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Thirteen insights on capacity building for the sustainability transformation

Needs, challenges, and possible solutions in Germany and in an international context

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On December 10, 2024, the Science Platform Sustainability 2030 (wpn2030), in cooperation with the Technical University (TU) Berlin,[1] hosted a "DNS-Lab"[2] at TU Berlin. The focus was on the **"capacity building" transformation lever** proposed in the 2023 Global Sustainable Development Report (GSDR). Twenty-five experts from policy/administration, science, civil society, and business came together to jointly explore **needs, challenges, and possible solutions** with regard to **capacities for sustainability transformations in Germany and in an international context**. This paper summarizes the key insights of the DNS-Lab and embeds them in the state of knowledge of the 2023 GSDR and other scientific literature. It thus provides an **impetus for policy, research, and social transformation**, in particular for the implementation of the United Nations 2030 Agenda for Sustainable Development and the German Sustainable Development Strategy (Deutsche Nachhaltigkeitsstrategie, DNS).

Summary

In order to shape and accelerate sustainability transformations across society as a whole, a wide range of capacities are needed in policy/administration, science, civil society, and business. The following thirteen overarching insights were identified by the DNS-Lab participants as relevant needs, challenges, and possible solutions for capacity building during the transformation process.[3,4]

[1] The collaboration involved the Department of Education for Sustainable Nutrition and Food Science.

[2] The DNS-Labs are a dialogue format of wpn2030. For a brief introduction to the format, see p. 17; and for further information, see https://www.wpn2030.de/dns-labs/. A possible conceptual adaptation of the format is currently under development.

[3] For an explanation of the three phases of transformation according to the 2023 Global Sustainable Development Report (1st phase – emergence/destabilization, 2nd phase – acceleration/breakdown, and 3rd phase – stabilization/phase-out), see Figure 1.

[4] The following list primarily reflects the results of the workshop; it is not exhaustive. Building on the definition and contextualization of the term "capacity building" according to the 2023 Global Sustainable Development Report, which was shared with the participants in advance of the workshop, the paper also includes a well-founded classification of the concept of capacity and competence based on further scientific literature for a better understanding (see insight 1). This classification was supplemented by the authors following the workshop. The assignment of an insight to a specific transformation phase indicates its particular significance for this phase, but does not preclude its significance in other phases. The process of assignment to the phases was based on the workshop and the 2023 Global Sustainable Development Report (see Background).

Thirteen insights on capacity building in Germany and in an international context

Overall transformation process

1. Capacities as transformation competencies, and the necessary financial, temporal, and personnel resources and structures. Sustainability transformation requires a wide range of transformation competencies (e.g. technical and interdisciplinary competencies, strategic competencies), as well as financial, temporal, and personnel resources and institutional framework conditions in order to develop, strengthen, and deploy these competencies. Not only should new capacities be built up, but existing ones should be used efficiently and effectively.

2. Education, training, and retraining. The training and development of transformation competencies requires targeted and group-specific training, further education, and retraining courses as well as experience-oriented and holistic educational formats. Central to this are (vocational) education for sustainable development (ESD), but also concepts such as the *Inner Development Goals* (IDGs), which promote personal competencies to support individual and systemic change towards greater sustainability.

3. Communication and common future-positive narratives. Political actors, in the executive and legislative branches in particular, should communicate sustainability issues to society in a more tangible way and emphasize their everyday relevance for all stakeholders. Joint positive narratives of liveable futures should be formed and communicated from the outset. Strengthening communication competencies and the competency to develop effective sustainability narratives are key here.

4. Error culture instead of perfectionism. We need a better "error culture" that sees failure as part of the learning process. We should also put aside our perfectionism more often, in order to take action. This learning process requires innovation competence, among other things.

5. Accompanying scientific research at the science–policy–society interface. Scientific support for the transformation process is important for evidence-based, forward-looking, and socially relevant policy-making. Communication and cooperation competencies, systems thinking, and competencies in transdisciplinary research, scenario development, and evaluation are crucial here, among other things.

Phase 1 - Emergence/Destabilization

6. Needs analysis. In order to cover capacity needs and fill capacity gaps, these must first be identified through a needs analysis. This requires, for example, systems and critical thinking, data competence, and statistical capacities.

7. Long-term goals, visions, and continuity. The development of transformation strategies with clear, common goals and visions (including beyond legislative periods) and the anchoring of these in laws are central to long-term thinking and continuity in policy and administration. The development of long-term perspectives and thinking should also be promoted in business, civil society, and science.

8. Protected spaces for innovation. In the development phase of sustainable models, what is needed above all are protected spaces with enough time, money, and freedom to try out innovations "outside the box". Creativity and innovation competence are key competencies here.

Phase 2 - Acceleration/Breakdown

9. Cooperation, participation, and dialogue. Better mutual understanding should be established across departments, sectors, and stakeholder groups through increased dialogue and cooperation. Among other things, competencies in cooperation, dialogue, moderation, dealing with diversity, and systems thinking are important for this.

10. Dealing with resistance, conflicts, and a lack of political will. Competencies in conflict transformation, the strategic bundling of forces, and the resilience of subnational actors, among others, are key competencies for dealing with veto players in transformation processes and insufficient political will to deal with the issue of sustainability.

Phase 3 - Stabilization/Phase-out

11. (International) peer learning. We need more peer learning – internationally; between ministries; between federal and state administrations; and between policy, business, and society – as well as

more qualitative and quantitative research on peer learning. International peer learning on statistical competencies in the area of spillover effects, for example, would be an important approach here.

12. Structural anchoring. In the third phase, there is a great need for financial and human resources to structurally anchor transformative measures, e.g. through legal reforms and institutional changes. Civil society networks in particular should be strengthened through reliable structures to ensure continuous engagement.

13. Establishment of the "new normal". In order for sustainability to be understood as a fundamental, everyday practice and orientation in all areas of society, new values, rituals, and traditions must be developed in society that integrate sustainability into everyday life and political decision-making processes. This requires (cultural) transformation competencies, among other things. The formation and communication of common future-positive narratives should prepare for this.

Background

To accelerate the implementation of the Sustainable Development Goals (SDGs), the 2023 Global Sustainable Development Report (GSDR)[5] proposes the new lever, "capacity building", in addition to the four levers from the 2019 GSDR.[6] The authors define this as the development or expansion of "the capacity needed to support the transformation process to achieve the Sustainable Development Goals".[7] On the one hand, this includes developing **knowledge and skills of state and non-state actors at individual, institutional, and network levels to understand, enable and shape context-specific transformative change.**[8] These skills and knowledge relate to transformative change in the three phases of transformation defined by the 2023 GSDR: emergence/destabilization, acceleration/breakdown, and stabilization/phase-out (see Figure 1). Examples include capacities for the joint development of long-term visions and strategies (1st phase), for negotiating conflicts and compromises (2nd phase), and capacities in the form of resources for legal reforms and institution building, including for the implementation and follow-up of the SDGs (3rd phase).

