

Democratic government within environmental limits – on the legitimation of environmental policy

**SUMMARY** | June 2019



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# Summary

### Introduction

Progressive environmental degradation is a cause for deep concern. We have reached, and in some cases even exceeded, many of the outer limits of our ecological carrying capacity, both regional and global. There is therefore a real danger that humankind may trigger an irreversible ecological crisis. The growth of the global population and its economic activity, increases in the volume of traffic and in the use of raw materials, energy, water and land—the continuation in perpetuity of these steep growth trends is not sustainable. The forms taken by our economic activity and our social co-existence are being put to the test. In Germany, what this means is that our social market economy and our constitutional state need to be augmented with an ecological component. In other words, this is about ecological sustainability.

Germany makes a significant contribution to environmental pollution through its economic activities, and should therefore make a substantial contribution to finding solutions to the problem, both in its own national interest and as a responsible member of the global community. It has the economic and technological capabilities to be an environmental leader. However, its ambitions in this respect have declined markedly in recent years. In environmental and climate protection,

Germany is developing ambitious political strategies and concepts, often worked out in round table discussions employing formats that encourage dialogue and consensus. In terms of implementation and target achievement, however, environmental and climate policy remains deficient. And although the German Sustainability Strategy contains many sensible regulatory mechanisms, it has little impact on day-to-day policy.

We currently lack the kind of environmental policy frameworks for business and society that take full account of long-term environmental impacts. The concrete implementation of goals by means of ambitious and binding environmental legislation is too often entirely lost in the complexity of the political process. As a result, we lack robust and reliable framework conditions for the achievement of environmental policy. However, coherence, predictability and planning security are fundamental requirements for a liberal constitutional state and a free market economy. Inconsistencies and injustices unsettle and depress the economy and society. The credibility of environmental and climate policy suffers as a consequence, and its legitimacy can more easily be called into question by populist movements.

Environmental policy thus finds itself in a dilemma: on the one hand, it has to raise its level of ambition and its effectiveness; on the other hand, in many areas the political majorities needed for bold policy decisions are lacking. It lacks enforceability vis-à-vis other sectoral policies. The discussions in recent years on climate protection, air pollution in cities and agriculture all illustrate this clearly.

Against this background, the procedural and institutional prerequisites for effective governance within ecological boundaries come to the fore. In this report, the SRU would like to show that environmental policy aimed at protecting the natural foundations on which life depends can draw on strong scientific, legal, social and economic sources of legitimation. The report also addresses the question of how existing political institutions, processes and instruments can be improved to give greater priority to vital ecological needs and, in view of the state's responsibilities towards the future, to better integrate the concerns of young and future generations into the decision-making process.

# If planetary boundaries are exceeded, the risks to humans and the environment are unforeseeable

The evolution of humanity is at a critical juncture: global environmental change has reached levels that endanger the natural foundations of life. This also threatens the prospects for the social and economic development of humanity. Without stable environmental conditions, goals such as the preservation of peace and security cannot be achieved. National environmental policy must therefore not only deal with the problems within its own borders, but must also include the global dimension. Some environmental problems are tangible and directly visible, others are less perceptible, and sometimes even not at all – which in turn makes their urgency much more difficult to communicate.

Scientific analysis shows that the Earth is leaving the Holocene behind. Since the beginning of civilization, humans have lived under relatively stable environmental conditions in the geological epoch of the Holocene. Today, however, humankind is exerting such a strong influence on the Earth system that we are in the process

of leaving the safe environmental conditions of the Holocene behind: the incessant and progressive warming of the Earth is altering fundamental functional interdependencies within the Earth system. Biodiversity is under ever-increasing stress. Species, genetic diversity and the functionality of entire ecosystems are being lost or substantially altered. Intensive land use and excessive inputs of nutrients, synthetic substances and chemicals are all having a massive impact on the environment and human health. We can therefore now speak of the arrival of a new geological epoch, the Anthropocene.

