

Uponor

Uponor – Enriching life



A woman with blonde hair, wearing a striped tank top and dark pants, stands on a rocky shore of a large lake. She is holding a fishing rod that extends across the water. The sky is blue with scattered white clouds. The background shows a forested shoreline across the water.

Our vision:
Throughout the world our
solutions enrich people's
way of life

Our core purpose:
Partnering with professionals
to create better human
environments

Our way

Sustainability is an age-old concept. For us it is just natural.

Our journey:

We are committed to playing a vital role in building a sustainable future for both our business and the world's people.

We are committed to further developing our culture of sustainability, transparently linked to our values and widely demonstrated by actions throughout our organisation.

We are committed to focus our strengths in developing and implementing innovative and responsible solutions that improve human environments whilst reducing environmental impact.

We are committed to developing and acting upon the opportunities of working together in close cooperation with other professionals in the construction industry.

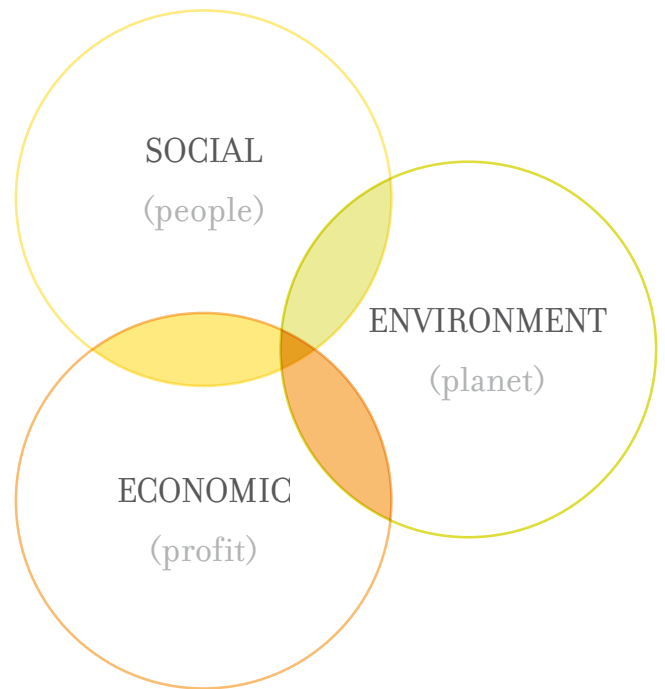
Along the way:

We will manage our complete supply chain operations to minimise impact on the environment.

We will introduce sustainable solutions for the built environment, that


- are energy efficient
- provide clean and healthy water
- reduce waste of water and other natural resources
- minimise the emission of greenhouse gases.

We will forge a sense of true partnership with likeminded people who work and live with the solutions we offer.



“ Recognised as a leading contributor to the sustainable built environment, we will strive to grow profitably as a sustainable enterprise by developing innovative and responsible solutions that improve human environments whilst reducing environmental impact. ”

