

## Climate Change & Greek Businesses

### Risks & Opportunities

#### Executive Summary

The Earth's climate is affected by a number of natural processes, like the angle of the planet's axis with respect to the sun, the geological activity and the oceans and, of course, the "greenhouse effect", in which the so-called greenhouse gases (carbon dioxide, methane, water vapor etc) withhold incoming sunlight, thus creating a dynamic equilibrium that enables the creation and preservation of life. Since the era of the industrial revolution, the levels of carbon dioxide have increased by at least 30%, basically due to the burning of fossil fuels and changes in land use (e.g. deforestation, urbanization). This anthropogenic process has exacerbated the greenhouse effect, increasing the average global temperature by 0,6 °C during the course of the 20<sup>th</sup> century.

The consequences of anthropogenic climate change are multifaceted. On the one hand, the phenomenon affects the natural environment: the polar ice-cap is melting and the sea level is increasing, extreme weather phenomena become more and more frequent, desertification and freshwater shortages take place and the planet's ecosystems are under pressure which results in significant biodiversity loss, especially in terms of the rate of extinction of species. On the other hand, climate change entails material financial costs. According to Stern's recent study (2006), the international community needs to take all necessary measures so as to maintain the average global temperature rise below the critical threshold of 2 °C, otherwise the financial cost will be immense. Namely, Stern estimates that the cost of total inaction fluctuates between 5% and 20% of the global GDP, which is disproportionately larger than the cost of tackling climate change, which lies between 1% and 2% of the global GDP.

Since climate change affects the economy, it is obvious that the business world will not remain untouched. Climate change implies a series of risks for businesses. Those risks entail potential impacts, potentially severe, that will affect the smooth functioning of businesses in many ways.

According to international bibliography, the three basic climate-change risks related to the business world are the following:

**Physical risk:** pertains to the impact of intense natural phenomena incurring due to climate change, e.g. storms, floods, drought, hurricanes and forest fires.

**Regulatory risk:** pertains to all possible impacts stemming from the introduction of climate change policies, like new legal and regulatory frameworks, taxation and newly imposed operational procedures.

**Market/Reputational risk:** pertains to potential consequences from changes in the market conditions or from any disruption of the relation between producers and consumers.

Climate change, however, does not only imply risk, it also spells business opportunities. The basic opportunities from tackling climate change can be summarized as follows:

**Opportunity from the direct impacts of climate change:** Local changes in the climate may be a problem for certain areas of Greece, while for others, it may comprise a business opportunity.

**Regulatory opportunity:** Climate change creates the need for innovation, i.e. the creation of new climate-neutral products and services, thus boosting employment and enhancing the business cycle and profitability.

**Market/Reputational opportunity:** Responding to the needs of an ever increasing environmentally aware consumer world is not only a strategy for 'green' image-making, but first and foremost, it is a strategy that makes business sense.

The degree of risk exposure and the breadth of the arising opportunities are primarily related to sectoral parameters, as well as to the geographic/spatial location and dispersion of each company. For instance, the tourist and agricultural sectors face the greatest physical risk, whilst industrial companies face significant risks from a changing institutional environment. Yet, climate change for both those sectors constitutes also an opportunity. The agricultural sector may reap benefits from developing alternative, environmentally-friendly crops, while tourism may enjoy increased revenues from altering its business model to address environmentally sensitive individuals from across the world.

Climate change does not only concern large companies but also the smaller ones. Small-medium enterprises (SME's) in Greece comprise the pillar of the national economy, largely contributing to the national income. Those companies amount approximately to 800.000. This implies a significant environmental footprint that requires long-term planning in order to be dealt with effectively.

The report concludes that climate change, both locally and globally, constitutes an opportunity for redesigning businesses and developing innovative products and processes. This may prove to be fruitful both for business and the environment. Ongoing international developments strongly suggest that prudent entrepreneurship is inextricably linked with environmental responsibility, and this applies to smaller companies too. Greek SMEs can only remain competitive, up-to-date and sustainable when they are equipped with the knowledge required to face the environmental challenges of our times.