Unless humanity changes course, the Earth will enter a state that could be described as 'Wasteland Anthropocene'. Sometimes a change in environmental conditions occurs gradually, but sometimes it can be abrupt. Once certain planetary boundaries have been exceeded, there is an increased danger of reaching tipping points at which environmental processes and conditions change within a very short time. In the areas of climate change and land use, planetary boundaries have already been 'riskily exceeded', and in the areas of biodiversity (genetic diversity) and nutrient flows (nitrogen) 'dangerously exceeded'. In a Wasteland Anthropocene, the condition of the ecosystems would deteriorate to such a degree that the functional interdependencies between the geosphere and the biosphere that characterise the Holocene would be lost. The use of the term 'Wasteland Anthropocene' rather than 'Hothouse Earth' is intended to make it clear that the change is not caused solely by severe climate change but results from the interplay of several massive stresses on the environment.

It is still possible to maintain Holocene-like conditions. For this to happen, existing transgressions of planetary boundaries would have to be reversed as far as possible and further transgressions prevented. However, such a sustainable Anthropocene requires firm control over society's material and energy flows.

The question of precisely where the planetary boundaries should be set in different areas can be explored through scientific enquiry, but cannot always be determined on scientific grounds alone. Drawing boundary lines is based both on a scientific analysis of the changes in the Earth system and on discussions within society at large about the risks that human societies are prepared to take and about how to deal with persistent uncertainty. It is therefore also necessary – in Germany, too – to ensure the legitimacy of our ethical and legal framework for action, which in the democratic and social constitutional state of the Federal Republic of

Germany is given by the Basic Law. This has to be done through a process of self-analysis and reflection, based on our factual knowledge.

# The protection of the environment is not only a legitimate task for the state but a duty

The social benefits of environmental protection and its contribution to the preservation of liberty are often not properly appreciated in politics and society.

This is especially true when environmental protection is unfairly criticised – and thus delegitimised – as a constraint on individual freedom. This view fails to recognise that in fact environmental regulation, planning and approval are often what make economic development possible, because in this way the state provides legal and thus investment security against competing interests and protection against private liability. Moreover, in many areas environmentally damaging behaviour on the part of private individuals threatens the individual freedoms of those affected, which have to be protected by the state.

The core principle of the protection of the natural foundations of human life is recognised as an essential component of one of the fundamental raisons d'etre of the state, that of 'security'. In terms of the theory of the state, it has always been able to claim the protection of the security of its citizens as a source of legitimation. Some man-made environmental changes, however, now pose a threat to legally-enshrined individual rights such as those to life, physical integrity and property. Further significant security risks may arise indirectly if global environmental changes contribute to the political and economic destabilisation of entire countries and regions. In this respect, the constitutional duty of the state to protect its citizens is not being sufficiently taken into account in political decision-making. In this context, environmental protection can claim a strong legitimatory basis derived from the definition of the state's environmental responsibilities in the Constitution (Article 20a of the Basic Law) and from the obligation to protect fundamental rights (Article 2 (2) of the Basic Law: protection of life and physical integrity). The clearer the threat posed by environmental pollution to constitutionally guaranteed ecological minima, the greater the reduction in political discretion.

The mandate to protect, enshrined in Article 20a of the Basic Law, and the precautionary principle legitimized by it, give rise to a fundamental obligation to maintain a safe distance from ecological boundaries. The precautionary principle obliges the state not only to avert real and present dangers, but also to anticipate and prevent any possible future harm to human health and the environment. This does not mean that ecological boundaries are a priori exempt from being qualified by or weighed against other rights and interests. However, the more serious the foreseeable consequences of transgressing those boundaries are, the more we are obliged to steer clear of them.

Notwithstanding this constitutional mandate for protection, it is difficult to derive concrete material precepts and obligations for the legislature from constitutional law. This makes it all the more important to have suitable procedures and institutions in place that help the state fulfil its duty to protect the environment over the long term and keep that duty at the forefront of political decision-making.

# Strong environmental policy is dependent on its perception by society as legitimate

Far-reaching processes of change not only need to have legal legitimacy, they must also have the support of society. It is popular support more than anything else which enables politicians to implement a robust environmental policy. In the current public debate, many people are questioning whether this support exists at present.

Environmental awareness remains very strong among the German citizenry. A majority of the population sees the state as bearing some responsibility in this area and does not believe that environmental problems can be solved by the market alone. A large majority believes, in line with the scientific community, that unless changes are made in society and politics, we face ecological catastrophes.

In many policy areas, there are majorities in society for environmental policy measures that go further. Many citizens, for example, want agricultural subsidies to be more closely linked to social and ecological needs. Surveys also show that a majority in society supports a rapid energy transition and would welcome a generally more proactive environmental policy.

