



Water for the Recovery of the Climate

A New Water Paradigm

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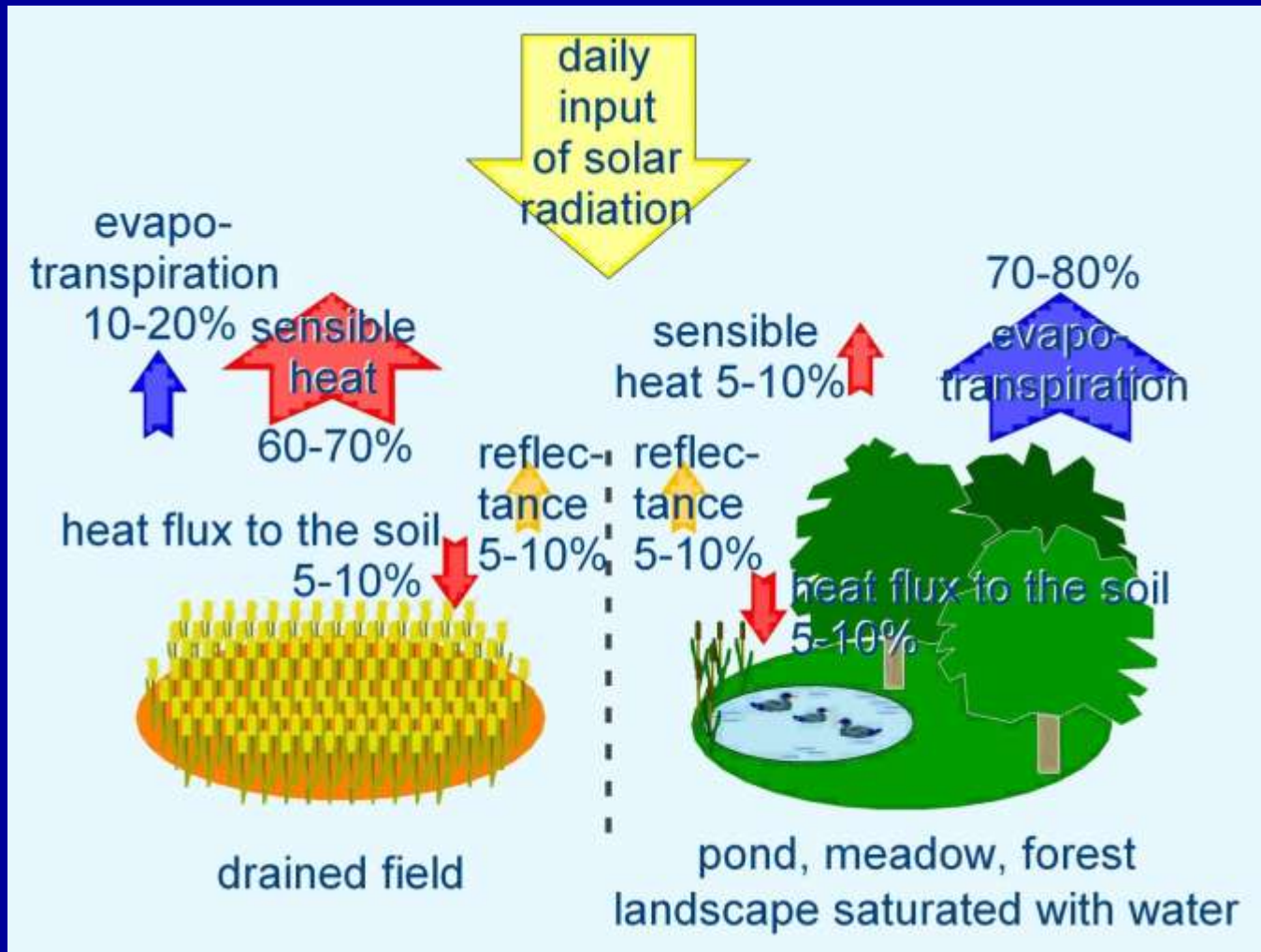
Water Ecosystem Restoration for the Recovery of the Climate (Michal Kravčík, NGO People and Water, Slovakia)

