SUSTAINABLE TRANSFORMATION: A GUIDING PRINCIPLE FOR POLITICS, SOCIETY AND SCIENCE

“The search for sustainable business and wealth-creation models presents science with new challenges. [...] it will have to look more closely at the question of which processes of transformation are necessary for a transition to a sustainable way of life and business.”

German Sustainable Development Strategy, 2016

1.1 | The basis of the Science Platform in sustainable development policy

When Germany signed the 2030 Agenda for Sustainable Development, it committed itself to helping realise its goals. The German Sustainable Development Strategy (DNS 2016) defines 17 target areas for sustainable development in Germany.

We want to stress the importance of the 2030 Agenda as a pact for the future of the global community. Applying to all sectors of German society including science, it provides orientation and stipulates that all actors have the responsibility to take action. Science will make important contributions to the implementation of this agenda.

Germany's commitment to socially, economically, ecologically and globally sustainable development is a longstanding one (e.g. Rio 1992, Johannesburg 2002). With its ambitious Sustainable Development Strategy, the Federal Government has been defining specific national goals, success indicators and public reporting requirements for sustainable development since 2002.

Despite the many successes and the dedication of many individuals, Germany must do much more and it must improve implementation. Germany's Sustainable Development Strategy continues to be largely unknown by the public and remains outside the focus of political discussions, where many decision-makers have not made it a priority. At the European level, stringent and robust policies that support member states in achieving their sustainability goals are lacking. But Germany faces far-reaching decisions and future investment, to which the scientific community – through research, education and cross-sectoral cooperation and communication – can and should contribute in support of the 2030 Agenda.

The German Sustainable Development Strategy identifies paths for implementing the 2030 Agenda in Germany. It formulates the guiding principle of a universal, cooperative, inclusive and forward-looking transformation of our society by 2030. 17 specific targets have been formulated to gauge the success of measures from the local to the global level. According to the German parliament and the Federal Government all citizens and all decision-making levels in Germany shall further specify and achieve the transition to sustainable development.

We wish to emphasise that the status quo in society, in business and in politics is irresponsible and runs contrary to the provisions we need to make for our future. The new electoral term will be a decisive period for the successful implementation of the 2030 Agenda in Germany and abroad – with Germany's support and through its globally responsible action. This is in the interest of Germany and is of crucial political and economic importance.

In the coming years and decades, German society will undergo stark changes driven by the digital transformation, globalisation, urbanisation and rural structural change. The energy transition, decarbonisation, multiple transformations to the food system and sustainable mobility are among the more prominent challenges that must be pursued while maintaining a globally competitive economy. Policymakers and all members of society are now charged with shaping this transformation actively and sustainably.

We firmly believe that the imminent challenges, the resulting questions and the underlying values and conflicts of interest must be addressed politically and honestly and that they must be subject to open, informed debate. We understand sustainable development policy as the framework in which we can grapple with our future in a manner that is systematic, coherent, innovative and responsible.

1.2 | The basis of the Science Platform in science policy

Knowledge is Germany's primary resource. Knowledge ensures our societal cohesion, our prosperity, our ability to learn individually, and our ability to advance technologically and as a society. Trust in scientific knowledge is a valuable good that must be preserved, used and advanced in the scientific community's dialogue among its members and with society as a whole. Discussions about sustainable development are very complex: the variety of goals and fields of activity, the different political levels, and the many actors with different interests result in a meshwork of interactions in which cause and effect are hard to discern without a systematic perspective. This makes political action difficult, even at a time when global development requires rapid and effective decisions. Knowledge is a crucial requirement for implementing sustainable development transformations. If its status as fact is threatened,

the establishment of strong and clear voices and trusted knowledge becomes even more central given that sustainability transformations can only be implemented on the basis of knowledge.

An important role of science is to provide orientational knowledge for the debate on sustainable development. The scientific community must uncover mechanisms in the economy, in technology, in society, in nature and their interactions and it must make visible real or supposed interests, conflicts and path dependencies. The goal is also to create a basis for posing questions that are cross-cutting with SDGs and to prioritise fields of action, approaches, and cooperative possibilities. The findings should be prepared so that they are understandable and accessible for decision-makers in politics and society at large.

Research, teaching and education for sustainable development cannot be isolated from established disciplines. Rather, these activities have a genuine cross-sectional orientation. They also demand high quality work that is transparent, systematic and developed for practical use. Their purpose is to show which insights are (not) generated in which societal spheres and to develop those insights into real solutions. In view of today's global challenges, science must develop new perspectives on sustainability challenges. It can offer orientational knowledge with regard to existing and possibly unforeseen innovations.

We thus advocate the strengthening of both sustainability-oriented disciplines and integrated research, which uses its scientific freedom to identify problems and rethink solutions. We want to bolster the scientific community in such a way that radical innovations are able to advance and enable the transformations we need. This requires greater permeability – and mobility – between all areas of science as well as better systems for funding and rewards. It is our view that the freedom and openness that character-

ise scientific knowledge, together with its correctable nature, do not stand in opposition to the sustainability goals; rather they are among their essential prerequisites.