A high level of environmental awareness does not automatically lead to a change in behaviour. Ecologically sustainable consumption often means changing well-established routines. It can also be associated with greater time and money costs. In addition, it is often difficult to weigh up the different ecological consequences of consumption choices against each other. In the end, whether citizens act in an environmentally conscious way depends on a number of factors, such as the economic situation, the alternative behavioural offers available and, last but not least, on their values.

Individual actions represent an important contribution to environmental protection, but cannot replace political decisions. In many cases, effective environmental protection requires a reliable framework for action on the part of citizens and business, one which ensures legal certainty and trust, as well as a level playing field on the market, through clear regulatory requirements. Individual actions always take place within this politically constructed framework. This means that the state and politicians must not shirk their constitutional responsibilities.

The distributional effects of environmental policy measures represent a mandate for policy-makers, not an argument against environmental protection. Environmental policy interventions often lead to short-term costs, and sometimes low-income households are disproportionately impacted. Social approval for policy measures may decline if social consequences are not sufficiently taken into account. Politicians quite rightly take these concerns seriously. However, they should see them as a caution to take distributional effects into account in the design of environmental policy instruments and, where necessary, to cushion them via social policy.

# A policy of ecological sustainability is urgently needed

A stable and resilient environment is the foundation of social and economic development. What is therefore required is a policy of ecological sustainability that has scientific, legal, social and economic legitimation, as outlined above. Such a policy recognises the boundaries that limit the proper functioning of the biosphere as scientific guard rails for human development. This does not mean that environmental protection takes precedence in all decision-making. Rather, the various dimensions of sustainability must continue to be weighed up

against each other. However, the ecological boundaries must serve as a yardstick in conjunction and conformity with the constitutional guard rails.

# The neglect of ecological considerations in policy decisions has structural causes

Long-term and systemic environmental problems represent a major political challenge. In general, the importance of environmental policy is widely recognised in society. Nevertheless, ecological considerations often play only a subordinate role in decisions on specific issues. This is not only the fault of the political actors, but has various structural causes, including the complexity of environmental problems, unequal access to political processes for different interest groups, and institutional obstacles in politics and administration (Fig. 1).

# **Environmental goals in Germany** are often not reached today

These political, legal, economic and social constraints lead to an insufficiently ambitious implementation of the strategies and programmes adopted at political level for the protection of natural resources. For example, the majority of the environmental targets in the German Sustainability Strategy are likely to be missed (Fig. 2). However, since this does not entail any consequences, there is a lack of political commitment behind them, and, in consequence, a lack of appropriate policy instruments and implementation measures.

#### Figure 1

### Challenges for an effective ecological sustainability policy

#### Complexity and uncertainty

# - the complexity of environmental policy tasks

- the path dependencies of existing sociotechnical systems
- unintended consequences and problem deferral



#### Unequal access to the political process

- the advanced organisational capacities of business interest bodies
- the mature networks linking business associations and politics
- the greater obstacles faced by bodies pursuing the common good or reform agendas

# Growing disparity between environmental awareness and action

- the gap between environmental awareness and consumer and political action
- rationalisation of and denial of responsibility for environmentally polluting behaviour
- growing distrust of political institutions and solutions



# Institutional obstacles in the political and administrative systems

- administrative structures not fit for purpose
- responsible authorities have inadequate resources and fail to fulfil their responsibilities
- finding out how to participate in the political process is too difficult



#### Problems of legal doctrine

- polluters enjoy better legal protections than those affected by pollution
- difficulty of enforcing environmental protection responsibilities
- weak legal protection for future generations



# Economic growth cancels out ecological efficiency gains

- failure to decouple growth from negative environmental impacts
- efficiency gains cancelled out by rebound effects
- inequality of access to and benefits from global resources