On the other hand, this includes **building and expanding capacities in all transformation areas, supporting the other levers and the coordinated use of all levers along the transformation phases.**[9] According to the report, **capacities are primarily required in five areas (core competencies)** to enable and manage transformations:

1. Strategic direction and foresight (strategic thinking);
2. Innovation and generation of new alternatives;
3. Orchestration, engagement, and negotiation (conflict management);
4. Identifiying and overcoming impediments;
5. Learning and resilience (dealing with crises and risks).[10]

In addition to the 2023 GSDR, two other developments enriched the discussion in Germany regarding capacity requirements for the transformation and the further development of the German Sustainable Development Strategy (DNS) (embedded in an international context).

On the one hand, at a side event co-organized by wpn2030 at the United Nations High-Level Political Forum on Sustainable Development (HLPF) in 2024, stakeholders from Germany, Latin America/Caribbean (especially Colombia and Brazil), and other countries exchanged views on the necessary capacities for integrated reporting and implementation of sustainability strategies.[11]

[5] Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report 2023: Times of crisis, times of change: Science for accelerating transformations to sustainable development, (United Nations, New York, 2023). Hereafter GSDR 2023. https://sdgs.un.org/gsdr/gsdr2023

[6] The four levers from the 2019 GSDR are: Governance; Economy & Finance; Individual & Collective Action; and Science & Technology. In the German Sustainability Strategy (DNS) of 2021, these were translated into the levers Governance; Social Mobilization and Participation; Finance; Science, Research and Digitalization, and supplemented by the lever International Responsibility and Cooperation.

[7] GSDR 2023, p. 46.

[8] GSDR 2023, p. 104; SDSN Germany (2024). Integration von Spillover-Effekten, Kapazitätsaufbau und Aktionscharakter für beschleunigte Transformationsprozesse. Stellungnahme von SDSN Germany zu der Dialogfassung der Deutschen Nachhaltigkeitsstrategie 2024, p. 6. https://www.sdsngermany.de/wp-content/uploads/2024/07/20240714_DNS_Stellungnahme_SDSN-Germany.pdf

[9] GSDR 2023, p. 104, 106.

[10] Ibid, p. 47.

[11] Rathgens, J., Löpelt, S., Schönrock, P. & Servo, L. (2024). Peer learning and capacity building for integrated implementation and reporting on regional and national sustainable development strategies. In: Science Platform Sustainability 2030 (wpn2030). https://www.wpn2030.de/en/wpn2030-hlpf-side-event-2024-peer-learning-and-capacity-building/

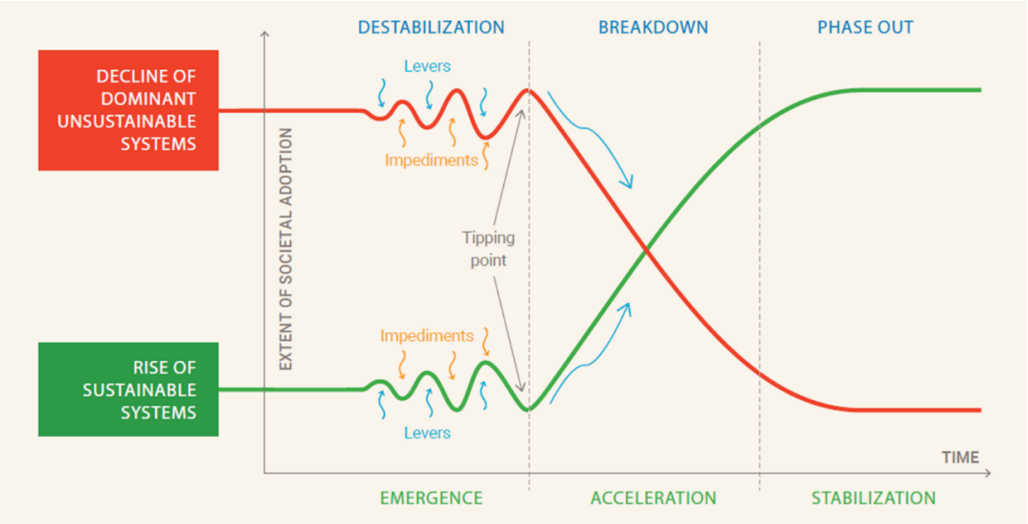

Figure 1: The three phases of transformation. 1st phase – emergence/destabilization: Sustainable systems/behaviours/practices emerge on a small scale with leveraged support, but they also encounter barriers. At the same time, unsustainable systems are destabilized. 2nd phase – acceleration/breakdown: Sustainable systems reach a tipping point beyond which they accelerate – expanding and becoming a new practice/way of thinking for society; Unsustainable systems break down. Phase 3 - Stabilization/Phase-out: Sustainable systems are institutionalized while unsustainable systems are phased out. One example is the implementation of renewable energies with a simultaneous phase-out of fossil fuels. Source: GSDR 2023, p. 65.

On the other hand, SDSN Germany (alongside other stakeholders, e.g. DGVN[12]) recommends the inclusion of capacity building as a sixth lever in the DNS in its statement on the further development of the DNS dated 17.07.2024.[13]

In it, the network proposes the design of the lever in the transformation areas and the existing levers of the DNS as examples. The DNS-Lab at wpn2030 is built on these considerations.

DNS-Lab

The DNS-Lab "*What capacities does the transformation need? Insights from the 2023 Global Sustainable Development Report and the international* context"[14] was attended by experts from Germany, Austria, and the EU. Three perspectives from academia, the Austrian government, and German business provided insights into the global state of knowledge on the lever of capacity building and concrete experiences with capacity building in practice. In four intensive group work phases in a World Café format, the topic was explored in its entirety.

The participants identified needs, challenges, and possible solutions for capacity building with regard to the following aspects: 1.) Various types of capacities, 2.) Capacities in the three transformation phases, 3.) Capacities for the transformation areas and levers of the DNS, and 4.) Capacity building in international comparison. The participants then prioritized the most relevant discussion results from their point of view.

Thirteen insights on capacity building

At the four World Café topic tables, participants discussed recurring topics that cut across various transformation areas, levers, and often stakeholder groups. These were prioritized by the participants in the DNS-Lab and subsequently synthesized as thirteen clusters during evaluation of the results by wpn2030. A distinguishing feature was the allocation to the three phases of the transformation process or to the process as a whole. This assignment was based on the workshop results and the 2023 Global Sustainable Development Report. The insights also reflect the three impulses at the beginning of the

[12] DGVN (2024). Stellungnahme der Deutschen Gesellschaft für die Vereinten Nationen e.V. (DGVN) zur Dialogfassung der Deutschen Nachhaltigkeitsstrategie 2024, p. 1, 5. https://dgvn.de/fileadmin/user_upload/nachhaltig_entwickeln/Dokumente/DNS_2024_Stellungnahme.pdf

[13] SDSN Germany, 2024, p. 1 f., 6 ff.

