

As part of its mission, Construction Products Europe promotes the uptake of efficient construction solutions for buildings and infrastructures. One of the key points of our activity is the reduction of emissions generated during the life cycle of the construction in order to mitigate climate change.

In addition to the on-going work on energy efficiency, adapting our built environment to the impacts of climate change will be a substantial challenge for the European Union. It will require contributions from governments, industry and citizens, and the European institutions have to create the right regulatory framework in order to succeed.

In this context, Construction Products Europe would like to share its views on the EC initiatives in this field.

### Climate change, buildings & infrastructures

Many of the decisions that we take today may increase or decrease our vulnerability to predicted climatic changes. Buildings and infrastructure we design and build today will, in the future, have to resist to more extreme climatic conditions and environmental pressures.

A wide scope of aspects has to be considered (non-exhaustive list):

- ▶ Water management civil works are crucial as they allow rainwater harvesting and act as storage during storms and so prevent flooding;
- ▶ Infrastructures and buildings can be endangered by the sea-level rise. Moreover, sea defences protect from the effects of high-tides;
- ▶ The retreat of glaciers can create instability in mountainous regions, leading to rock falls and avalanches. Adequate construction design will reduce the risk to the population;
- ▶ Climate change will also affect forests and the lack of green cover can increase the risk of floods and erosion. This has to be taken into consideration during the construction or the refurbishment of buildings and infrastructures;
- ▶ To protect wetlands and aquatic ecosystems, a reduction of the water consumption is needed. Efficiency water distribution systems, sustainable use and recycling will help to achieve this goal;
- ▶ Other extreme climate events such as winds or blizzards, heavy rain or snowfall should be considered in the design of buildings and infrastructures. More extreme temperatures or humidity may also affect the durability and performance of some building products;
- ▶ Energy systems rely on infrastructures to maintain their service, especially during storms or floods. Investments in resilient distribution systems will help avert blackouts;
- ▶ The construction of transport systems, such bridges, tunnels, roads, railways but also ports and airports that are designed to operate under changing climatic conditions are required as these operate in any circumstances.
- ▶ In general constructions that are less vulnerable to climate change will require less costly insurance policies.

## **Standardisation: an available, efficient methodology**

---

Over the past twenty years, construction products and their applications have been greatly standardised in Europe. This is due to the action of key players, such as the European Commission (in particular DG Growth), CEN, the National standardisation bodies and the Construction products industry.

Some important milestones are:

- ▼ The publication of the Construction Products Regulation;
- ▼ The publication of more than 450 harmonised standards (hEN), first under the Construction Products Directive and now under the Construction Products Regulation.
- ▼ The development and publication of Eurocodes, through CEN TC 250, covering different construction materials and dealing with all kind of actions on structures. Eurocodes series are now under revision.
- ▼ Sustainability of construction works in CEN TC 350 including the publication of the frameworks, the methodology and the indicators for the assessment of the environmental performance of buildings. Sustainability standards are now being improved to include the economic and the social performance of the buildings and to include civil works.

2

---

The standardisation process covers more and more construction products, and continuously improves the quality and accuracy of the test methods, definition of essential characteristics and calculation methodologies.

Adaptation to climate change creates new requirements that standards are ready to fulfil. The challenge we face is the definition of these requirements and the risks which should be taken into consideration.

Climate change adaptation requirements should be integrated in existing horizontal standardised technical methodologies (Eurocodes and CEN TC 350 standards). Construction Products Europe believes that there is no need for new tests or assessments to evaluate the properties of products. The current ones should be applied according to adaptation to climate change criteria within the general framework of the horizontal standards.

## **Risk assessment and strategy**

---

Climate change will result in a change in magnitude and frequency of climatic events. The rate of future climate change is uncertain, and therefore decisions regarding the future need to be informed by an analysis of the climate risk, or change in risk. Risk assessment should be used to assess the likelihood of uncertain future events or 'hazards'. It should be also combined with impact assessment and valuation techniques.

A climate adaptation strategy is a combination of measures and options chosen to meet particular risk management criteria. A variety of generic climate adaptation measures have been described as responses to the impacts of climate change. These may be used individually, but more often a portfolio of measures may be the most appropriate option. Many of these essentially represent improved resource management.

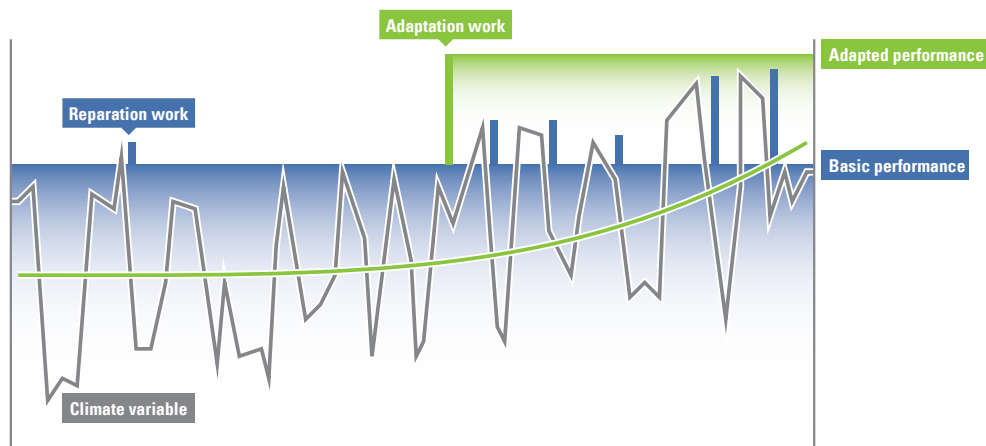
---

### **CONSTRUCTION PRODUCTS EUROPE - AISBL**

Blv. du Souverain 68, BE-1170 Brussels - Tel. +32 (0)2 645 52 07/ Fax. +32 (0)2 645 52 13  
[www.construction-products.eu](http://www.construction-products.eu) - email: [info@construction-products.eu](mailto:info@construction-products.eu)  
Transparency Register: 48010783162-91

The success of adaptation options will depend on their potential to produce benefits that outweigh their costs. The choice of measures will be determined by the particular objectives set by the decision-maker and it should be based on a full sustainability assessment (economic, environmental and social).

Many of the options considered in an assessment will concern choices regarding how much adaptation, if any, and when to carry out such measures. Such choices are therefore



Comparative analysis: Reparation cost vs. adaptation cost

dependent on changes in the probability and magnitude of the significant climate variables. The choices between options can involve significant costs and environmental and social impacts. Consequently, decision-making on climate change adaptation may often involve important trade-offs between the environmental, economic and social implications of such options. These need to be considered with care. Allowing a greater safety margin may entail higher costs – for example, a greater security of water resource supply could entail the high costs and environmental impacts of providing a reservoir.

In many cases, the criteria for decision-making will be constrained, for example by the legislative and regulatory environment, by other stakeholders and decision-makers, budgets, etc. Any policy aiming to have a positive impact on adaptation to climate change should take into consideration these restrictions and develop tools to go beyond them.

## Synergies with transport and energy sectors

Construction Products Europe would like to highlight the close link of construction to other sectors like transport and energy. Indeed, the transport and energy systems rely on the performance of construction products and technologies. Interaction should therefore be promoted.

**Construction Products Europe (CPE)** is a international non-profit making association made up of national and European associations that represent small and medium-size enterprises and world-leading companies. CPE aims to promote the European construction industry, to share information on EU legislation and standardisation and to provide input in all European construction-related initiatives.