Wind turbines are more than 100 metres tall and often installed in exposed areas. In many places they have a massive impact on the landscape. The photograph shows a wind farm in Lagrange in Spain. The country is a pioneer and produces ten per cent of its electricity with wind energy.

Right: Citizens from Graveley to the north of London demonstrate against a wind power plant. Protests of this kind are widespread across Europe. Society plays a key role in the implementation of the energy turnaround.
In 2011, the German Advisory Council on Global Change (WBGU) presented an extensive study entitled “World in transition – A social contract for sustainability”. In this study, the WBGU examines courses that can be taken towards a low-impact and sustainable global economy and society.

Dirk Messner
The report* has attracted considerable interest at both national and international level. The costs of restructuring, of the technological scope of action and of the political barriers have since then been widely discussed. In addition to the feasibility issues, two further fundamental questions have repeatedly been raised:

1. Are the warnings against the repercussions of global warming and climate change, on which the pleas for a comprehensive sustainability transformation are based, really not exaggerated?

The WBGU answer: The natural sciences have unfortunately not given the all clear. On the contrary, the view that humans are the strongest geological factor in the earth system is becoming more and more widely accepted. Existing production and consumption patterns could lead the earth system as a whole onto a new course in this century, with incalculable results and risks for many future generations of humans. The idea that the earth is driven by physical laws over which we humans have little or no influence belongs to the past.

Humanity is becoming the architect and designer of the earth system – for better or worse. It must therefore accept responsibility for the stability of the earth system and learn to stabilise and protect the global ecological public goods such as the atmosphere, the seas, the forests, the global ice masses, hydrological cycles and agriculturally used land. Welcome to the Anthropocene – the era of the humans.

2. Does the concept of the “Great Transformation” reflect a yearning for a rule of experts? Does the WBGU concept mean sacrificing the freedom of individual life models on the altar of ecological dictatorship?

Our answer: Science should not prescribe goals for society. However, it must draw attention to the limitations of the earth system and the risks of global warming. The relationships uncovered by science must be responsibly communicated to society. Science can also contribute to the illumination of paths towards sustainability, to making alternative options visible and to estimating their costs – in other words to exploring what our future could look like. The social sciences should also participate in the social discourse on the normative foundations of a sustainability culture. Ultimately, in democratic societies, it is the citizens who decide how they want to respond to the insights and options for taking action that science can provide. The WBGU is consequently not dreaming of a republic of experts but rather, and indeed, of a democratic knowledge society. This society takes note of scientific insights and weighs them up to make responsible decisions that not only take present interests but also the interests of future generations into consideration.

The acceptance of limitations, in the case of sustainability the limitations of the earth system, in no way questions the liberal constitution. People have defined other types of limitations in the course of their civilisation history to organise people living together in societies: social rights and standards set the boundaries within which the economy can develop without people being exploited; human rights define rights and obligations in the social interaction between humans; the Law of Nations regulates what is acceptable in the interaction between states.

The time has come now to accept the physical limitations of the earth system in order to secure people’s means of subsistence in the long term. This view stands squarely in the tradition of Kant, for whom freedom did not mean unregulated action but “action for good reason”.

For further information on this issue:

www.wbgu.de/en
Smog in Tianjin in January 2013. Thick smog is today often normality in Chinese cities. Apart from the adverse health effects, this also leads to road and air traffic congestion. With emissions to the order of ten billion metric tonnes a year, China is by far the largest CO₂ emitter in the world.