WATER FOR THE RECOVERY OF
THE CLIMATE"

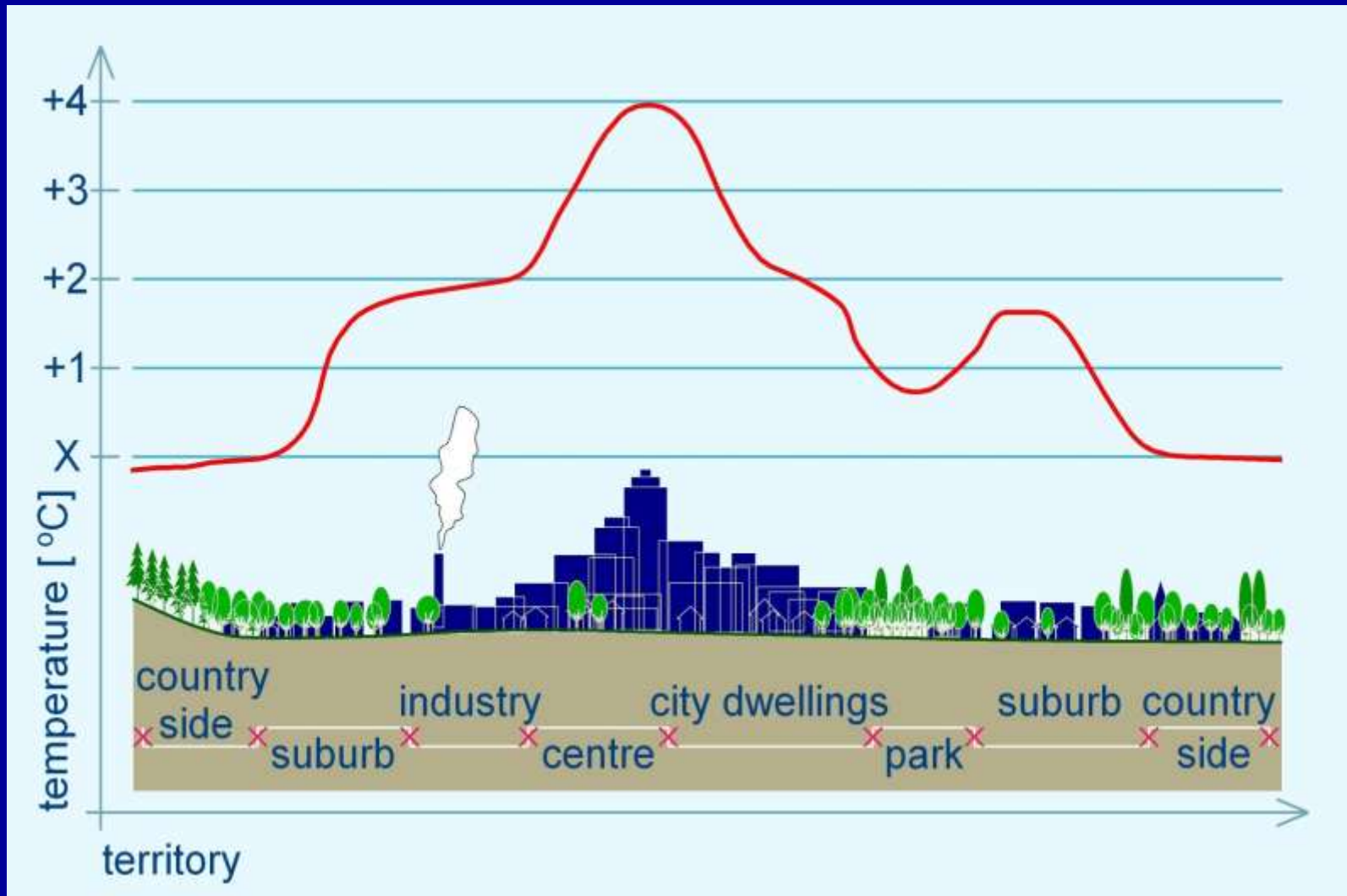
2th December 2010

Bratislava