[14] The DNS-Lab was held on 10.12.2024 in Berlin. A second DNS-Lab also took place in parallel, on the topic "From vision to transformation – Bringing sustainable community catering to the masses".

workshop. They were expanded by the authors to include the state of knowledge of the 2023 GSDR and scientific literature, especially with regard to the concept of capacities/competences – particularly those important for the transformation. As a result, the following needs, challenges, and possible solutions across different target groups are particularly important for the development of capacities for sustainability transformations in Germany and in an international context:

Overall transformation process

1. Capacities as transformation competencies and the necessary financial, temporal, and personnel resources and structures. [15] The sustainability transformation requires not only qualified personnel with a wide range of transformation competencies, but also financial, temporal, and personnel resources (financial lever) and institutional framework conditions (governance lever) in order to develop, strengthen, and implement transformation competencies. However, not only should new competencies, resources, and structures be built up, but existing ones should be used more efficiently and coherently in relation to sustainability goals. Based on the definition of capacity building in the 2023 GSDR (see Background), the working definition of capacities in the workshop therefore included competencies that require resources and must be embedded in framework conditions in order to use them effectively.[16]

Overview: transformation competencies and the resources and structures required for this[17]

Competence: Competence is the ability to behave effectively in different situations and contexts. It is a mixture of knowledge, skills, and attitudes.[18]

The following competencies are required to understand, enable, and shape context-specific transformative change:[19]

— *Professional competencies*, e.g. a comprehensive understanding of sustainability (especially policy/administration); technical knowledge (e.g. in the field of renewable energies); knowledge of sustainability legislation and implementation (especially policy/administration) (see insights 2 and 11); knowledge of international negotiation processes (in particular civil society, policy/administration) (see insight 9); understanding of transformation financing (with regard to advance payments by the public sector, dealing with immature technologies and markets, as well as costs already incurred [sunk investments]).

— *Interdisciplinary and methodological competencies*, e.g. systems thinking[20] as understanding and dealing with complexity, e.g. of the 17 SDGs (especially policy/administration, civil society) (see insights 5, 6, and 9); systemic analytical skills;

[15] This point (in particular the overview below) forms the basis for all further insights and was expanded by the authors after the workshop to include the state of knowledge of selected literature, including (higher) education for sustainable development and transformation research. It is therefore significantly more comprehensive than the other points.

[16] Cf. the concept of systemic capacity building, e.g. Potter, C. & Brough, R. (2004). Systemic capacity building: a hierarchy of needs. Health Policy and Planning, 19(5), 336-345. https://doi.org/10.1093/heapol/czh038; and "transformative literacy", e.g. Schneidewind, U. (2013). Understanding change: on the way to "transformative literacy". In: H. Welzer and H. Wiegandt (Eds). Ways out of the growth society. Frankfurt am Main: Fischer, pp. 115-140, https://epub.wupperinst.org/frontdoor/deliver/index/docId/4935/file/4935_Schneidewind.pdf. For further definitions of capacity building, see Merino, S. S. & de los Ríos Carmenado, I. (2012). Capacity building in development projects. Procedia – Social and Behavioral Sciences, 46, 960-967. https://doi.org/10.1016/j.sbspro.2012.05.231

[17] The competencies presented here relate to all stakeholder groups (policy/administration, science, civil society, business). However, some competencies may be more relevant for certain actors than others.

[18] Wiek, A., Withycombe, L. & Redman, C. L. (2011). Key competencies in sustainability: a reference framework for academic program development. Sustainability Science, 6, 203-218. p. 207. https://doi.org/10.1007/s11625-011-0132-6; Weinert, F. E. (2001). Concept of competence: a conceptual clarification. In D. S. Rychen & L. H. Salganik (Eds). Defining and selecting key competencies (pp. 45-65). Seattle: Hogrefe & Huber Publishers; Reiber, T. (forthcoming). Shaping sustainable futures: transformative change makers needed.

[19] The grouping was based on the workshop results, the 2023 GSDR, and scientific literature on capacities and competencies for sustainable development, e.g. Rodríguez Aboytes, J.G. & Barth, M. (2020). Transformative learning in the field of sustainability: a systematic literature review (1999-2019). International Journal of Sustainability in Higher Education, 21(5), pp. 993-1013. https://doi.org/10.1108/IJSHE-05-2019-0168; Jacob, K., Paulick-Thiel, C., Teebken, J., Veit, S. & Singer-Brodowski, M. (2021). Change from within: exploring transformative literacy in public administrations to foster sustainability transitions. Sustainability, 13(9), 4698. https://doi.org/10.3390/su13094698

[20] "Systems-thinking competence is the ability to collectively analyze complex systems across different domains (society, environment, economy, etc.) and across different scales (local to global), thereby considering cascading effects, inertia, feedback loops and other systemic features related to sustainability issues and sustainability problem-solving frameworks" (Wiek et al., 2011, p. 207).

competencies for interdepartmental and cross-policy cooperation (see insights 9 and 11); critical thinking[21] (see insight 6); data literacy, i.e. interpreting data and developing data-based action scenarios (especially for decision-makers) (see insight 6); statistical competencies (especially on spillover effects) (see insights 6 and 11); (social) media competence (especially policy/administration) (see insight 3); change management skills (especially in phases 2 and 3), including leadership skills (also lateral, e.g. taking on leadership for a topic); knowledge management; project management.

— *Strategic and foresight competencies*, e.g. strategic thinking and action (the ability to develop shared, long-term visions and goals with the involvement of stakeholders and to create ownership for these visions and goals) (see insight 7); ability to define strategies and steer actions in line with shared goals (see insight 7); long-term thinking (see insight 7); futures thinking[22] (see insight 3); strategic foresight (ability to develop scenarios and understand models[23]) (see insight 5); competence to better understand and seize new opportunities (see insight 8); competence to strengthen both the interface between science and policy and the processes for developing, validating, and disseminating robust knowledge for the SDGs[24] (see insight 5).

— *Innovation competence and competencies to generate new alternatives*, e.g. ability to experiment and learn from mistakes (see insights 4 and 8); ability to develop and select appropriate and sustainable alternatives and to scale and replicate these solutions over time[25] (see insights 8 and 9); creativity (see insight 8).

— *Competencies for orchestration, engagement, and negotiation (conflict transformation),* e.g. ability to coordinate action and facilitate participation across different stakeholder groups, sectors, and levels (local, regional, national) (see insight 9); ability to recognize and manage conflict, compromise and build consensus (see insight 10); ability to promote political will and public awareness for change (including disruption of unsustainable developments) (e.g. campaigning skills) (see insight 10)[26]; competencies in moderation, communication, and negotiation, cooperation[27] and dialogue, and in dealing with diversity (see insights 3 and 9).

— *Competencies to identify and overcome impediments*, e.g. ability to recognize unsustainable developments, diagnose system blockages and undesirable effects, and promote political willingness and public awareness for change[28] (see insight 10); competence to overcome behavioural patterns and structures[29] (see insights 9 and 13).