Jyri Luomakoski, Uponor President and CEO



California Academy of Sciences

Sustainability: LEED Platinum

Location: San Francisco, California, USA

Applications: Radiant heating and cooling

Project size: 38,000m²

Architect: Renzo Piano

Planning: Arup & Partners

Investor: Robert Vogel GmbH & Co. KG

Prime contractor: Webcor

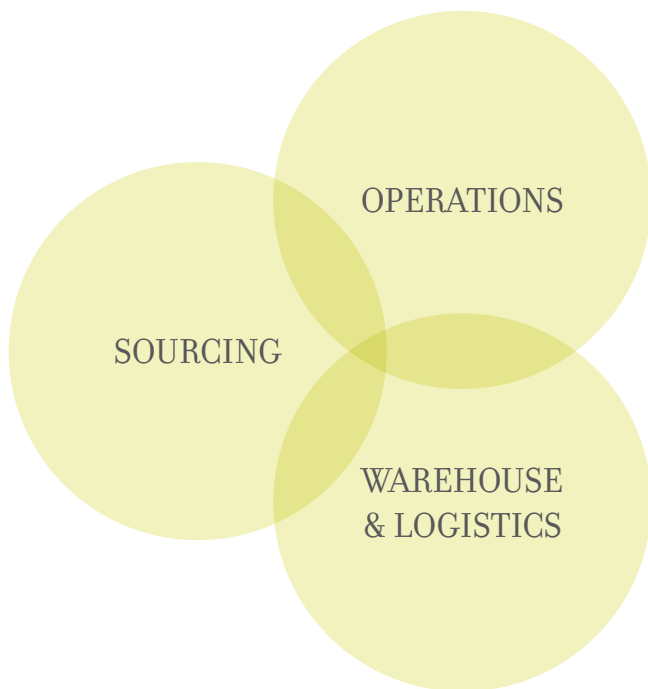
Completion: 2008



Sustainable production adds value to the quality of our products

Environmental protection is at the core of our supply chain. We pursue a certified environmental management system according to the standard ISO 14001 to help reach our environmental targets.

The ISO 14001 standard represents the core set of standards used by organisations for designing and implementing an effective environmental management system.



Supplier strategy

A sustainable supply chain goes beyond our own operations. That is why we expect also our suppliers to comply with the principles of ISO 14001 and ISO 9001 and any legislation on the environment and on employee relations. Our supplier framework agreement aims to ensure standards governing quality and corporate responsibility within our supply chain.

Efficient energy consumption as key success factor

According to evaluations commissioned on our internal operations, the greatest environmental impacts are the result of energy consumption in our production facilities, transportation and other logistics. This is why we are striving to reduce the need of energy while at the same time increasing the share of renewable energies.

CO₂ Emissions – Reducing our carbon footprint

We are participating in the Carbon Disclosure Project (CDP). Since 2009 we measure group wide our greenhouse gas emissions and climate change impacts. Year-by-year, we aim to improve the emission rate as well as the data accuracy regarding CO₂ emissions. We have set a target to reduce CO₂ emissions 15% by 2015 (basis year 2009).

Waste management

Waste management is a development target in our production facilities. Plastic is highly recyclable and part of our surplus production can be used in other production processes. Additionally, part of our waste can be used for energy recovery, thus reducing the amount of waste ending up in landfills.



Sustainability indicators

| | Unit | 2011 | 2010 | 2009 |
|-------------------------------------|----------------------|--------------|-------|-------|
| Environmental indicators | | | | |
| Total energy consumption | 1,000 MWh | 154.7 | 163.1 | 170.4 |
| - Electricity used | 1,000 MWh | 105.7 | 107.8 | 104.2 |
| - Fossil fuels used | 1,000 litres | 49.0 | 53.0 | 66.2 |
| Raw materials used | 1,000 tonnes | 82.7 | 95.3 | 90.9 |
| - of which, % recycled materials | % | 7.1 | 6.0 | 5.3 |
| Water consumption | 1,000 m ³ | 129.3 | 139.3 | 151.2 |
| Total GHG emissions (Scope 1 + 2) | 1,000 tonnes | 47.1 | 45.6 | 52.7 |
| GHG (Scope 3) | 1,000 tonnes | 204.0 | 204.6 | 208.0 |
| Waste water discharged | 1,000 m ³ | 42.8 | 36.6 | 39.0 |
| Hazardous waste | 1,000 tonnes | 0.3 | 0.2 | 0.3 |
| Total waste | 1,000 tonnes | 11.5 | 11.4 | 10.6 |
| Waste recycled | 1,000 tonnes | 8.7 | 9.2 | 9.0 |
| Total number of manufacturing sites | | 10 | 10 | 10 |
| ISO 14001 certified sites | | 8 | 8 | 8 |
| % sites certified | % | 80 | 80 | 80 |

