A Changing Planet

The overlapping spheres of climate, energy and environment pose some of the most pressing problems the world faces today. Many scientists believe climate change is occurring more rapidly than predicted. In addition to natural sources of environmental change, humans are increasingly contributing to the breakdown of natural cycles on Planet Earth. Many blame the greenhouse effect for the rapidly melting polar ice caps, thawing permafrost, changing seasonal weather patterns, and rising sea levels. The industrialized world uses vast amounts of energy, but consumption is also increasing dramatically in developing countries such as China and India with their populations of over one billion each. Sources of fossil fuels are finite and overuse is harmful to the environment. So how should we meet global energy needs? The search for answers has begun. But it is not just governments and scientists that need to act. Every citizen can contribute to the solution in his or her own way.

01 2025 – Global Climate Change
The earth’s climate is changing faster than at any time in the last 10,000 years. It’s a fact that has split scientists into two distinct camps. One believes natural forces are responsible while the other put the blame on human activity. Nowadays only few dispute the fact that manmade pollution is also upsetting the balance of nature and the signs are abundant.

02 Global Warming – Caprice or Catastrophe
The earth’s climate is changing and humans are playing a part in it. In this episode we travel to the Antarctic with researchers who are drilling deep holes in the polar icecaps, looking for cause and effect in the different layers of ice. In the south seas we look at the prospect that many low-lying, populated islands and atolls will soon be covered by rising oceans. And in China we accompany farmers whose livelihood is threatened by years of drought.

03 The Fuel that Never Ends
What will power our cars in the future? Will it be ecologically produced E85 bio-ethanol? A newly developed engine has been designed to spurn on the development of carbon-dioxide neutral biofuels and low emissions vehicles, which will make use of whole plants, not only their fruit, to produce fuel.

04 The Last Drop of Oil – Will 2020 Mark the Next Energy Crisis?
Analysts currently predict that global oil production will peak in 2020, despite rapidly increasing demand for “black gold.” But will there be enough alternatives to meet our energy needs after 2020? Just how much can we expect of renewable energy sources? And what conflicts will arise between producers and ecologists? A community in Bavaria is grappling with just such a scenario.

05 Turning Manure into Energy
The village of Jühnde is the first municipality in Germany to declare itself energy self-sufficient. A bio-gas facility turns renewable raw materials such as grain into gas which in turn fuels a power plant that supplies the village with heat and electricity. We highlight the work of Joern Weitemeier, a one-time farmer who now runs the unique bio-fueled power generator. He’s on call 24 hours a day and is gaining a reputation around the globe. Groups travel from as far as America and Africa to take a first-hand look at what some are calling the biotechnology of the future.
06 Crashing Cliffs – When Mountains Crumble
Climate Change has led to a steady retreat of alpine permafrost. This phenomenon is having catastrophic effects on mountain stability. Many mountain formations all over the world rely on the adhesion of the permanent ice. When the ice melts, the formations become brittle, leading them to crumble under their own weight in often spectacular rock slides.

11 Arid Landscapes
Southern European countries like Greece, Spain, and Italy are in danger of turning into steppe. Climate change is not the only reason, although it will aggravate the situation. Overgrazing and excessive water consumption because of a concentration of industry, agriculture, and tourism, researchers warn, could result in landscapes similar to those in Morocco, a desert country with dried-up river valleys.

12 The World’s Biggest Dam – Help for the Mediterranean?
A dam, 27 kilometers long and six hundred meters wide at its base, separating the Mediterranean from the Atlantic – that is what an Austrian architect wants to build between Morocco and the town of Tarifa in Spain. It would require one billion cubic meters of rock. As yet, however, the dam is merely at the concept stage. The aim is to preserve the Mediterranean from the impending consequences of climate change.

13 Climate Change and the Arctic
No eco-system has suffered more from the consequences of climate change than the Arctic. Over the last few decades the average temperature in the Arctic has risen by roughly twice as much as in the rest of the world. For years now the so-called eternal ice has been shrinking. A unique polar expedition involving the German research ship "Polarstern" has documented the alarming effects of climate change in the Arctic.