2015 saw a historic double success for sustainability and climate policy. The 2030 Agenda for Sustainable Development, with its Sustainable Development Goals (SDGs), and the Paris Agreement on climate protection establish a system of ambitious policy goals for the world. The group of twenty major industrialized and emerging economies (G20) now needs to resolutely advance implementation of both agreements, seizing the opportunity of this ‘Great Transformation’ to sustainability as a unique modernization project that offers substantial economic development opportunities. Complete decarbonization of the world economy by 2070 at the latest can only be achieved by profoundly transforming energy systems and other high-emissions infrastructures. This transformation could inspire Innovation and channel investment into sustainability and climate protection, e.g. into sustainable Infrastructures that need to be established and expanded. At the same time, the transformation could combat inequality and promote Inclusion within societies and globally, thus becoming an equity project. The G20, as a central global actor, should specifically promote the Four Big ‘I’s of sustainability and climate policy to ensure that conflicts over resources and their distribution are defused and international crises avoided. Sustainable development, and in particular global climate protection, is currently the only ambitious undertaking that involves all the world’s nations and resulted in a global consensus. Achievements in this enormous, complex policy field enable countries to establish mutual trust, making the ‘Great Transformation’ to sustainability also a peace project. Germany’s G20 presidency can set a decisive course for this future programme.

Challenge

A double breakthrough: the political context

In 2015 two global conferences reached a double breakthrough. (1) The 2030 Agenda for Sustainable Development, with its 17 SDGs agreed upon at the UN in New York, outlines the complex challenges of a transformation towards sustainability that should also help overcome global poverty. The SDGs are at once shared goals and a challenging programme of action for the global community. (2) The Paris Agreement under the auspices of the UN Framework Convention on Climate Change (UNFCCC) for the first time establishes legally binding goals to keep man-made global warming well below 2°C and pursue efforts to limit warming to 1.5°C. These goals are an appropriate global political reaction to threats that can no longer be denied. However, our current political context is also characterized by various dangerous tensions: wars and civil wars, mass migration and terrorism, global financial market crises and growing inequality as well as the rise of an authoritarian, populist nationalism observed in many countries are major issues. Given this situation, the Paris Agreement and the 2030 Agenda must not be allowed to be relegated to the bottom of the international political agenda.
Implementing the Paris Agreement will demand a uniquely strenuous effort from the global community. If emissions remain at current levels, the global CO2 budget for limiting global warming to 2°C will be exhausted within 20 years. If we are to keep global warming below the 2°C guard rail, emissions will have to be reduced to zero by 2070 at the latest. To limit the increase in the global temperature to 1.5°C, we will need zero emissions by 2050. This will only be achieved by fundamentally transforming energy systems and other high-emissions infrastructures and substantially changing citizens’ behaviour. There is a risk that some countries – in order to avoid a rapid phase-out of fossil energies – will engage in a massive expansion of nuclear energy and large-scale deployment of untested technologies such as carbon dioxide capture and storage (CCS, also in combination with bioenergy – BECCS), possibly supplemented by high-risk geoengineering measures, e.g. manipulation of the global radiation budget. The WBGU is proposing a much lower-risk alternative for preventing the global temperature from rising by more than 2°C. It recommends rapidly decarbonizing energy infrastructure, greatly accelerating the expansion and development of renewable energies, and effectively curtailing energy consumption. To bring about such a transformation, the WBGU is presenting a decadal carbon roadmap to plot the profound changes that will be necessary in coming decades. Its proposals range from effective CO2 pricing and an end to fossil fuel subsidies (by 2020), denying licences for new vehicles with combustion engines (by 2030) and large-scale deployment of renewable energy technologies as well as energy storage and transport (by 2040), to complete decarbonization of the G20 economies (by 2050).

Proposal

The G20’s leadership role

G20 countries are responsible for 82% of CO2 emissions from fossil fuels, so the G20, with its formative influence on the world’s economy and politics, must play a leading role in implementing the 2030 Agenda and the Paris Agreement. The G20 countries should, for example, increase the reductions they announced within the framework of the UNFCCC to reconcile them with the goals agreed on in Paris. The WBGU also recommends that the G20 adopt the decadal carbon roadmap. Based on this roadmap, G20 countries should develop comprehensive and verifiable national decarbonization strategies for, inter alia, phasing out the use of fossil fuels by 2050 and preserving natural ecosystems, with their carbon stocks und sink functions.

The Four Big ‘I’s: Innovation, Infrastructure, Investment, Inclusion

If we are to pursue this challenging path, the Four Big ‘I’s must become part of the G20 programme: a reorientation of Innovation to make it possible to develop economies and prosperity within the guard rails of the Earth system; a rapid, climate-friendly and resource-efficient modification of the global economy’s central Infrastructures; the creation of framework conditions for stimulating more Investment in the transformation towards sustainability; and linking these goals with the principle of social Inclusion, i.e. equity and participation, which should guide all these actions and is both a precondition and a goal of the societal transformation towards sustainability. G20 governments should advocate for the Four Big ‘I’s of transformation. To achieve all these goals, the WBGU believes that the proactive state – one that actively sets priorities, publicizes them explicitly, and gives its citizens greater opportunities to raise their voices, to participate in decision-making and to be actively engaged in their societies – must be strengthened.

Establish transformative sovereign wealth funds

The nations participating in the 2030 Agenda and the Paris Agreement will need to develop effective national policy instruments to implement the goals they have set. The WBGU recommends in particular that G20 countries establish transformative sovereign wealth funds, which we also call ‘future funds’. These could enable G20 countries to be more active in financial markets as stakeholders, with the goal of promoting socially responsible structural change to create a sustainable economic and social system. These future funds should draw their revenues from CO2 taxes and emissions trading as well as from a generational component levied on estates. The investments made by the transformative sovereign wealth funds should be oriented towards climate change targets and the SDGs; profits should be used to advance equity and the common good.

Using sustainability and climate policy to solve global political problems

G20 governments should become involved as pioneers in this area not only ‘at home’. but also at the international level, and help to
G20 governments should become involved as pioneers in this area not only 'at home', but also at the international level, and help to strengthen cooperation and solve global problems. If correctly configured and strategically used, the Four Big 'I's of sustainability and climate policy could serve to leverage solutions to global political problems.

**First:** A far-seeing climate and sustainability policy could become a *modernization project* for the global economy. It could open up opportunities for economic development by inspiring innovation and creating sustainable investment and employment prospects, and it could help channel investments into technologies, companies and infrastructures that will secure a better future in the long term.

**Second:** Climate and sustainability policy could become an *equity project* at the national level and promote inclusion by making decarbonization strategies socially responsible, combating inequality and strengthening social cohesion.

**References**


**Existing Initiatives & Analysis**