Spiegelhaus Hamburg

Sustainability: Hafencity gold award

Location: Hafencity Hamburg, Germany

Applications: Underfloor heating and cooling, thermally activated building (TAB) structures, potable water systems

Project size: 50,000m² for exhibitions and events

Architect: Henning Larsen

Planning: DS-Plan Ingenieurgesellschaft für ganzheitliche Bauberatung und Generalfachplanung mbH

Investor: Robert Vogel GmbH & Co. KG

Tenant: Spiegel Group

Completion: 2011





Sustainable solutions for the built environment

The energy performance of buildings plays a major role in curbing climate change. It is important to take sustainability aspects into consideration when planning or renovating buildings.

Energy efficiency

These aspects include energy efficiency, efficient utilisation of renewable energy sources, health as well as overall environmental friendliness and lifecycle thinking.

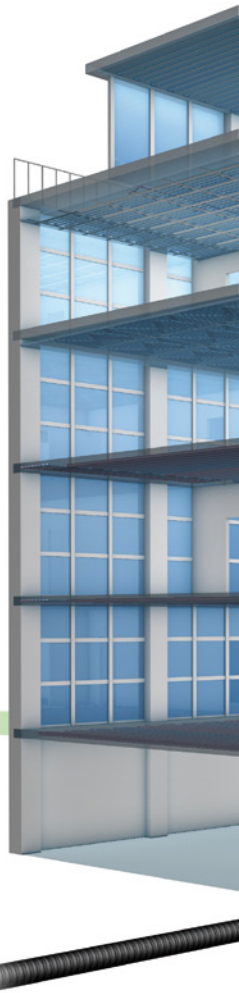
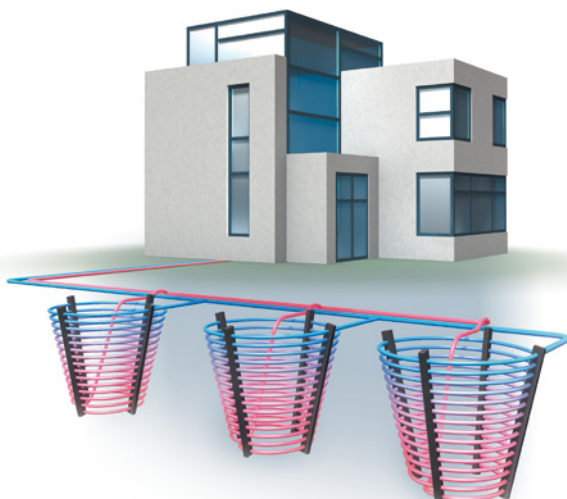
We view sustainability as a holistic approach to project design that strives to create a balance between the building, its construction and the environment it occupies.

The lifetime of a building is between 50 and 100 years. It's therefore crucial to install a heating and cooling emitter system that can utilise future energy sources. With an embedded radiant system the building is practically future proof as this would work efficiently with any possible future energy supply system, including individual solutions such as solar and ground energy or possible future district energy solutions. This is valuable for the annual cost of energy as well as for the future property value.

Radiant systems are based on the principle of low-temperature heating and high-temperature cooling. This is also known as low-exergy design, meaning a system that creates greater output using less energy. The efficient energy conversion of a radiant system results in an overall decrease in CO₂ emissions for any building type. The water in a radiant system has a capacity to transport energy 3,500 times greater than air, so it can heat and cool using less energy than a forced-air system.