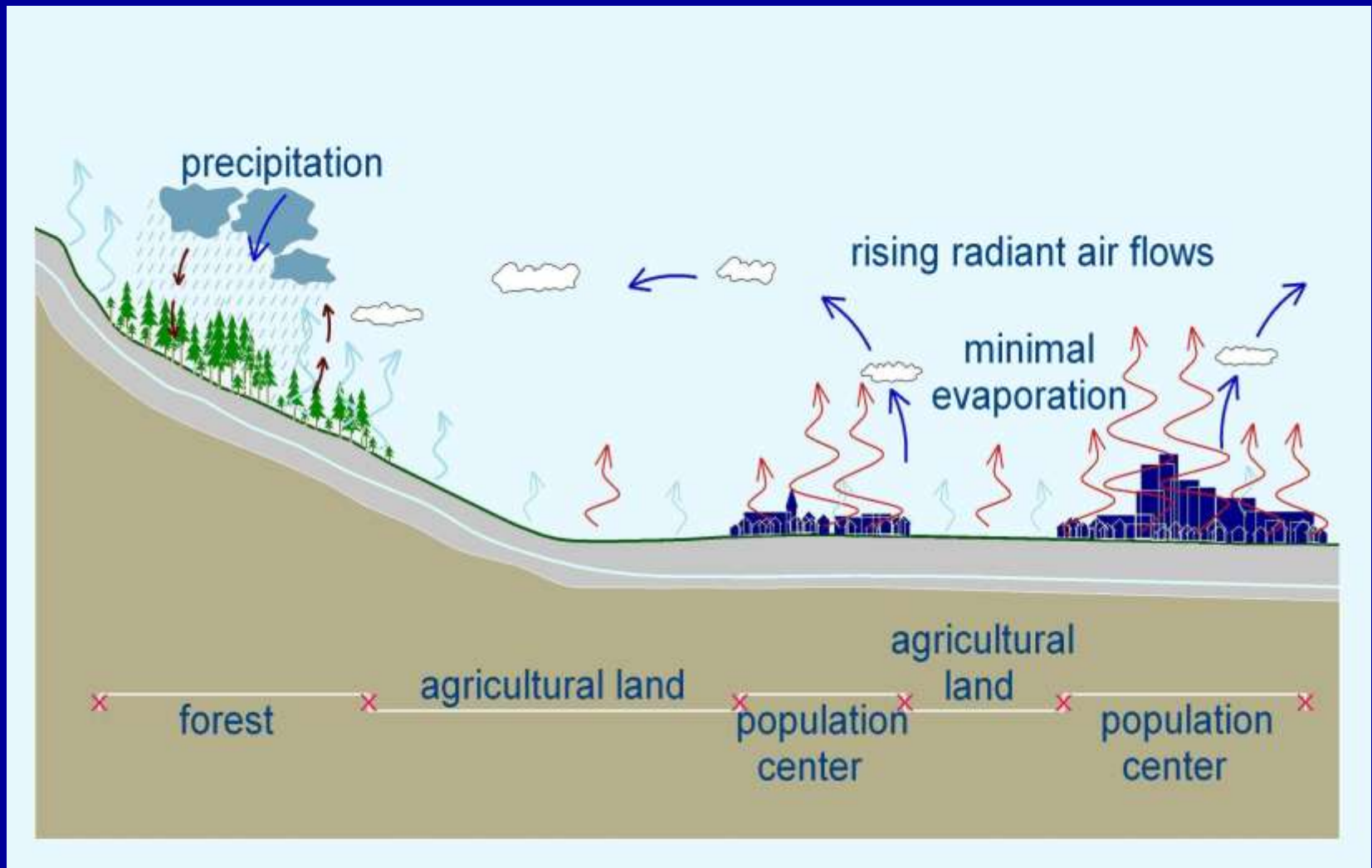
The distribution of solar energy on land with and without water



