Due to population growth and rise in per-capita consumption the demand for vital resources will increase dramatically during the next decades.

Resource supply

Scarcity of resources is a major global trend. The demand for water, food and energy will increase substantially within the next decades. Several international studies analyse future perspectives and find significant changes in global demand for all areas (see table).

Increase in global demand until 2050	
Energy	+ 40-50%
Water	+ 20-30%
Food	+ 60-70%

It is undisputed that demand for natural resources will increase in the medium term because of a combination of population growth and projected increases in per-capita consumption. But there is uncertainty as to whether supply can keep pace. This leads some experts to argue that, in the long-term, the world should expect at best, sustained increases in commodity prices, and at worst, shortages of key resources.

Military conflicts, civil wars, unrest, or geopolitical tensions are a reason for disruption of supply chains, but also for shortages and increases in the price of important resources such as energy and food.

When we consider the impact of climate change, we normally think about the environment – the melting Arctic and Antarctic ice caps, rising global sea levels, intensifying storms or expanding deserts. Several experts realise that the most potent effects of climate change will be experienced by humans directly through the impairment and destruction of habitats. Already in 2012, a study titled "Resources Futures", the British think-tank Chatham House analysed the relationship between resource supply and climate change. According to this report, climate change is best understood as a "threat multiplier … a key factor exacerbating existing resource vulnerability". It can be assumed that climate change, especially when combined with growing supply shortage, will result in a significant reduction in the planet´s vital resources.

Food

Food risk includes both food security and food safety. Food security is built on four pillars, including food availability and stability, food access and food use. Global population growth coupled with urbanisation, climate change, water scarcity and resource competition are posing a real threat to global food security. Food safety refers to the conditions and practices that preserve the quality of food to prevent contamination and foodborne illnesses. Unsafe food causes many severe and life-long diseases, ranging from diarrheal diseases to severe organ damages. The World Health Organisation (WHO) estimates that foodborne and waterborne diarrheal diseases are one of the leading causes for death in particular for children in developing countries.

Water

Around the world, cities, farmers, industries, energy suppliers, and ecosystems are increasingly competing for their daily water needs. Currently about 70% of water resources are used in agriculture, 20% for industry and 10% are domestic use. In the absence of major policy changes and much better water management the situation will deteriorate and water availability will become increasingly uncertain. In many regions of the world, groundwater is being exploited faster than it can be replenished and is also becoming increasingly polluted. Groundwater depletion may become the greatest threat to agriculture and urban water supplies in several regions in the coming decades.

Energy

Global energy demand continues to rise. Despite the urgent need to limit CO2 emissions, fossil fuels will be the most important energy sources in the coming decades. By 2050, renewables will increase significantly, but will probably only account for about 27% of global energy demand. As a result, most experts predict that energy-related carbon dioxide emissions will continue to rise through 2050. The forecasts underscore the challenges associated with moving away from fossil fuels.