— *Learning and resilience (dealing with crises and risks),*[30] e.g. knowledge of system dynamics in order to develop more effective and resilient strategies (e.g. by strengthening institutions and networks through monitoring and continuous learning)[31] (see insights 4, 7, and 10); risk management (especially business).

— *Normative and emotional-motivational competence (perso*nal values and attitudes),[32] e.g. courage to state facts in the face of the major challenge of disinformation (especially science) (see insight 5); emotional resilience and tolerance of ambiguity (especially policy/administration) (see insight 10); intrinsic motivation and mental stamina (especially in science) (see insight 5); resilience and perseverance (see insight 10); conviction concerning the

[21] "Critical thinking competency: the ability to question norms, practices and opinions; to reflect on one's own [original quote corrected for typos] values, perceptions and actions; and to take a position in the sustainability discourse" (UNESCO (2017). Education for Sustainable Development Goals: Learning Objectives, p. 10. https://unesdoc.unesco.org/ark:/48223/pf0000247444).

[22] Futures thinking enables, among other things, the development of desirable future scenarios. see https://link.springer.com/reference-workentry/10.1007/978-3-319-98390-5_272-1

[23] This includes understanding that scenarios and models are not predictions of the future, but data-based views of the future that can change when the data situation changes. Interventions can also cause changes in scenarios.

[24] GSDR 2023, p. 47.

[25] Ibid, p. 47.

[26] Ibid, p. 47.

[27] For example, this includes assuming a common interest and listening to the other person's description of the problem without interpreting this as political opposition.

[28] GSDR 2023, p. 47.

[29] If, for example, it is not possible to accelerate and stabilize the spread of necessary technological innovations and changed behavioural patterns, such processes can break off or stagnate. If unsustainable systems are not dismantled, they can cause considerable damage (e.g. emissions in the transport system can lead to irreversible damage to ecosystems).

[30] See Bryant, J. & Thomson, G. (2021). Learning as a key leverage point for sustainability transformations: a case study of a local government in Perth, Western Australia. Sustainability Science, 16, p. 795-807 https://doi.org/10.1007/s11625-020-00808-8

[31] GSDR 2023, p. 47.

[32] See Woiwode, C., Schäpke, N., Bina, O. et al. (2021). Inner transformation to sustainability as a deep leverage point: fostering new avenues for change through dialog and reflection. Sustainability Science, 16, p. 841-858 https://doi.org/10.1007/s11625-020-00882-y

importance of sustainability transformation (see insight 7). The *Inner Development Goals* (IDGs) can serve as a useful complement to other approaches to Education for Sustainable Development (ESD). The IDGs describe competencies in five areas (being, thinking, relating, cooperating, acting) that are fundamental to an individual's commitment to sustainable development (see insight 2).[33]

Financial resources: Civil society faces the challenge of insufficient financial flexibility. Long-term funding is also needed in science, especially for transdisciplinary, scenario, and evaluation research. Policy-making needs financial resources, especially in the initial transformation phase, for example to ensure interdepartmental cooperation or to promote capacity building at universities. Policymakers are faced with the task of not only investing in the development of sustainable systems, but also abolishing environmentally harmful subsidies during the destabilization phase in order to free up resources.

Time: For a successful strategy development and error culture, e.g. in business, sufficient temporal resources and appropriate prioritization are required in addition to financial resources.

Personnel resources: Personnel capacity is a major requirement, especially in policy/administration.

Institutional framework conditions: Political offices should be made more attractive and encourage people to make resilient and sustainable decisions. Structures are needed that strengthen the responsibility and scope for action of policy and administration. The economy also needs planning security through reliable framework conditions and regulations on the part of policymakers (especially in phase 2). Stronger feedback with policymakers is necessary to ensure that companies' sustainability strategies are in line with the SDGs. Cross-border guidelines and guidance within the European Union, such as the Corporate Sustainability Reporting Directive (CSRD) or regulations in connection with the EU Green Deal, are also important for the capacity-building lever that describes cross-border issues. Fair and sustainable trade systems are central to international capacity building. In the third transformation phase, there is a particularly high need for the structural anchoring of transformative measures (see insight 12).

2. Education, training, and retraining. In order to acquire or strengthen the above-mentioned transformation competencies, i.e. to understand and deal with transformation processes, target group-oriented training, further education, and retraining courses as well as experience-oriented[34] and holistic educational formats are required. In this context, (vocational) education for sustainable development (ESD) and IDGs, as a holistic educational concept with special focus on sustainability, play a prominent role.[35]

Public administrations should be trained to manage the implementation of complex strategies through the three phases of transformation. Interdisciplinary competencies are key here. In addition, the topics of sustainability and sustainable legislation and enforcement, for example, should be more firmly anchored in the training of administrative staff. Training courses should be designed to be integrated into work, particularly in policy and administration, and be made up of various stakeholder groups in order to incorporate their different perspectives and facilitate networking. The further training of decision makers is also key. One approach that needs to be expanded is indicator-based support for capacity building.[36] The development of indicators by civil society plays an important role here.[37]

Possible solutions for business include anchoring sustainability in vocational training, e.g. via the German Ordinance on Trainer Aptitude (AEVO).[38] The aim is to ensure that all vocational trainers are instructed on integrating sustainability aspects more strongly into their programmes. In addition, further training on the topic of sustainable procurement as well as retraining, e.g. in the area of circular economy

[33] See https://www.wilabonn.de/projekte/1124-empowerment-fuers-klima-mit-den-inner-development-goals.html and https://innerdevelopmentgoals.org/

[34] "In action-oriented learning, learners engage in action and reflect on their experiences in terms of the intended learning process and personal development" (UNESCO, 2017, p. 55).

[35] See Ankrah, D., Bristow, J., Hires, D. & Artem Henriksson, J. (2023). Inner Development Goals: from inner growth to outer change. Field Actions Science Reports [Online]. Special Issue 25, Innovation levers for ecological transformation. http://journals.openedition.org/factsreports/7326

[36] Indicators should be used not only to measure progress, but designed in such a way that they also offer scope for reflection and further development.

[37] One example is the indicators of the Hamburg Future Council, see https://www.zukunftsrat.de/publikationen/der-heinz-hamburger-entwicklungs-indikatoren-zukunftsfaehigkeit/

[38] Cf. https://www.bibb.de/de/pressemitteilung_178160.php

or renewable energies, are also required.