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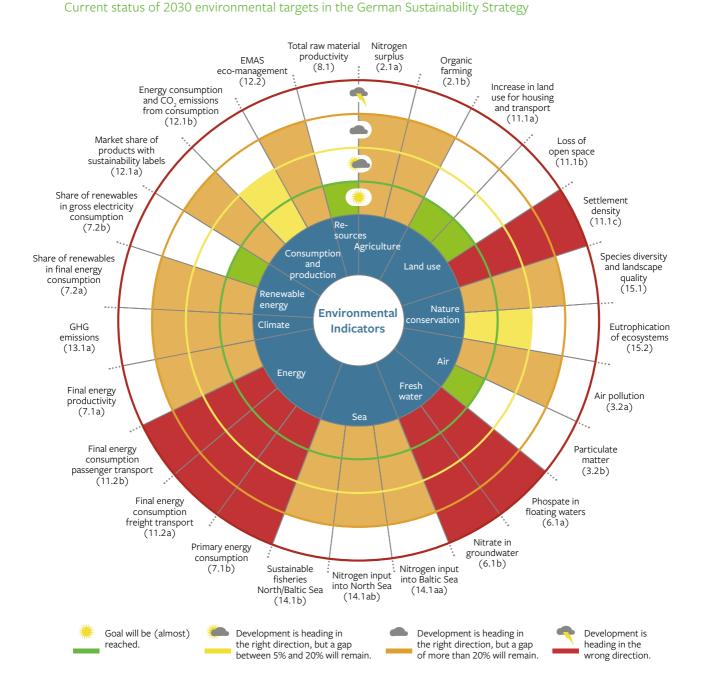
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# Political institutions and decision-making processes need to be updated to give greater priority to environmental protection

At present, the focus of the debate is on technicaleconomic solutions, but a discussion on the political prerequisites for sustainable development is also needed. Against this background, a policy of ecological sustainability based on six guiding principles needs to be developed (Table 1). A policy of ecological sustainability must be long-term in conception and future-oriented in order to preserve sufficient scope for action and decision-making for younger and future generations. In addition, the protection of the natural foundations of life requires an integrated approach in which policy-

makers in all sectors take responsibility for the ecological consequences of their actions. In order to identify risks and to avoid regulatory signals and measures that lead in the wrong direction, a policy that meets current needs must be rigorously based on the best existing knowledge and must actively seek to close gaps in that knowledge. Policymakers need to be able to assert and enforce the common good as a guiding principle for state action against the opposition of vested interests. In addition, a policy of ecological sustainability must not only be legitimized in a formal democratic sense; its aims and outcomes must also be supported and shaped by society as a whole. Finally, the currently relatively weak legal position within the constitutional settlement of those who suffer the consequences of environmental pollution needs to be strengthened.

o Figure 2



This figure shows the environmental indicators used in the German Sustainability Strategy and an analysis undertaken by the Federal Statistical Office of current trends against the 2030 targets for those indicators. Indicators for which no analysis was undertaken are not shown. It is the view of the SRU that some of the targets are not sufficiently ambitious to protect the natural foundations of life.

SRU 2019; source: Statistisches Bundesamt 2018

#### O Table 1

Guiding principles for a policy of ecological sustainability

| Long-term perspective  | Integration   | Knowledge   |
|--|---|---|
| <ul> <li>Taking more account of the long-term consequences of policy</li> <li>Involving younger and future generations in political decision-making</li> </ul> | <ul> <li>Strengthening the responsibility of all government departments for the environmental consequences of their actions</li> <li>Improving the coherence between policy goals</li> <li>Monitoring and controlling material flows</li> </ul> | <ul> <li>Strengthening research into sustainability and transformation</li> <li>A swifter translation of knowledge into policy</li> <li>Making the system and practice of policy advice more transparent</li> </ul> |
| The common good  | Participation   | Balancing freedoms  |
| <ul> <li>A stronger orientation of policy<br/>towards the benefit of the many</li> <li>Equity of access to the process<br/>of negotiation</li> </ul>           | <ul> <li>Making environmental decision-making more transparent and participatory</li> <li>Increasing the social relevance of environmental communications</li> </ul>  | <ul> <li>Striking a balance between the constitutional rights of polluters and of those affected</li> <li>Strengthening the legal rights of those affected by environmental pollution</li> </ul>                    |

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# Recommendations for a policy of ecological sustainability

The purpose of the following recommendations from the SRU is to strengthen environmental protection in the political decision-making process and in the activities of the administration. Their focus is on institutional and organisational changes at the federal level. The report concentrates on measures regarded as achievable in the short to medium term under current conditions. Some of the proposals therefore take up instruments already available under the German Sustainability Strategy. However, much greater consideration must be given in their implementation to the importance of the ecological foundations of life.