Advancing a comprehensive approach to sustainable development requires that various types of knowledge and science in all its forms must be exploited – from basic to applied research, and from transformation to transformative research. These must be utilised to analyse and support social and economic change, economic innovations, political reforms, and structural transformations.

We understand science as a central source of society's self-reflection. Science needs a sense of possibility and the courage to think anew while taking a sensible approach to uncertainty in the areas of action and knowledge. A committed, responsible approach, coupled with the openness to revise previous positions when new information emerges, is a quality that underlies good sustainable development policy in general and the Science Platform Sustainability 2030 in particular.

We must move beyond the idea that knowledge transfer, consulting and learning take place in only one direction: from science to society and politics. The interactions between knowledge and action, communication, consulting, and participation processes, and knowledge generation and cultural imaginations are complex. On the one hand, Germany's existing pluralist research and funding systems are a major accomplishment. Tapping into this diversity to achieve the common goal of creating a liveable future is the main purpose of the science platform. On the other hand, recent debates about transformative research, citizen science, sustainable science and the interfaces between science policy and society have called for more cooperation between science, politics and cultural institutions and more help for universities as they train the next generation of sustainability leaders.

We believe that these debates must be continued with the utmost intensity, and we are certain that this intensity can be realised in the area of sustainable development policy. To achieve this, we want to help strengthen the role of science policy in society. Therefore, a debate must take place with the scientific community and with societal and political leaders about the best way to organise science-based sustainable development policies. This is essential if we are to properly deal with highly conflictual areas of policy. As the 2030 Agenda is implemented, we are likely to see an increase in such conflicts and an intensification of related controversies.

2 | SCIENCE PLATFORM: A PLACE FOR TRANSDISCIPLINARY COOPERATION IN THE SUSTAINABLE DEVELOPMENT STRATEGY

“The Federal Government [...] offers a platform on which scientific support for the implementation of the SDGs will be pooled. The platform’s work will be systematically integrated into the further management, dialogue and implementation process of the 2030 Agenda in order [...] to conduct the debate over sustainability policy on a scientific basis.

Federal Government, German Sustainable Development Strategy, 2016

We believe that it is socially and politically necessary to identify shortcomings in sustainable development policy and uncover further questions and problems that may be cross-cutting with particular SDGs. We want to provide suggestions and ideas for sustainable development policy that are critical, constructive, and scientifically based. From our perspective, the primary task of the Science Platform is to support sustainable transformation by raising questions, by discovering obstacles and opportunities, and by bringing nuanced solutions into the social and political arena.

2.1 | The mission of the Science Platform

Communication and cooperation are highlighted as key factors for solving problems and taking political action in the 2030 Agenda and the German Sustainable Development Strategy. A key improvement to participatory and cooperative processes within the strategy is the proposed creation of a science platform as a new element of sustainable development policy that seeks in particular to make better use of knowledge as a resource.

The Science Platform Sustainability 2030 has the mission of reflecting on sustainable development policy and providing new impetus for innovation. Its work focuses on progress and shortcomings in the implementation of the 2030 Agenda in, with and by Germany. The platform encourages members of the scientific community to develop ideas for new solutions in dialogue with policymakers, society, and the business community.

The Science Platform is part of a comprehensive national sustainable development policy architecture that aims to mobilise knowledge and science for upcoming societal transformations. Sustainable development is not obtainable without a profound cultural transformation. Ideas about progress, prosperity, consumption and mobility vary greatly within Germany and across the world. A dialogue between science and civil society about knowledge, ethical responsibility, plural values and their inherent tensions is needed to push respective transformations.

We will pool scientific initiatives and analyses relating to the 2030 Agenda and identify research needs by engaging in dialogue with stakeholders from civil society, business and politics, for example, in the context of the Federal Government’s Sustainability Forum. Indeed, in its very organisation and approach, the platform represents a new form of cooperation among scientists for a sustainable future, with the direct

involvement of stakeholders from the business community and civil society.

Because sustainable development is a challenge on multiple levels, the platform's work will also extend to European, international and intercultural partners and topics.

As part of the platform's work, we will even further connect the German, European, and international scientific communities as we work together to find both globally conceived and locally applicable answers to sustainable development challenges.

2.2 | The specifics and benefits of the Science Platform

While presenting the German Sustainable Development Strategy at the annual conference of the German Council for Sustainable Development in 2017, Chancellor Angela Merkel stated that the platform's purpose is to make sure that "voices from the scientific community are duly heard." The platform's systematic involvement in the steering, dialogue and implementation processes of the German Sustainable Development Strategy is both recognition of science's commitment to the cause and a call to intensify its efforts.