The econsense sustainability competence programme is a practical example of how to strengthen sustainability competencies in business. This is aimed at medium-sized enterprises that want to develop their sustainability skills and network across sectors, and enables the transfer of practical knowledge and methods, among other things.[39] In this phase, sustainability needs to be mainstreamed in the economy, for which the use of economies of scale is an important approach.[40]

The Managing Global Governance (MGG) network – as an innovative dialogue and training platform for young leaders from emerging global powers and Europe – offers training and learning opportunities for education, knowledge cooperation, and political dialogue for civil servants and social actors for the implementation of the 2030 Agenda[41] and thus represents a promising scientific approach to competence development. Among other things, sustainability competencies are anchored in the curricula of (administrative) universities through international cooperation between them and with universities and UN institutions. [42] The ESD 2030 programme offers further starting points.[43]

3. Communication and common future-positive narratives. Continuous communication to society by political actors in the executive and legislative branches, characterized by mutual understanding, as well as communication from civil society, business, and science throughout the entire transformation process is key to its success. Sustainability issues should be communicated in a more tangible way and their everyday relevance for all stakeholders should be emphasized. A greater focus should therefore be placed on strengthening communication competencies. The challenge of good communication in politics lies, above all, in the second transformation phase, which is characterized by conflicts. One approach in politics should be to "pick up" people with their values through empathy, i.e. to talk about shared values for liveable futures and derive solutions from this.

Positive visions of the future are important in order to draw motivation and strength for the complex, demanding transformation process. From the outset, therefore, utopias that provide orientation and the associated shared narratives of positive, liveable futures should be created and the path to these communicated.[44] In the second and third transformation phases, it is important to defend and further develop the newly established narrative. It therefore requires the competence to develop and defend effective, i.e. positive and understandable, narratives for sustainability and to make them relatable for different target groups.

4. Error culture instead of perfectionism. We need a better error culture that sees failure as part of the learning process and honestly points out challenges in order to ensure credibility. This learning process requires innovation competence, local learning capacity according to the 2023 GSDR and the ability and willingness to make course corrections,[45] as well as sufficient temporal and financial resources. We should also put aside perfectionism more often, in order to take action – something that civil society in particular is committed to. One possible solution is capacity development through action. In addition, when deciding on measures, it could be made transparent where a limited number of mistakes is more favourable than complete protection against failure. Successes, especially during the breakdown phase of unsustainable systems, should be valued as such. Experiences of self-efficacy are also important here, i.e. being able to cope with new or challenging situa-

[39] Cf. https://econsense.de/en/sustainability-competence-program/

[40] "Scaling usually refers to the adaptation, uptake and use of innovations such as practices, technologies, and market or policy arrangements across broader communities of actors and/or geographies", see: Schut, M., Leeuwis, C. & Thiele, G. (2020). Science of Scaling: understanding and guiding the scaling of innovation for societal outcomes. Agricultural Systems, 184, p. 1. https://doi.org/10.1016/j.agsy.2020.102908. See also: GSDR 2023, pp. 46, 84; and Schaltegger, S., Loorbach, D. & Hörisch, J. (2023). Managing entrepreneurial and corporate contributions to sustainability transitions. pp. 891-902. Wiley Online Library. https://doi.org/10.1002/bse.3080

[41] Cf. https://mgg.network/page/training&learning

[42] One example of this is the Managing Global Governance (MGG) Academy workshop "Capacity Building for the 2030 Agenda: Peer exchange of National Schools of Public Administration & Think Tanks on National SDG Implementation", which took place in Brasilia from February 26 to March 1, 2018. This brought together the experiences of public administration schools and think tanks in Brazil, China, Germany, India, Indonesia, Mexico, and South Africa, see: Grimm, S., Díaz, A. P. & Alves, P. (Eds). (2022). Training civil services on the 2030 Agenda: skill development for working towards the common good, Brasilia: Escola Nacional de Administração Pública (ENAP), p. 199. https://repositorio.enap.gov.br/jspui/bitstream/1/7343/1/training_civil_services_on_the_2030_agenda.pdf

[43] For more information on the UNESCO "ESD 2030" programme in Germany (2020–2030), see https://www.bne-portal.de/bne/de/bundesweit/bne-2030/bne-2030_node.html

[44] See SDSN Germany, 2024, p. 8 f.

[45] i.e., to evaluate, classify, and learn from experience and adapt the course accordingly, see GSDR 2023, p. 84.

tions on the basis of one's own competencies and being able to help shape one's own living environment.[46]

5. Accompanying scientific research at the science–policy–society interface. Transformations can only be implemented if solutions are developed jointly by policy, science, and society. This requires communication and cooperation competencies in order to utilize local knowledge, among other things. Systems thinking is also required in order to identify interventions and to recognize and assess interactions and international spillover effects. Scientific monitoring of the transformation process through transdisciplinary research, the development of scenarios (phase 1), and the evaluation of measures (phase 3) is important for evidence-based, forward-looking, and socially relevant policy-making. Investment in this research and the promotion of research and development in low- and middle-income countries are necessary for this. Scenario techniques and modelling of development trends help to make change (which is associated with many uncertainties) more tangible and form the basis for fact-based decisions. In addition to the courage to state facts, intrinsic motivation, resilience, and the ability to communicate scientific findings in an understandable way are also required.

A positive example of this is the UniNEtZ project,[47] which emerged from the Austrian Ministry of Education and Science and in which scientists and artists from 23 universities and universities of applied sciences in Austria have joined forces to form an innovative alliance to contribute to SDG implementation in Austria. Among other things, the scientists developed concrete, science-based measures for the implementation of all 17 SDGs in the context of Austria's first Voluntary National Review (VNR).

Phase 1 - Emergence/Destabilization[48]

6. Needs analysis. In order to address capacity needs and fill capacity gaps, these must first be systematically identified through a needs analysis. Better measurement of capacity building would be fundamental to this. This requires, among other things, systems thinking, critical thinking, and data competence, as well as statistical capacities. In the development phase, a robust analysis of needs is important for evidence-based policy/administration decisions, among other things.

7. Long-term goals, visions, and continuity. The formulation of common, clear goals and visions in transformation strategies (including beyond legislative periods) are central to long-term thinking and continuity in politics and administration. These should be enshrined in legislation (e.g. via a parliamentary resolution on the sustainability strategy) in order to ensure commitment and funding. Legislative periods, dealing with discontinuity over time and the continuity of policy-making beyond the first transformation phase are major challenges. What is needed is a commitment to sustainability as the overarching guiding principle of government action and the associated necessary political consensus.[49] Appropriate governance structures, such as a sustainability-focused review of legislation, are also key here. Conviction concerning the added value and benefits of the sustainability transformation plays a critical role here. In order to jointly develop long-term visions and strategies, policymakers should work closely with the scientific community, among others, e.g. by using scenario analysis methods.[50]

The development of long-term perspectives and long-term thinking should also be promoted in business, civil society, and science. Financial resources,

[46] See Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioural change. Psychological Review, 84, pp. 191-215; Barysch, K. (2016). Self-efficacy. In: Frey, D. (Ed). Psychology of values. Springer: Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-48014-4_18; WBGU - German Advisory Council on Global Change (2018). *Just & In-Time* Climate Policy. Four Initiatives for a Fair Transformation. Policy Paper 9. Berlin: WBGU, p. 12. https://www.wbgu.de/fileadmin/user_upload/wbgu/publikationen/politikpapiere/pp9_2018/pdf/wbgu_policypaper_9.pdf

[47] For further information see https://www.uninetz.at/en/about-us

[48] Other capacities mentioned in the 2023 GSDR in the first transformation phase are as follows: Capacity for destabilization of old systems; effective governance and policy implementation; refinement of ideas, practices, and technologies; promotion of public awareness (encouraging citizens to switch to new systems and sustainable consumption) (p. 75 f.).