The hot climatic umbrella of an urban space



The impact of the transformation of land on small water cycles

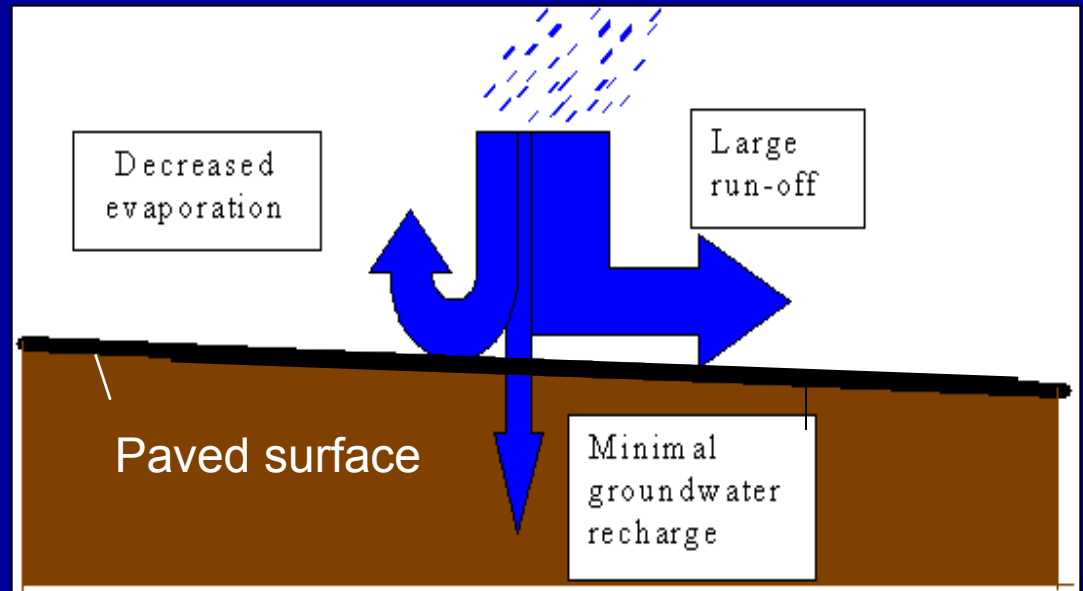
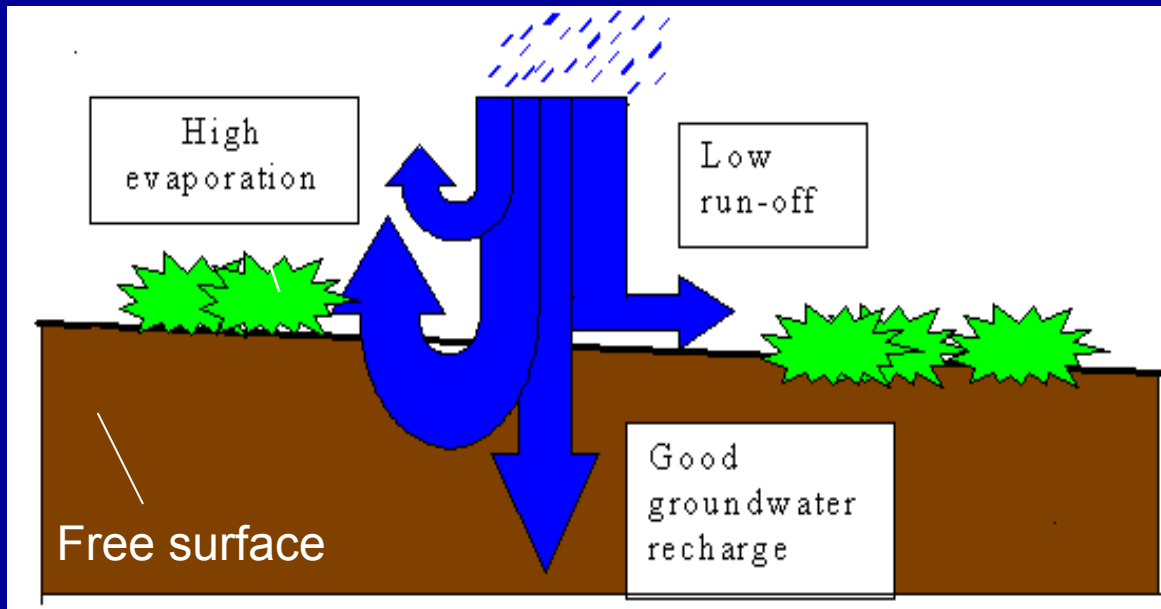


