

## Towards a meteorological architecture

By Philippe Rahm

The building industry is one of the main culprits in global warming because the burning of fossil fuels to heat or cool dwellings is the source of nearly 50% of greenhouse gas emissions. Following some resistance and procrastination the whole industry is now mobilised in favour of sustainable development and arguing for improved heat insulation on outside walls, the use of renewable energies, consideration for the whole life cycle of materials and more compact building designs.

It is clear that these steps all have a definite objective, which is to combat global warming by reducing CO<sub>2</sub> emissions. But over and above that goal, beyond such socially responsible and ecological objectives, might not climate be a new architectural language, a language for architecture rethought with meteorology in mind? Might it be possible to imagine climatic phenomena such as convection, conduction or evaporation for example as new tools for architectural composition? Could vapour, heat or light become the new bricks of contemporary construction?

Climate change is forcing us to rethink architecture radically, to shift our focus away from a purely visual and functional approach towards one that is more sensitive, more attentive to the invisible, climate-related aspects of space. Slipping from the solid to the void, from the visible to the invisible, from metric composition to thermal composition, architecture as meteorology opens up additional, more sensual, more variable dimensions in which limits fade away and solids evaporate. The task is no longer to build images and functions but to open up climates and interpretations. At the large scale, meteorological architecture explores the atmospheric and poetic potential of new construction techniques for ventilation, heating, dual-flow air renewal and insulation. At the microscopic level, it plumbs novel domains of perception through skin contact, smell and hormones. Between the infinitely small of the physiological and the infinitely vast of the meteorological, architecture must build sensual exchanges between body and space and invent there new aesthetical philosophies approaches capable of making long-term changes to the form and the way we will inhabit buildings tomorrow.