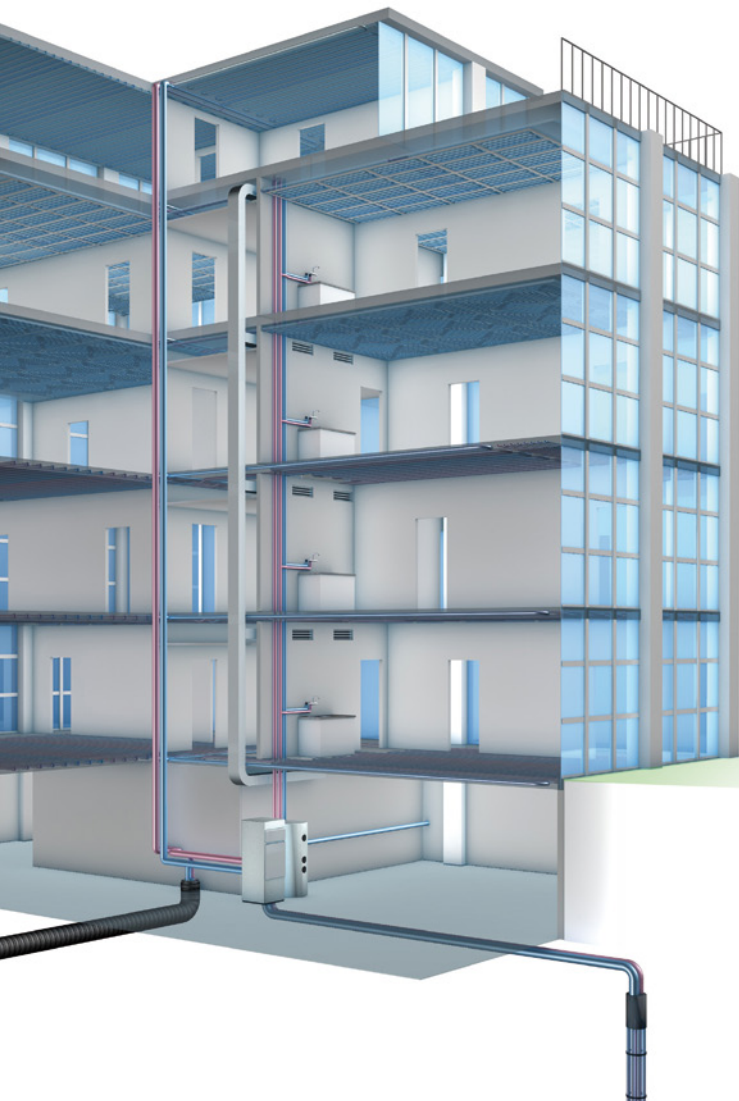
Uponor solutions with "Low Exergy" design:

- Radiant heating and cooling systems for floors, walls and ceilings
- Thermally active building systems
- District heating and cooling systems
- Ground energy systems
- Intelligent energy control systems

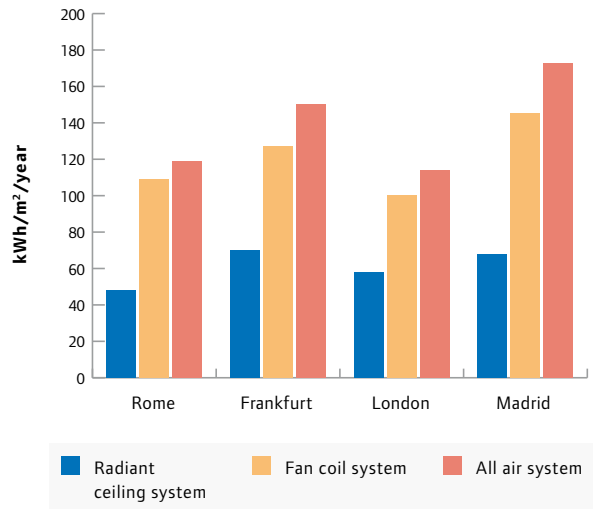


Sustainable benefits:

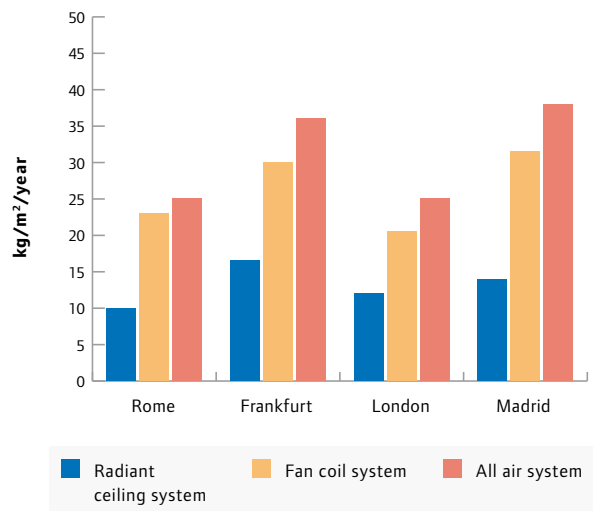
- Our water-based radiant heating and cooling systems are the most energy-efficient way to distribute heat within a building.
- The low operating temperatures enable optimal efficiency of the heat sources, ideally renewable sources like ground heat.
- This leads to a significant reduction of primary energy consumption and CO₂ emission.
- Radiant heating systems offer the best sensation of comfort to occupants.
- At the same time they can be used for cooling at no additional cost.



Primary energy consumption (kWh/m²/year)



CO₂ emissions (kg/m²/year)



Primary energy use for heating, cooling and ventilation, resulting from an EnergyPlus simulation of a typical office building (511m²), operated in different European locations. The building design fulfils national energy regulations.

All systems work with condensing gas boilers and air cooled chillers. The radiant ceiling system has in addition the possibility of free cooling through groundwater (18°C), (University of Torino, 2010).

Sustainable solutions, because water is life

How pipe systems can contribute to a clean water cycle —
in a building and on the planet.



Water quality and efficiency

Water is one of our most precious resources and its protection and smart use one of our main challenges. Buildings are major users of our potable water supply. Our goal is to encourage smarter use of water, inside and out.

Maintaining water quality and improving water savings are key requirements in our choice of materials, processing and design. Our plastic-based plumbing and wastewater systems and installation technologies are continuously developed to meet the most stringent requirements.

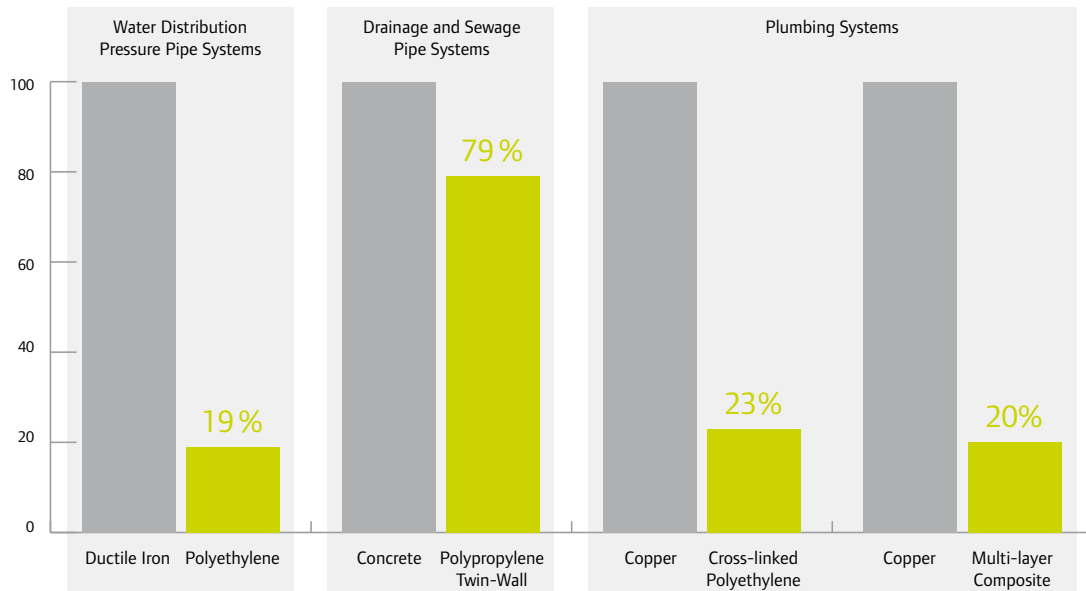
Our cross-linked polyethylene and multi-layer composite pipe systems are designed for a lifetime of well over 50 years. Using a lighter material limits the impacts of installation and transportation. Furthermore, our systems have excellent durability, avoiding the loss of clean water. The smooth inside surface makes water flow easier, reducing the energy required to convey the water.