[49] Cf. the proposal of the wpn2030 in its statement on the further development of the DNS 2024, "to set the DNS as an umbrella strategy for all political projects in Germany […], in the sense of a strong alignment of the Federal Government's projects (e.g. Future Strategy, […] Digital Strategy of the Federal Government, etc.) with the DNS [original in German]": Wissenschaftsplattform Nachhaltigkeit 2030 - wpn2030 (2024). Statement of the Science Platform Sustainability 2030 on the dialogue version of the German Sustainability Strategy 2024. p. 5. https://www.wpn2030.de/wp-content/uploads/2024/09/wpn2030_Kommentierung-der-DNS-Dialogfassung-2024.pdf

[50] See GSDR 2023, p. 75 f.

reliable institutional framework conditions, experience-oriented education, and early joint commitment, combined with a common narrative, are crucial here.

8. Protected spaces for innovation. Currently, the capacities within business are still too strongly focused on compliance and too little on the development of sustainable business models and the social commitment of companies (see insight 9). In addition to stronger voluntary commitment and initiative on the part of companies, protected and informal spaces with adequate time, money, and freedom should be provided during the emergence phase in order to test innovations and sustainable alternatives "outside the box" and to develop or "convert" new, social-ecological business models. Economic actors, in cooperation with stakeholders from policy, science, and society, are called upon to show a willingness to change and innovate and to see regulation as providing momentum for something new. Creativity and innovation competence are key competencies here. However, these changes must also be relevant to companies' everyday activities. At the same time, reliable framework conditions, planning security, and curiosity in society are decisive factors.

Phase 2 - Acceleration/Breakdown[51]

9. Cooperation, participation, and dialogue. Better mutual understanding should be established across departments, sectors, and stakeholder groups through increased dialogue and cooperation. According to the 2023 GSDR, this is particularly important during the second phase in order to scale the transformation process, i.e. to identify successful practices and models from the first phase that can be expanded and replicated.[52]

Cross-departmental cooperation is an important capacity that already exists in Germany but needs to be deepened and strengthened in order to effectively implement transformation areas and levers. The transformation teams (TTs), in which ministries came together (from 2022 to 2024) to cooperate more closely in the transformation fields and the International Responsibility and Cooperation lever of the DNS, are a positive example. However, these should be reformed and carried forward beyond the initial phase. Competencies in cooperation, dialogue, moderation, dealing with diversity, and systems thinking should be expanded. This should not only be done at the working level, but managers and decision-makers must also be trained in interdepartmental cooperation. In addition, depending on their purpose, TTs should be given more financial and human resources and powers (e.g. for implementation). It would also be advisable to provide them with external facilitation. The participation of all decision makers and departments as well as the involvement of social groups in the work of the TTs should be expanded. There also needs to be even greater willingness to engage in change in policy and administration. Entrenched structures in the administrative apparatus, together with path dependencies, pose a challenge here. In Austria, the Interministerial Steering Group, consisting of four Austrian federal ministries and the Federal Chancellery, is developing a cross-departmental framework for the implementation of the 2030 Agenda in and by Austria as a whole.[53]

Transformation decisions should not only be made by governments. Capacities for consensus-building, mutual understanding, and cooperation on an equal footing are therefore an important need in policy and administration. Policy and administration should take an active role and form and keep together broad alliances with civil society actors and involve the public more closely in political processes at municipal, state, and federal levels. Participation formats should also be improved and made more interactive, for example. Such alliances are important, as they provide a space for analysing and discussing problems and building consensus on the status quo and the necessary measures. Decision makers, civil society, and other actors should also work more closely together to implement strategies. While this requires a willingness to form coalitions, it is equally important that civil society can maintain its independence from politics and form autonomous social alliances. At the international level, access for civil society and science should be ensured and made transparent in political processes such as the United Nations climate negotiations.

Alliances should also be strengthened among non-state actors. One example of this is cooperation between business and civil society (corporate citizenship). Attractive and safe meeting spaces for dialogue and effective cooperation between all social

[51] Other capacities mentioned by the 2023 GSDR in the second transformation phase are as follows: Promoting the move away from "business-as-usual"; mobilizing financial and organizational capacities for the expansion of production facilities (p. 84).

[52] See GSDR 2023, p. 84.

[53] Cf. https://www.bundeskanzleramt.gv.at/themen/nachhaltige-entwicklung-agenda-2030/implementierung.html

groups should be created and institutionalized.[54] Overall, there is a need for better bundling of civil society and business initiatives.

10. Dealing with fears, resistance, conflicts, and a lack of political will. The second phase of transformation is characterized by many upheavals and related challenges, such as fears in society and a struggle for survival, particularly for young members of civil society, among others. On the one hand, civil society pressure on politicians (e.g. through movements such as Fridays for Future) is important in order to make legislation more sustainable and accelerate the transformation. On the other hand, in order to strengthen social acceptance and ensure a "just transition", compensatory measures such as climate dividends (German "Klimageld") are essential during the breakdown phase of unsustainable systems.[55]

Competencies in conflict transformation and resilience, as well as the ability to campaign against counter-movements,[56] are key competencies for dealing with veto players in transformation processes, especially during the breakdown phase of unsustainable systems. An awareness of corporate cultures and power structures, as well as the ability to convince decision makers of the importance of sustainability, are essential here. Points of resistance should also be recognized early on and used as an opportunity (e.g. Germany's Building Energy Act [GEG]).

We need to learn how to deal with diminishing political will with regard to sustainability and challenges for multilateral cooperation. The key question here is how capacities and civil society engagement can be better bundled in order to free up more capacities. This requires strategic competence and resilience. Experiences from "municipal or regional resilience enclaves", e.g. in Poland (PiS government), Brazil (Bolsonaro),[57] and the USA (Trump 1.0), can serve as a guide here. In addition, local sustainability actors and structures should be strengthened through international cooperation and protected against persecution and reprisals. International political processes should be more closely coordinated (e.g. UN Framework Convention on Climate Change and SDG 4.7 Education for Sustainable Development[58]). According to 2023 GSDR, there is also a need to build capacity, political will, and public awareness to build support for scaling up transformative action.[59]

Phase 3 - Stabilization/Phase-out

11. (International) peer learning. International peer learning on good examples and failures of transformation processes is seen as essential for policy and administration to build transformation capacities, especially in the third phase of the transformation process. There remains a need to increase awareness of international peer learning in German policy and administration. A lack of connection between international processes and the day-to-day business of politics, administration, and science poses a challenge. Obstacles for policymakers include language barriers and a lack of structures for exchange between states. The lack of time resources for peer learning, e.g. for the translation of time-bound reports, also complicates the implementation of intergovernmental peer learning processes. Conscious prioritization by government ministries would be necessary here in order to redistribute – or release new – capacities. The existence of the inclusive framework of the GSDR, with its transformation areas and levers, helps with national SDG implementation (e.g. transformation areas in Finland and Germany). However, the international exchange of experience in implementing the GSDR should be expanded.[60] One possible solution here would be a stronger exchange between the national VNR focal points and the institutional anchoring of this exchange. The European Sustainable Development Network (ESDN),[61] for example, plays an important role in multiplying national solutions for capacity building at the European level.