SOIL SEALING IN CITIES

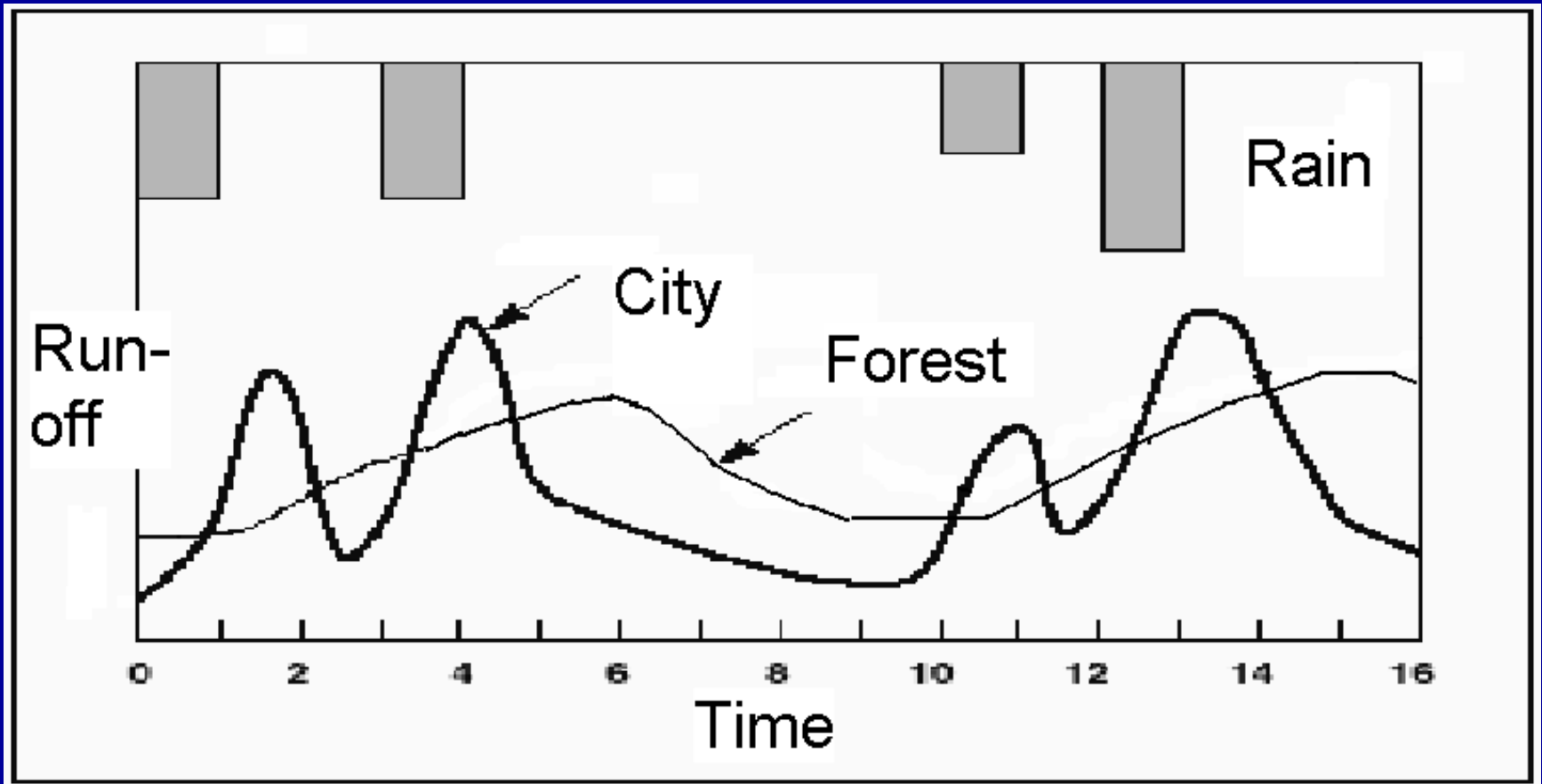


- about 20 billion m³ of rainwater sluiced from municipalities of Europe annually