Our plumbing and infrastructure solutions have outstanding environmental performance and the CO₂ footprint during production, transport, installation, operation and disposal is considerably lower than that of traditional systems.

Low environmental impact from plastic pipes

A detailed Life Cycle Assessment (LCA) has been carried out to determine the environmental performance and footprint of our plastic pipe systems used for plumbing installations in buildings as well as for water distribution and sewer installations outside the building. The study was commissioned by The European Plastic Pipes and Fittings Association (TEPPFA) and carried

out by the Flemish Institute for Technological Research (VITO). Compared to traditional materials, plastic pipe systems show a significantly lower impact on the environment from the primary extraction of raw materials up to and including the end of life treatment once their reference service life has expired.



The percentages mentioned in the graph above are the average of these six key environmental impact categories.

The Life Cycle Impact of the system on the environment is divided into the categories:

1. Abiotic depletion: exhaustion of natural resources
2. Acidification potential: emissions from manufacturing processes resulting in acid rain
3. Eutrophication: over-fertilisation of water and soil
4. Global warming: insulating effect of greenhouse gases, such as CO₂ and methane
5. Ozone layer depletion: depletion of the ozone layer in the atmosphere caused by emissions of pollutants
6. Photochemical oxidation: photochemical reaction of sunlight with primary air pollutants, that leads to chemical smogs

Partnering with professionals

Co-operating with our partners helps us develop improved solutions for their needs, while identifying how to better utilise the entire value chain for the benefit of the customer.

To significantly reduce the impact on the environment within our industry, i.e. the building and living sectors of the market, we are paying more attention to holistic planning whereby eco-efficiency is a factor considered early in the initial planning stages. Therefore we seek participation in projects from the very beginning.

Collaboration and forming partnerships is the basis of our approach to promoting sustainability in the construction business. In this way, we can contribute to environmental improvements in the construction process, from design all the way through to the completed project.

To help facilitate this collaboration, we actively participate in key industry forums:



We are a member of the ENCORD (European Network of Construction Companies for Research and Development), and participate alongside major companies within the industry in the development of a European wide concept and frame of reference for sustainability in the construction industry. ENCORD's Sustainable Development Charter is the culmination of the work by its members to pull together the key principles under which member

companies commit to develop their businesses and operations for the future. The Charter recognises the key role that Research, Development and Innovation has in the construction sector, and how this will support quality and greater added value in the built environment. The Charter incorporates such fundamental principles as lifecycle development, social responsibility in local communities, ethical working standards, caring for our employees and engaging our stakeholders.



As a member of TEPPFA (The European Plastic Pipes and Fittings Association), we are committed to promoting the interests of the industry on the European level and focussing on environmental issues and sustainable development. Likewise, in North America, we participate in the sustainability activities of the US-based PPFA (Plastic and Pipe Fitting Association).



In several countries, we are a member of the Green Building Councils, which promote sustainable practices related to the built environment globally.



Our dialogue

Connected with planners, architects and organisations we achieve best results for customers – and environment.



VORWISUNG!
Wegen der sogenannten
Witterungsrisse ist die
Sicherheit nicht
gesichert. Die
Sicherheit ist
daher gefährdet.
Bitte nicht
benutzen.
Werner Meister M. 1014

Office Building Rivergate, Vienna

Sustainability: LEED Gold, EU Green-Building certificate

Location: Vienna, Austria

Applications: Thermally activated building (TAB) structures

Project size: 30,000m²

Architect: Auer+Weber+Assoziierte

Completion: 2011



Building sustainable relationships

Sustainability starts with the way we treat people. Including employees.
And considering future generations as well.