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[54] See GSDR 2023, p. 47.

[55] For a classification of the "Just Transition" concept and aspects to be considered beyond compensatory measures, see Wang, X. & Lo, K. (2021). Just transition: a conceptual review. Energy Research & Social Science, 82. https://doi.org/10.1016/j.erss.2021.102291; and Onbargi, A. F. & Dombrowsky, I. (2025). Political inequality and impacts on climate mitigation: the case of Germany's energy sector. Applied Energy, 393. https://doi.org/10.1016/j.apenergy.2025.125928

[56] The 2023 GSDR emphasizes the following capacities here: Identifying and overcoming general barriers and system blockages (identifying unsustainable pathways and breaking unsustainable systems; encouraging a move away from business-as-usual) (see p. 84).

[57] For example, Brazil's federal states defended the sustainability agenda against actions by the federal Bolsonaro government (2019–2022) by advocating for the preservation of the Amazon rainforest in regional alliances and at the international level, see Junqueira, C., Figueiredo Mendonca do Prado, D. & Mauad, A. C. (2021). Subnational activism and conflicts within Jair Bolsonaro's government: an analysis of the Brazilian states' actions in the Sustainable Development Goals (SDG) agenda during 2019. Estudos Internacionais Revista de Relações Internacionais da PUC Minas, 9(3), pp. 114-132. 10.5752/P.2317-773X.2021v9.n3.p114.

[58] Cf. https://sdg-indikatoren.de/4/

[59] See GSDR 2023, p. 47.

[60] A good example of this is the organization of a series of regional workshops on the implementation of the GSDR: https://enb.iisd.org/gsdr2023-regional-dissemination-workshop

[61] For further information see https://www.esdn.eu/

There is also a great need for the intergovernmental exchange of expertise and experience concerning (participation) structures; and a need for a better data basis for managing the DNS in the area of spillover effects. International peer learning on statistical competencies would be an important approach here.

Tandem partnerships also offer great potential for youth representatives. However, this can hardly be exploited as there are no corresponding structures or funding in partner countries. At EU level, an important solution is the mutual transfer and capacity building between non-profit youth organizations, universities, and institutions in the field of vocational training and business via the Erasmus+ programme.

International networking platforms and databases between civil society organizations should also be established in order to coordinate (including virtually), initiate mutual learning, and facilitate partnerships. International peer learning between sustainability stakeholders in the private sector also needs to be expanded.

At national level, peer learning between departments could, for example, strengthen the competencies of civil servants in sustainable legislation and enforcement. To strengthen interdepartmental cooperation, the exchange between federal and state administrations should also be promoted. The Sustainability Coordinators' Conference is an interesting practical example here, connecting Austria's federal and state government tiers for greater policy coherence and creating a space for peer learning.

In science, there is a need for more qualitative and quantitative research on peer learning (e.g. evaluation of implementation measures).

12. Structural anchoring. In the final transformation phase, there is great need of long-term financial and human resources and the structural anchoring of transformative measures. As described in the 2023 GSDR, these investments can promote legislative reforms and the development of resilient and adaptable institutions for the implementation, regulation, enforcement, and follow-up of the SDGs.[62] For example, pilot projects, such as the German government's TTs, would need to be evaluated and then integrated into long-term structures, where appropriate, in order to promote capacities for interministerial cooperation. Civil society networks should also be strengthened through reliable structures in order to ensure continuous engagement.

13. Establishment of the "new normal". The term "new normal" means that sustainability is no longer seen as an exception, but as a fundamental, everyday practice and orientation in all areas of society. This requires the development of new values, rituals, and traditions that integrate sustainability into everyday life and political decision-making processes. In order to achieve this transformation, structural anchoring, targeted training, and further education measures in (cultural) transformation competencies[63] and the provision of appropriate resources are particularly necessary. The formation and communication of shared positive narratives should prepare the ground for this.

Conclusion

The development, expansion, and efficient and effective use of capacities in policy/administration, science, civil society, and business is key to advancing sustainability transformations. It is not only individual transformation competencies that play a role here. Financial, temporal, and personnel resources must also be made available and institutional framework conditions (further) developed in order to develop, strengthen, and deploy these skills. In addition to a needs analysis to identify capacity gaps, this requires target-group-oriented training, further education, and retraining courses as well as experience-oriented and holistic educational formats. Continuity in policy and administration through long-term common goals should form the necessary framework here, as should the structural anchoring of transformative measures, e.g. through legal reforms and institutions. Cooperation competencies are also required in order to achieve more dialogue and cooperation and thus a better mutual understanding across departments, sectors, and stakeholder groups. Competencies in conflict transformation, the strategic bundling of social forces and resilience are

[62] See GSDR 2023, p. 86.

[63] According to Schneidewind (2013, p. 135), "transformative literacy" includes, among other things, developing an understanding of the cultural and value orientations of today's societies and their dynamics as well as cultural change processes and the role of various actors in these. The underlying assumption is that sustainability-oriented transformations are only possible with socio-cultural change in the sense of a comprehensive spread of alternative values and lifestyles from below. See Schneidewind, U. (2013). Understanding change: on the way to "transformative literacy". In: H. Welzer & K. Wiegandt (Eds). Ways out of the growth society. Frankfurt am Main: Fischer, pp. 115-140, https://e-pub.wupperinst.org/frontdoor/deliver/index/docId/4935/file/4935_Schneidewind.pdf

also key to dealing with veto players in transformation processes and insufficient political will for sustainability. Good communication competencies in politics are crucial to ensure continuous communication to society throughout the entire transformation process and its success. For example, common positive narratives of liveable futures should be formed and communicated from the outset. These form the basis for establishing a "new normality" in which sustainability is the norm in all areas of society. This can only succeed with a socio-cultural change in which corresponding new values, rituals, and values are established. In addition, scientific monitoring of the transformation process at the science–policy–society interface is important for evidence-based, forward-looking, and socially relevant policy-making. In addition, it is not only important to increase peer learning – including internationally – but also to conduct qualitative and quantitative research. We also need a better error culture that sees failure as part of the learning process. This requires protected spaces that have sufficient time, money, freedom, and creativity to test out innovations.

Further development of the German Sustainable Development Strategy 2025

On February 17, 2025, the further development of the German Sustainable Development Strategy 2025 was published.[64] The new federal government has also committed to this strategy as part of its coalition agreement. In the further development of the DNS 2025, capacities are mentioned, including in connection with increased interdepartmental cooperation through the TTs (p. 30), Germany's support for capacity building in other countries (e.g. in the area of circular economy, p. 71), and in sustainable administrative action (p. 119). In addition, the importance for the transformation of ESD and various competencies is highlighted in the transformation area "Human well-being and capabilities, social justice", among others.