 Ecological sustainability needs to be understood and implemented in an integrated way

The principle of the integration of environmental law must be embedded in the Basic Law. The need for environmental protection should be taken into account in all environmentally relevant policy areas. Although the principle of environmental integration is already applicable law in both the EU and the Federal Republic of Germany, political practice continues to be shaped by departmental thinking. The principle of integration should therefore be incorporated into the Basic Law and more strongly linked to the sustainability strategy (see long version, Section 5.1.1).

Administrative culture should be geared towards cooperation and trust. Cooperation between federal ministries has often been characterised to date by a division of labour, competition and demarcation. This is due in some part to the Joint Rules of Procedure of the Federal Ministries (Gemeinsamer Geschäftsordnung der Bundesministerien - GGO), which only provide for interdepartmental project groups on an occasional and ad hoc basis. However, early and close interministerial cooperation is urgently needed for the achievement of ecological sustainability. Project groups should therefore increasingly become the rule rather than the exception. Cooperation can also be promoted through mutual understanding. Greater staff mobility between departments should therefore be encouraged. Experience from the European Commission indicates that this can significantly strengthen the basis for trust (Section 5.1.2).

# The sustainability strategy must be consistently implemented

Giving the strategy greater binding force. In order to give the German Sustainability Strategy more political enforceability, the responsibility for its implementation should be located more explicitly than has hitherto been the case in specific government departments. In particular, the departments responsible for sectors with a major impact on the environment must be given correspondingly greater policy responsibility, in order to ensure that the implementation of the strategy is more effectively anchored in everyday politics. If several departments share the responsibility for the implementation of a given objective, it could also help if political accountability is divided and allocated accordingly (Section 5.2.1).

Strengthening financial support for sustainability goals. The implementation of the sustainability strategy by the departments has not yet had proper financial backing, either in the federal budget or in departmental budgets. This means that on the one hand there is a lack of transparency regarding the amount of funding going into implementation, and at the same time the continuity of the funding flow is not assured. The SRU recommends investigating how long-term financing can be secured for the sustainability strategy, its objectives and its consolidation. It is also necessary in this context to review and adapt existing budgetary law and its interpretation with regard to long-term policymaking (Section 5.2.2).

Reviewing policy programmes and strategies for their consistency. The strategies and programmes of the Federal Government and the departments, just like the laws, must be reviewed in terms of their sustainability. For this purpose, the sustainability impact assessment procedure could be used (and at the same time strengthened) within the wider framework of regulatory impact assessment. The aim would be to ensure that strategies and departmental programmes actively support, or at least do not conflict with, the implementation of the German Sustainability Strategy (Section 5.2.3).

Making sustainability impact assessments more transparent and effective. In practice, the sustainability impact assessment procedure has acquired little political weight. It is marked by the same structural weaknesses as the regulatory impact assessment procedure of which it is a part. Greater transparency, in particular, would be an improvement. The Federal Government

should amend impact assessment in practice so that a first impact assessment report is published on the Internet at draft stage, one in which sustainability is a central element (Section 5.2.4).

Strengthening the role of the Parliamentary Advisory Council on Sustainable Development. The Parliamentary Advisory Council should be given greater powers, on the model of the European Committee of the Bundestag. To this end, it should be incorporated as a committee into the Bundestag's rules of procedure. In addition, it should be given greater scope to comment on legislative procedures and, at its own discretion, to carry out more in-depth and substantive monitoring of the sustainability impact assessments for individual draft laws. The Federal Government should commit itself to responding as a matter of course to the position papers of the Parliamentary Advisory Council on Sustainable Development. In addition, it should submit regular progress reports to parliament on the implementation of the German Sustainability Strategy (Section 5.2.5).

Developing visions for transformations towards sustainability and monitoring their realisation. Long-term strategies for sustainable transformation should be developed for all relevant sectors on the basis of agreed objectives such as those contained in the German Sustainability Strategy. This should involve both inter-ministerial procedures and discussions with the sectors and associations affected as well as with the general public. The progress of these initiatives should be monitored (Section 5.2.6).

