



**Building blocks of the policy review  
on  
Water Scarcity & Droughts  
in the EU**

# **Water efficiency of buildings**

RauilM21 - Fotolia.com

**Brussels, April 27 2010**

*Andrea Nam,  
European Commission, DG ENV,  
Protection of Water Environment*

# Water efficiency of buildings 1

- Europe continues to waste at least 40% of its water due to inefficiency - In some regions, up to 30% of the volume of water consumed in buildings could be saved
- Commission Communication 2007 - put priority on water savings, covering also water saving in buildings
- possibility of developing requirements for water performance of buildings at EU level, in particular the development of a new directive similar to the Energy Performance of Buildings Directive

# Water efficiency of buildings 2

Recent studies related to buildings:

- Two studies carried out for the Commission (June, 2009) ([http://circa.europa.eu/Members/irc/env/wfd/library?l=/framework\\_directive/scarcity\\_droughts](http://circa.europa.eu/Members/irc/env/wfd/library?l=/framework_directive/scarcity_droughts)) :
  - water performance of buildings
  - on water efficiency standards

## Conclusion:

- Multitude of measures on the market, legislation, schemes and incentives vary across countries but little experience on the results
- Big water saving potentials
- need for EU action
- identified policy options

Deutsche Bank research paper (April, 2010)

## Conclusions:

- The real estate industry lacks a universal definition of what constitutes a green building as well as consistent data sources and metrics on green buildings. These deficits make an assessment of the profitability of green building investments difficult and therefore hold back stronger investor interest.
- Current market mechanisms alone do not seem likely to accomplish a sufficient degree of energy efficiency and resource savings over the coming years

# Water efficiency of buildings 3

Three levels' approach to the improvement of the water performance of buildings:

- 1. use of water saving eco-design products/devices – application of the extended Eco-design Directive (2009/125/EC)
- 2. water efficient construction design/major renovation plans (a more advanced level is the installation of technical options like grey-water reuse or rainwater harvesting systems).
- 3. method to measure building's performance

# Water efficiency of buildings 4

## ➤ 1 - use of water saving eco-design products/devices

Could be achieved by:

- application of the extended Eco-design Directive (2009/125/EC) - covers the energy related - water using -products (taps, showerheads, toilets – products with the highest water consumption - the revised Eco-design Directive new Work plan (possibly 2011-2012) to cover WEPs
- If all domestic water using products are included in the Eco-design, a 19.6% reduction from EU total public supply might be achieved (3.2% reduction from the annual total EU abstraction)
- If only energy-related products are included without considering dishwashers and washing machines the reduction is estimated to 6%(1% of total abstraction)
- behavioural changes could provide significant savings: small changes in showering time, bathing frequency or use of taps can result in savings of 20 to 30%.
- Reducing the water consumption of energy-related products such as taps, showers and baths can also result in an indirect reduction of energy consumption: potential reduction of the heating needs by 20% for these products (0.50% of total EU primary energy supply).

Risks:

relying on user behaviour changes

# Water efficiency of buildings 5

## ➤ 2- water efficient design

Could be achieved by

- Taking into consideration water efficiency when designing/renovating a building – choosing the right mixture of water using devices, plumbing system, air conditioning units etc. – focus on commercial and public buildings
- the current technical options commonly used like the installation of grey-water reuse or rainwater harvesting systems – more expensive options.

More than 30-40% savings in new buildings could be achieved without relying on user behaviour changes

# Water efficiency of buildings 6

- 3- method to measure building's performance

Could be achieved by

- the introduction of different methods and instruments (eg. schemes, management plans, rating tools, minimum performance standard, auditing )

# Water efficiency of buildings 7

- New assessment
  - To be launched: first half of 2010 – open call for tenders
  - Objective:
    - further assess the impacts of the EU policy initiatives (regulatory/non-regulatory)
    - Support the stakeholder/public consultation
  - Timing: 14 months



# Water efficiency of buildings 8

## ➤ Follow-up of the work:

- Further elaboration of identified policy options/identifying new options
- - the main policy options considered are:
  - Developing a Directive (harmonisation needed across the EU)
  - Recommendation addressed to all the Member States (provide MS with guidance to improve water efficiency)
  - Integrated with other environmental initiatives regarding buildings (energy efficiency, construction standards)
- The selected policy options will be subject to /stakeholder public consultation – 1<sup>st</sup> half of 2011
- Commission proposal for policy measures – second half on 2011.

*Thank you for your attention*

*Questions?*