

## SF 20: Awareness raising campaigns for saving resources (e.g. water)

Fr	B	C	NY	S	T	Total
0	4	6	7,5	9	1	27,5

### Beispiel:

**New York City** (NYC) gets virtually all its drinking water from reservoirs outside the city - up to 200 km away. Due to population growth and, at the same time, the need to renew essential parts of the water supply lines, New York City is under pressure to act to keep water consumption constant despite rising population figures, since this amount can be provided via the remaining feed pipes for the duration of the renovation work. In order to enable this, the Department of Environmental Protection (DEP) started a Water Conservation Programme, which, within the framework of the strategic planning of the authority, embraces both the creation of incentive mechanisms, such as the „DEP Toilet Replacement Programme“, as well as various other measures such as awareness campaigns.

### 1. Differentiated description of the key field

The drinking water resources of many cities are limited (m:ci examples of New York City and Singapore). Besides protecting resources against pollution, for example by pollutants, the conscious and careful handling of drinking water by industrial and private consumers is, therefore, as necessary as the prevention of leaks in the supply network, where a significant share of the drinking water is lost.

Particularly in the industrial sector, the question arises as to whether the use of drinking water can be replaced by other water qualities. In Singapore, for example, many companies were persuaded to switch their industrial processes to the very pure reprocessed „NEWater“ (a high-quality product from treated wastewater), which reduced the amount of scarce fresh water consumed by the city.

Since both measures to influence behaviour as well as technical measures within the water infrastructure can often be applied and be effective only over long periods, it is vital to include the point of „careful use of the resource of drinking water“ in the strategic planning of sustainable urban development and to define measures by which this can be achieved.

A first step here is the development of a common understanding regarding the value of the resource of water and one's own consumer behaviour among users. The introduction of water meters on the level of buildings or households and the associated structure of charges is an initial important technical measure (in NYC, this was started in the mid-80s). This measure may be supplemented by the introduc-

tion of elements of a smart water grid, where consumers are constantly informed, for example, about their consumer behaviour; such effects are not yet under observation.

In addition to rolling out the items needed for the technical recording of water consumption, what is also required are awareness and information campaigns on the state of the water supply in each city as well as on the need to use the resource wisely. Ideally, this starts with children and the integration of this issue into everyday school life and does not end with posters being put up in the city.

Incentive mechanisms offered by cities (e.g. to encourage consumers to replace outdated water fittings and equipment [washing machine, dishwasher] with new water-saving alternatives) can achieve additional effects.

### 2. Reference to sustainability:

The resource of drinking water is always limited to some extent and, due to high water consumption, the necessary expenses (infrastructure, operation) for the treatment, transportation and purification of the resulting wastewater are always on the rise. At the same time, supply is often at the expense of the surrounding area, especially with increasing population in urban areas. Resource-efficient handling is, therefore, fundamental for sustainable urban development and has direct positive economic and environmental impacts.

### 3. Relevance to industrial sectors?

Mobility:	None
Energy:	High
Production & logistics:	Medium
Security:	Medium
ICT:	High
Water infrastructure:	High
Buildings:	High
Governance:	High

#### Brief description of the high level of importance:

- Water treatment and the transportation of water are always linked to the consumption of energy. Thus wasting water also always means wasting the energy needed to produce and transport this volume of water. Additionally, the energy needs of the urban water supply and sanitation system often represent a significant proportion of the city's total energy consumption.
- In the context of current trends towards smart grids, it is highly relevant to the ICT sector.
- Significant implementation measures of the efficient use of water will take place at the building level, e.g. the use of rainwater collection tanks as an alternative for watering plants and the use of water-efficient fixtures and installati-

ons.

- This is of great importance to the sector of governance as it has to integrate the topic into the city's strategic sustainability planning if need be and has to initiate measures (creation of incentives and information).

#### **4. *Impact (positive & negative)***

No negative impacts are known.

The positive impact can be summed up by the term „resource conservation“.

#### **5. *Implementation measures:***

- Recognise the local pressure to address the problem
- Designate possible technological and organisation measures to reduce the urgency of the problem.
- Inclusion in the strategic planning for sustainable urban development
- Information about requirements
- Creation of incentives; if necessary, changes to the rules
- Regular review of the implementation status and possibly adaptation of the specifications

#### **6. *Actors: Who can shape things?***

- Private individuals, citizens: Individual implementation measures at the household and possibly at the building level.
- Planners, contractors, construction companies: Development and application of approaches at the building, district and possibly city level.
- City and maybe district administration: Definition of possible approaches to finding solutions, initiation of information campaigns and the creation of incentives

#### **7. *Prerequisites:***

#### **8. *Obstacles/barriers:***

#### **9. *Indicators:***

- Water consumption per capita and per year.
- Querying of the relevance of the topic in strategic urban planning (strategic plan, etc.).

#### **10. *Special features/remarks:***