# A greater emphasis on ecological sustainability in the legislative process

### Making the influence of vested interests more visible.

The influence exerted by interest groups on the development of legislation should be made public. To this end, the existing list of associations held by the Bundestag should be given additional binding force. Senior officials in the ministries and the Chancellery should document any contacts with stakeholders and report on them regularly, much as the European Commission does. Legislative processes should be made more transparent. The GGO should be amended so that broad, early and transparent participation becomes the rule. The Federal Government has recently taken an important step in this direction by deciding to publish draft official documents, together with external opinions, on the Internet (Section 5.3.1).

Embedding sustainability more firmly in departmental administrations. For civil servants in many government departments, the concept of sustainability has so far played only a subordinate role. In order to change this, the role of the departmental coordinators for sustainability should be strengthened by means of a suspensive right of veto in the event of any conflict arising with the sustainability strategy; and they should also be made co-signatories for all legislative procedures (Section 5.3.2).

Introducing a right of legislative initiative for the Federal Ministry for the Environment. In view of the cross-sectional nature of environmental protection, the role of the Federal Environment Ministry in championing the environment should be strengthened to enable it to better integrate ecological concerns in all environmentally relevant policy areas. To this end, the ministry should be given the right to initiate legislation outside its own area of departmental responsibility on issues of particular importance for environmental policy. In addition, the Ministry of the Environment should be granted a suspensive right of objection pertaining to such issues, analogous to the right enjoyed by the Finance Ministry with regard to budgetary issues (Section 5.3.3).

### Establishing a council for intergenerational equity.

In order to give young and future generations a voice in a political system characterised by parliamentary terms and party democracy, it is necessary to examine how the long-term responsibilities of the state can be better embedded within the institutions. To this end, an external council for intergenerational equity could be established. Ideally, the council should be a constitutionally enshrined and democratically legitimized institution with significant political weight, but one that is perceived as neutral in terms of party politics. Its members, bringing together expertise in the areas of sustainable environmental, social and economic policy, should therefore be independent. Half of them could be elected by the Bundestag and half by the Bundesrat (on the recommendation of the Länder parliaments), for 12 years, without the possibility of re-election. This council should be involved in the legislative process as part of its consultative functions for Parliament and Government, inter alia by being given the opportunity to review and comment on draft laws. In order to strengthen its role, it should be granted a limited right of veto, with suspensive effect. If it were to have serious concerns about the possible impact of a law on future generations, or about obvious inconsistencies with the sustainability strategy, the council could halt the legislative process and initiate an in-depth public and parliamentary debate. After a three-month period of reflection, the legislature would then decide whether and how to take its concerns into account. Since this council would 'only' have a suspensive right of veto and would not have its own decision-making rights, there are no fundamental objections to it arising out of the constitutional principle of the separation of powers or from democratic first principles (Article 20 (1) and (2) of the Basic Law) (Section 5.3.4).

Making environmental goals legally binding. In order to strengthen the capacity of the government to take long-term action in pursuit of ecological sustainability, a law on creating benchmarks for environmental protection goals should be drawn up, in accordance with Article 20a of the Basic Law. Such a law should significantly strengthen ecological targets, which to date have had little binding force, and give them a higher status in legislative processes (Section 5.3.5).

# Generating and applying knowledge for ecological sustainability

A further substantial expansion of research to support transformation processes in the direction of sustainability. In order to strengthen sustainability research, it is necessary to increase not only funding but also transparency, as well as opportunities for participation in research governance. Of particular importance are research priorities which focus on the conditions for socio-economic transformation and monitor and analyse technology development from a social science perspective (Section 5.4.1).

Further work on early warning systems and monitoring; building up a material flow inventory. Over recent decades, politicians and the public have repeatedly been surprised by the emergence of new environmental problems. Valuable time can be lost through inadequate environmental monitoring, especially with regard to problems that are slow to emerge and difficult to reverse. Existing monitoring activities, which are often fragmentary and incomplete, therefore need to be improved. In addition, an inventory of all important material flows should be drawn up - starting with their extraction from the environment, via their processing into products and use in practice, through to their release or disposal. This would include, for example, minerals and metallic raw materials, carbon, nitrogen and phosphorus, as well as plastics, pharmaceuticals and pesticides. An inventory of material flows is useful for the development of more effective flow management measures and thus in the reduction of environmental risks and/or the improvement of materials recycling practices (Section 5.4.2).