PAVEMENT IMPACT

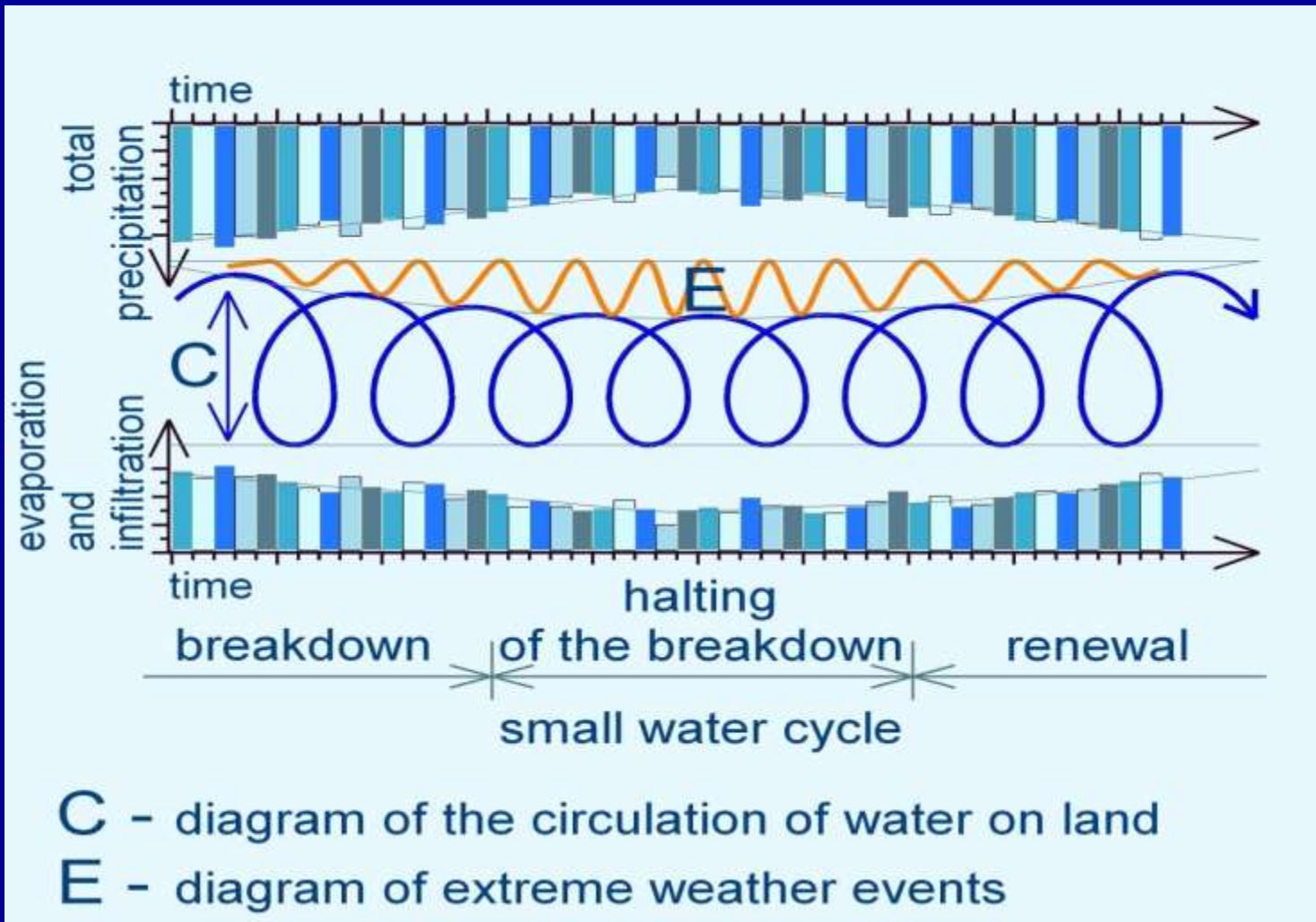


RUNOFF FROM URBAN AND FOREST ENVIRONMENTS

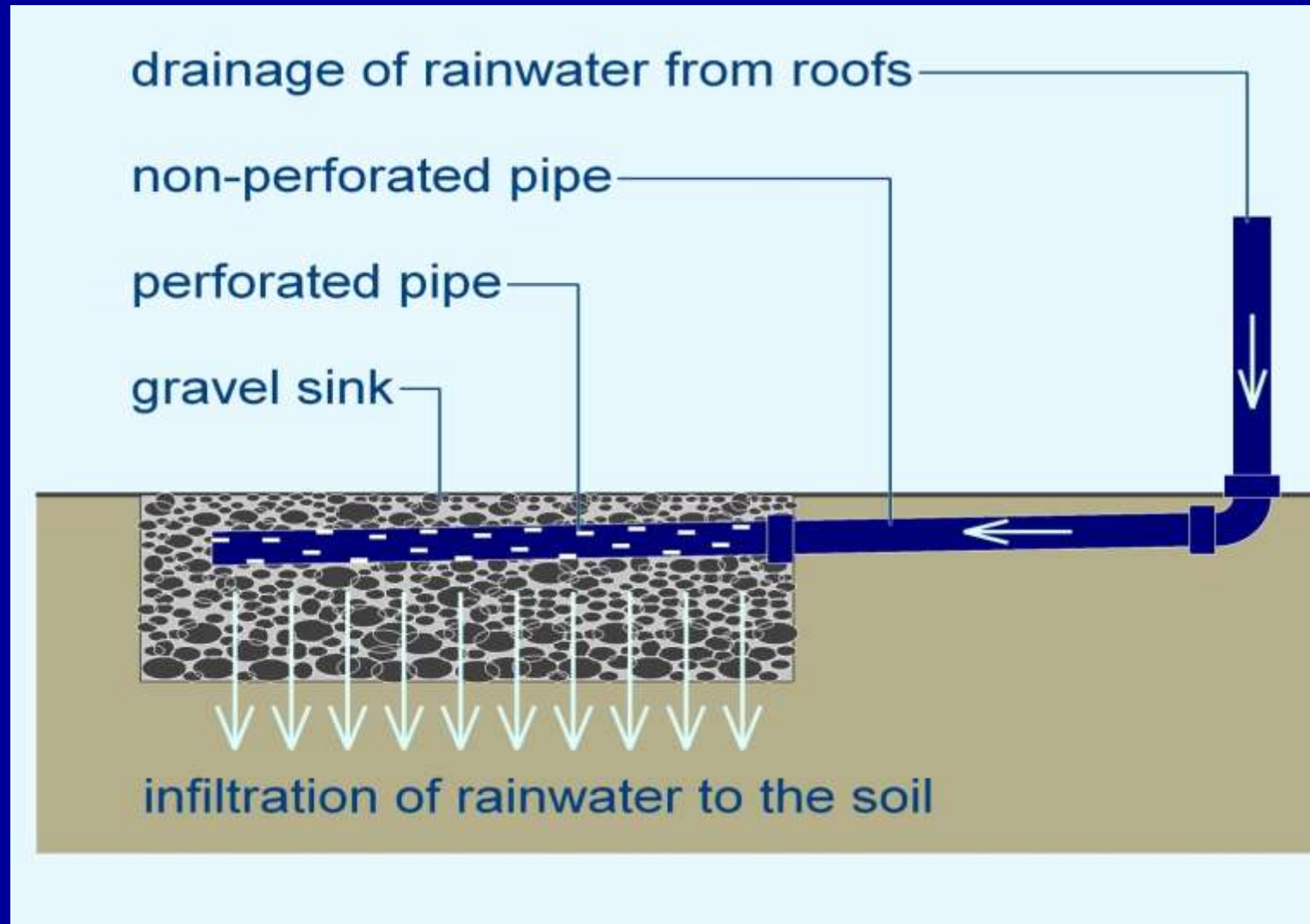


Decrease of runoff is overlooked
flood prevention measure

The destruction and renewal of the small water cycle



Rainwater harvesting from roofs in cities