We care for each other's welfare and that of future generations. It's essential to support and develop our employees working capability.

Our Code of Conduct reinforces our commitment as an employer to provide a safe working place free from discrimination. We treat all employees equally in all circumstances and at all levels, from recruitment until the employee leaves the company regardless of race, colour, nationality, age, religion, gender, sexual orientation, or other factors irrelevant to work performance.

We take into account the different needs of our employees, including career development and training opportunities. Furthermore, we reward our employees for their accomplishments, and we wish Uponor to be a good place to work in every respect. Our aim is to offer our employees opportunities for career development, in versatile roles both locally and internationally. Managers discuss these issues with their staff in the annual target and development discussion. During the annual succession planning process we identify potential successors for our key positions and we also identify our future young talents.

We provide everyone with a safe working environment, suitable working facilities and good tools to work with. Prevention of accidents is not seen as a legal requirement, but as the need to

protect our employees and Health and Safety indicators are closely monitored as a basis for the implementation of improvements in working practices.

At the same time we encourage a healthy balance between career and ambition on the one hand and on the other hand family life and the pursuit of other interests.

In the annual personnel survey, we follow up the development of these issues. It gives us valuable information of the employees' satisfaction and engagement. Based on the results, we agree improvement plans for the coming year.



Green builder VISION house 2011, Orlando Florida, USA: Uponor's plumbing and sprinkler systems were used at the VISION house, which explores green building and sustainable living options.



Our belief

Everyone counts. Because every single person has the potential to make a change – towards a better life for all.



National Renewable Energy Lab

Sustainability: LEED Platinum, largest net-zero energy building in the U.S.

Location: Golden, Colorado, USA

Applications: Radiant heating and cooling

Project size: 20,000m²



Photo courtesy of the National Renewable Energy Laboratory (NREL).



Our way,
the blue way

Both our products and our code of
conduct aim at the conservation
and protection of water resources.

A bright future for our society

Saving our natural resources is crucial to plants, animals and the whole human society – let's take on responsibility!

Since 1995, we are a Founder member of the Stockholm Water Prize, the 'Nobel Prize for Water', which is the world's most prestigious prize for out-

standing achievement in water-related activities. The annual prize honours individuals, institutions or organisations whose work contributes broadly to the conservation and protection of water resources and to improved health of

the planet's inhabitants and ecosystems, thus joining us in the efforts to create better human environments.

The Stockholm Water Prize is awarded by the Stockholm International Water Institute (SIWI), a policy institute whose diverse internationally-oriented programmes and activities contribute to finding sustainable solutions to the world's escalating water crisis. SIWI manages projects, establishes research programmes and publishes findings and recommendations on current and future water, environment, governance and human development issues. Furthermore, the institute serves as a platform for knowledge sharing and networking between the scientific, business, policy and civil society communities.

We are an active partner supporting SIWI and the Stockholm Water Prize.

On national and local level we are involved with countless organisations and events with the same mission. These range from large scale aid programmes like Make It Right that builds safe, sustainable and affordable homes for working families and directs its efforts to the rehabilitation of New Orleans after Hurricane Katrina, or to small, yet meaningful projects like helping restore a nesting habitat for osprey (*Pandion haliaetus*) in southern Finland.



Photo taken by Juhani Koivu

Uponor is a leading international provider of plumbing and indoor climate solutions for residential and commercial building markets across Europe and North America. In Northern Europe, Uponor is also a prominent supplier of infrastructure pipe systems. Uponor offers its customers solutions that are technically advanced, ecologically sustainable, and safe and reliable to own and operate. The Group employs approx. 3,000 persons, in 30 countries.

Uponor. Simply more.