Increasing the interdisciplinarity, long-term orientation and transparency of policy advice. Independent expert councils continue to constitute an important pillar of scientific policy advice, but here, too, ecological sustainability must be more firmly embedded as a guiding principle. In order to help bring about a successful transformation towards sustainability, it would be desirable to ensure that a broad spectrum of perspectives and technical disciplines is reflected in policy advice; that long-term aspects and the protection of public goods are consistently taken into account; and that there is a high degree of transparency with regard to contracting authorities, conflicts of interest, and the processes and methods of policy advice (Section 5.4.3).

# Greater recognition of ecological sustainability as the foundation of economic systems

Making financial systems sustainable. A central political concern must be to align financial systems with ecological sustainability. This applies to both public and private investment. In order to extend sustainable investment beyond its current niche position, the range of investment vehicles should be very broad and should always target the market as a whole. The state should also exploit its capacity to influence the market directly and make public procurement, public investments and public facilities environment-friendly (Section 5.5.1).

Making  $\mathrm{CO}_2$  pricing more robust: greening taxes, duties and subsidies. Taxes, duties and subsidies urgently need to be ecologically orientated. Sufficiently stringent, socially cushioned  $\mathrm{CO}_2$  pricing is of great importance in this context. Taxes and duties applied in the fields of electricity, heat and transport should be consistently based on the  $\mathrm{CO}_2$  content of the energy sources. In addition, environmentally harmful subsidies, such as tax breaks for diesel or air transport, must be rapidly eliminated (Section 5.5.2).

**Broadening our understanding of prosperity.** In order to kick-start the transformation processes needed, for which the recommendations above can provide an insti-

tutional basis, it is also necessary to broaden the understanding of prosperity in Germany. People's quality of life must be assessed in its entirety and not reduced to economic indicators such as Gross Domestic Product. Numerous methodological approaches are already available for this purpose (Section 5.5.3).

### **Conclusions**

Democracy and the liberal constitutional order face the epochal and hitherto unsolved challenge of securing the ecological basis for the existence of our societies. Swift and decisive action is needed to avoid even greater damage and significantly higher costs at a later date, and to maintain, within the ecological boundaries, a democracy that is capable of functioning. There is a need for a society-wide debate on the question of how the necessary process of change is to be organised within the democratic constitutional state.

However, ensuring the continuation of human economic activity within ecological boundaries is not only the responsibility of politicians. Securing the ecological foundations for life is not only one of the ethical and constitutional responsibilities of the political institutions, but also requires changes to our economic system, to our collective values and to our individual behaviour.

If the transition to ecological sustainability is not successful, we are threatened with with calamitous social and political consequences arising from environmental damage. The challenge for the democratic and liberal constitutional state today is to develop the modern industrial and service society which has been so successful within the framework of a social market economy in an ecological direction. Only if the ecological crisis can be averted by means of a policy of ecological sustainability can civil liberties, the rule of law and democratic decision-making processes be guaranteed in the long term. Such a policy represents a way of safeguarding the essential necessities of life, and thus constitutes the very basis for the state's legitimacy.

## The German Advisory Council on the Environment

### Prof. Dr. Claudia Hornberg (Chair)

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### Prof. Dr. Manfred Niekisch (Vice Chair)

Professor of International Nature Conservation

### Prof. Dr. Christian Calliess

Professor of Public Law and European Law at the Department of Law at the Freie Universität Berlin

### Prof. Dr. Claudia Kemfert

Professor of Energy Economics and Sustainability at the private University "Hertie School of Governance" in Berlin and Head of the department Energy, Transportation, Environment at the German Institute of Economic Research (DIW Berlin)

## Prof. Dr. Wolfgang Lucht

Alexander von Humboldt Chair in Sustainability Science at the Department of Geography at Humboldt University Berlin and Co-Chair of the Department of "Earth System Analysis" at the Potsdam Institute for Climate Impact Research

## Prof. Dr.-Ing. Lamia Messari-Becker

Professor and Director of the Institute of Building Technology and Construction Physics at the University of Siegen

### Prof. Dr.-Ing. Vera Susanne Rotter

Professor and head of the group "Solid waste management" at the Technische Universität Berlin

### Secretariat of the German Advisory Council on the Environment

Luisenstrasse 46, 10117 Berlin, Germany Tel.: +49 30 263696-0 info@umweltrat.de

www.umweltrat.de

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