

## Editorial

# Green Architecture and the Politics of Climate Change

Climate change is the biggest global threat to humankind, affecting us wherever we live. The responses to climate change so far have been based solely on a steady change in climate. Growing evidence suggests that unchecked temperature rises may lead to more rapid and irreversible shifts in the climate system. These could result in large changes in global weather patterns in only a few decades. The consensus on the timescale of such an event has not been reached yet; nevertheless, the potential impacts are far reaching. Further actions are needed to significantly reduce GHG (Green House Gas) emissions, the primary cause of global warming.



## Green Architecture

Buildings are one of the biggest emitters of GHGs accounting for about 45% of carbon emissions in the UK. Built environment professionals thus have the unique opportunity to contribute towards a significant reduction in GHG emissions using green design and construction. Energy efficient and environmentally sustainable development that aims to slow down or reverse the impacts of climate change is generally termed as green architecture. Enhancing energy efficiency or reducing energy demand in buildings requires an integrated effort from the stakeholders and innovative policies from the governments. Existing legislations to curb GHG emissions in the built environment have a narrow focus and concentrate only on the energy efficiency of building systems and envelopes. Realised gain or lost potential of renewable energy is not necessarily considered to determine efficiency of a building or a project. Impacts of energy efficiency legislations on emissions reductions are thus low in comparison with the stated objectives; e.g. in Kyoto agreement. Effectiveness of an energy policy for the built environment pivots on Policy makers' understanding and acceptance of the impacts of climate change.

## Politics of Climate Change

National and international policies on climate change and energy efficiency in the built environment reflect the lack of commitment from the policy makers of world's biggest GHGs emitters. For example, when the central debate on climate change has shifted from *'human activity is causing Earth to warm'* to *'whether we are reaching the threshold level of irreparable damage - sooner than expected'*, policy makers and advisers to the US government are questioning the scientific basis of climate change (Eilperin 2006). Immediately before the G8 summit in Gleneagles in 2005, the US administration has been under the spotlight for *secretly undermining* proposals to tackle climate change by removing all reference to the fact that climate change is a *serious threat to human health and to ecosystems* (Townsend 2005). Recently in the BBC (2006) Panorama programme: *Climate chaos: Bush's climate of fear*, the US administration is reported to be involved in *systematically changing and suppressing scientific reports about global warming*. State sponsored denials such as these have a negative impact on governmental policy, if any and public awareness of climate change. Acknowledgement of the facts is the first step towards an effective policy.

Similar lack of interest for climate change by policy makers can be found in the developing countries, which are increasingly becoming carbon-intensive. For example, China is the world's biggest coal producer and not surprisingly, the second biggest emitter of GHGs. Oil consumption in China has doubled in the last 20 years. With sustained economic growth China's total emissions is predicted to overtake US's by 2050. The use of energy, mostly fossil fuel is predicted to increase exponentially in China and other developing countries, such as India and Brazil. The increase in the built environment is of particular interest. Energy demand in commercial buildings in China is set to increase *seven fold* by the year 2015. Air conditioned buildings with high embodied energy are being built without much consideration to the sustainability of energy supply, security and emissions. The exponential increase in energy demand will be exacerbated further by the fact that buildings are usually used for 50-100 years and their energy consumption *inertia* will have a major impact on future energy demands and GHG emissions.

The developing countries are not yet required to cut emissions as part of the Kyoto agreement. Energy efficiency and a reduction in energy demand are not on the agenda for these countries. Policies on energy efficiency are virtually non-existent, which results in a carbon-intensive economy and affects energy security. For example, in China, the demand for energy has been increasing by about 15% a year but the generation is around 12% resulting in blackouts.

The politics of climate change has different dimensions for the developing and developed countries. Although the US and other G8 countries have more responsibility, the need to foster carbon-free and green development in the developing nations should not be understated.

## References

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