The platform will contribute to sustainable development in a number of ways:

- It will utilise its role in the political architecture of sustainable development to benefit scientific research and education as well as political and social praxis by providing sound solutions and identifying the challenges of integrative research.
- It will bring together various scientific disciplines and science policy advisors with societal and political actors to confront the major challenges of the sustainable development agenda. In doing

so, the platform will supplement the work of sector-specific platforms and advisory boards (e.g. High-Tech Strategy, the German Advisory Council on Global Change, the German Advisory Council on the Environment, the German Council of Economic Experts, the Bioeconomy Council, etc.), and it will interact with organisations that discuss science and research policy and those that address societal policy (e.g. Council for Sustainable Development, Sustainability Forum).

- It will create a much-needed forum for problems and themes relevant to transformation and sustainable development. This work will give rise to a broader debate about structural deficits and approaches to sustainable development.
- It will put more emphasis on the international dimension of sustainable development and further utilise scientific expertise from Europe and around the globe.

2.3 | Focus areas and formats

The platform's areas of focus are based on the following overarching **criteria**:

- scientific relevance, appeal in the scientific community, need for orientational knowledge
- political relevance, urgency of topics and actions to the 2030 Agenda and the German Sustainable Development Strategy
- global relevance and international appeal
- need and potential for transformation
- avoidance of duplicate work by other actors and processes

Each of the platform's areas of focus is grouped around one of the following areas:

Deficits areas

Areas where Germany shows clear shortcomings, whether these relate to efforts to achieve the targets of the German Sustainable Development Strategy or the negative effects of Germany's actions on other countries. Deficits in this sense also encompass crucial areas that have yet to establish themselves in sustainable development policy or scientific research. Examples here include child poverty in Germany and the various problems caused by unsustainable patterns of consumption and production.

Ripe areas

Sustainable themes where the political and societal discussion has yet to reach an intensity and scope befitting their urgency. The platform will provide proactive, targeted and localised contributions to further the discussion of these topics and help establish them as enduring questions of transformation. Examples include current debates about mobility or the future of employment, especially with regard to digitalisation.

Transformation areas

Areas that require ongoing scientific input for accelerating or adjusting transformation. Examples include decarbonisation strategies or controversial issues surrounding society's wealth and growth models.

Cross-sectoral areas

Areas that reflect the integrative character of the 2030 Agenda and thus require support from interdisciplinary scientific analysis. One example includes the importance of natural resources and public goods for attaining various sustainable development goals (SDGs).

In all of its areas of focus, the platform will reflect on the framework for governance set out in the 2030 Agenda and Germany's Sustainable Development Strategy.

Work and dialogue formats:

In the first phase of its work, the platform will take stock of the existing discussion on each topic and identify central questions that arise from the 2030 Agenda and the German Sustainable Development Strategy. Next, it will more closely analyse priority problem areas, derive recommendations for sustainable development policy actions, and tie them to any research needs.

A key to the success of the platform will lie in its ability to generate, organise and moderate dialogue between the research community on the one hand, and representatives of politics, business and civil society on the other. One purpose of this dialogue is to make different problem perspectives and expectations transparent and comprehensible. The platform will then communicate these perspectives and expectations to the scientific community and mobilise broad support from appropriate, interested parties for each area of inquiry. The platform's specific work formats are:

- Working groups – formed by the steering committee and assisted by the secretariat – that regularly meet and that work together with scientists and stakeholders from the business community and civil society to analyse priority problems more closely.
- Formats for communication and cooperation with existing scientific advisory boards of the Federal Government and of scientific organisations.
- Innovative and thematically focused dialogue and interaction formats to overcome conceptual and practical obstacles, including those

related to international and intercultural topics and cooperative partnerships.

- Formats that inform the wider public, initiate public discussions and, when useful, involve the public in our work. These formats also include the creation of appropriate website.

Formats for findings:

The following formats for presenting findings and communicating them to key actors are essential to the recognition value of the platform's work:

- short studies, prepared in recurring processes and with a similar structure and appearance; background papers and in-depth analysis for recommending policy action;
- comments on the German Sustainable Development Strategy, position papers for the State Secretary Committee for Sustainable Development, science policy recommendations;
- documented discussions, public hearings and web-based interactions; and
- documented communication and cooperation with international actors.

The Science Platform at a glance

In the new version of the German Sustainable Development Strategy, the Federal Government called on the scientific community to create a platform that is systematically involved in the steering, dialogue and implementation processes of the 2030 Agenda and its sustainability architecture. In response to this, the Science Platform Sustainability 2030 was launched on 8 May 2017 and was presented to the public one day later at the 13th BMBF Forum for Sustainability.

The platform is supported by three organising institutions: the Sustainable Development Solutions Network Germany (SDSN Germany), the German Committee Future Earth (DKN Future Earth) and the Institute for Advanced Sustainability Studies (IASS), which houses the platform's secretariat. A steering committee consisting of 26 members from science, the business community, and civil society is responsible for the platform's activities and operative management. The committee also links the platform with other actors from science, politics, economics and civil society in an effort to build an effective, representative and internationally anchored platform. Additional support is provided by a circle of government agencies (open to all federal ministries) – currently including the BMBF, the BMUB, the BMZ, the BMEL and the Federal Chancellery.

List of Steering Committee Members

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