The insights presented here build on the capacities mentioned in the DNS, but go beyond them: the capacity-building lever allows systematic consideration of the required competencies, resources, and institutional framework conditions across all transformation areas and levers and also addresses the special challenges in the transformation phases. Capacity building should therefore become even more important as a central transformation lever in the implementation of the DNS in order to shape and accelerate the transformation process in Germany for society as a whole.

The DNS-Lab provided an initial framework for a structured debate on this lever. Further dialogue based on the insights presented here is required for its concrete design in Germany and other countries.

Thanks to

We thank all the DNS-Lab participants for contributing their expertise, in particular Serafin Groebner, Martin Heyer, Johannes Lauber, Tatjana Reiber, and Imme Scholz for their insightful advice and contributions to the preparation of this paper.

[64] Federal Government of Germany (2025). Transformation gemeinsam gerecht gestalten. Deutsche Nachhaltigkeitsstrategie Weiterentwicklung 2025. https://www.bundesregierung.de/resource/blob/976072/2335292/c4471db32df421a65f13f9db3b5432ba/2025-02-17-dns-2025-data.pdf?download=1

Annex: List of participants in the DNS-Lab, "What capacities does the transformation need? Insights from the 2023 Global Sustainable Development Report and the international context" (10.12.2024)

No.	Name	Organization	Stakeholder group
1	Kristina Beckers	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	Policy/Administration Other
2	Emanuel Gerth	EACEA (European Education and Culture Executive Agency), European Commission	Policy/Administration
3	Serafin Groebner	Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK), Austria	Policy/Administration
4	Barbara Hemkes	Federal Institute for Vocational Education and Training (BIBB)	Research
5	Martin Heyer	maßkonzept	Other[65]
6	Thomas Hohn	Greenpeace e.V.	Civil society
7	Anna-Sophie Humer-Hager	The United Nations Association of Germany (DGVN)	Civil society
8	Elena Jayalath	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	Policy/Administration
19	Dr. Oliver Krauß	VDI Technologiezentrum GmbH	Policy/Administration
10	Johannes Lauber	Federal Ministry for Economic Cooperation and Development (BMZ)	Policy/Administration
11	Monika Ollig	Federal Ministry of Justice (BMJ)	Policy/Administration
12	Nina Narith Ouan	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	Policy/Administration Other
13	Dr. Lisa Pettibone	FernUniversität Hagen	Other[66]
14	Lukas Probst	Klimadelegation e.V.	Civil society
15	Dr. Julius Rathgens	RIFS / wpn2030	Research
16	Dr. Tatjana Reiber	German Institute of Development and Sustainability (IDOS)	Research
17	Dr. Katharina Schleicher	German Advisory Council on the Environment (SRU)	Other[67]
18	Prof. Dr. Imme Scholz	Heinrich Böll Foundation e.V.	Other[68]

[65] Consulting, training, coaching.
[66] Research, university teaching.
[67] Scientific policy advice.
[68] Political foundation.

19	Christoph Selig	DHL Group	Business
20	Fidelis Stehle	Youth Delegates for Sustainable Development	Civil society
21	Dr. Sarah Styles	University of Labour	Research
22	Katarin Wagner	econsense – Forum for Sustainable Development of German Business e.V.	Business, Other[69]
23	Tabea Waltenberg	SDSN Germany	Other[70]
24	N.N.	N.N.	Business
25	N.N.	N.N.	Policy/Administration
26	Dr. Axel Berger*	wpn2030, SDSN Germany, IDOS	Research
27	Sarah Löpelt*	wpn2030, SDSN Germany, IDOS	Research
28	Julian T. Müller*	wpn2030, GERICS	Research
29	Kim Paczkowski*	wpn2030, Wuppertal Institute	Research

Legend: * Members of the organizing team.[71]

[69] Association with companies as members.

[70] Research, civil society, economy.

[71] The following three members of the organizing team were not present: Prof. Dr. Christa Liedtke (wpn2030, Wuppertal Institute, SDSN Germany), Dr. Ingo Wolf (wpn2030, RIFS Potsdam), and Siiri Hör (wpn2030, Wuppertal Institute).

What is a DNS-lab?

The DNS-Labs are a compact dialogue format of the wpn2030, through which integrated knowledge is developed at the science-policy interface for the German Sustainability Strategy in a transdisciplinary, cross-departmental manner and in exchange with science. The aim of this format is to develop suggestions and impetus for policy, research, and social transformation.

Objective: In a DNS-Lab, stakeholders with different perspectives from science, policy, and society are brought together, and jointly reflect on a specific issue within a short period of time. The overarching goal is to explore a topic or – in the case of existing knowledge on an issue – to drive forward transformations and identify and facilitate implementation steps. In addition, a DNS Lab pursues a specific goal that is relevant to the various specialist expertise and interests of the participants.

Setting topics: Each DNS-Lab is focused on a specific topic. The topic is specified and described in such a way that it is relevant and relatable for as many different disciplines and social actors as possible.

Participants: Against the background of the topic and the objective, inter- and transdisciplinary groups of 10 to 30 people from science, policy/administration, civil society, and business are invited to develop trans- and interdisciplinary integrated knowledge. Practical knowledge and scientific knowledge have equal weight in the DNS-Lab, and practitioners and researchers work together as equals.

Protected space: Operating under the Chatham House Rule (on anonymity of attribution), the DNS-Lab offers a protected space for open discussions in an appreciative atmosphere. Assessments of other perspectives and hierarchies of relevance are avoided. The protected space enables participants to develop ideas in an exploratory manner and engage in exchange with diverse stakeholders who would not be discussed to the same extent outside of such a space. This creates a trusting environment for joint reflection on different perspectives on a topic.

Integrated knowledge: At the heart of a DNS-Lab is the generation of integrated (and in this sense new) knowledge that is relevant for both politics and science. The creation of this jointly developed knowledge is also credibly comprehensible for third parties. The knowledge generated should be scientifically credible as well as practically and socio-politically legitimate. The decisions on synthesis are documented.

Content-rich moderation during the preparation, implementation, and follow-up of a DNS-Lab: Content-rich moderation ensures that the work in the DNS-Lab is open-ended, but at the same time that the goals of the Lab are kept in mind and concrete results are developed. The moderator has a responsibility in terms of content, methodology, and social communication.

wissenschaftsplattform nachhaltigkeit 2030

About the wpn2030

The Science Platform Sustainability 2030 (wpn2030) serves as an interface between science and policy to reflect on sustainability policy issues and to support the further development of the German Sustainable Development Strategy (DNS) with scientific expertise. The Science Platform works independently and is systematically integrated into the official political steering, dialogue, and implementation process of the 2030 Agenda in, with, and by Germany.

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DNS-Labs

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