Rainwater harvesting on slopes

Microstructures for the rainwater harvesting on land

Contoured barrages



Terraces



Eyebrow terraces



Pits



Vallerani-type microcatchments



Semicircular bunds



Triangular bunds



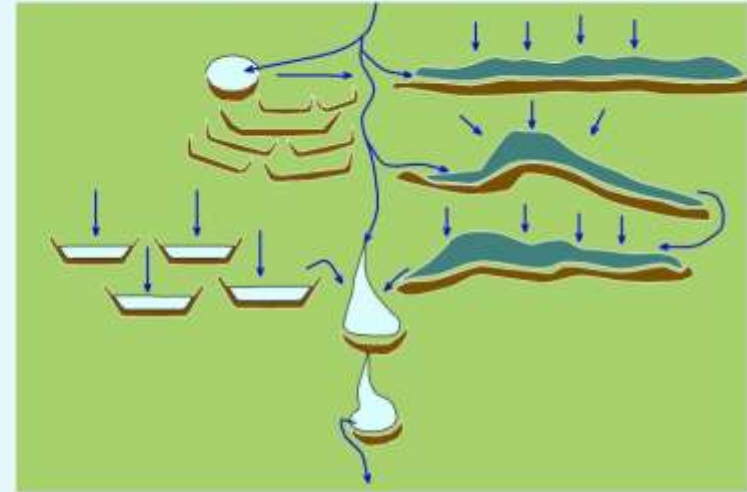
Meskat



Negarim



Combination of different rainwater harvesting technologies

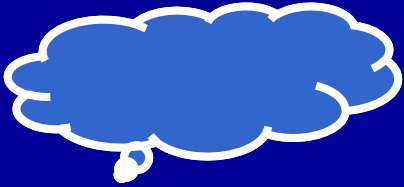


absorption area
earthen levee
runoff of water



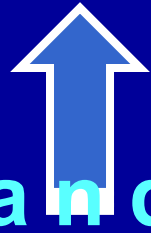
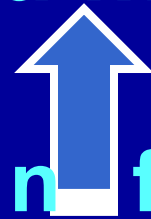
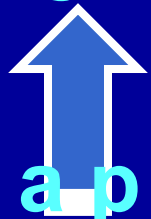
NEW WATER DEAL

more clouds



more soft rain

more air humidity



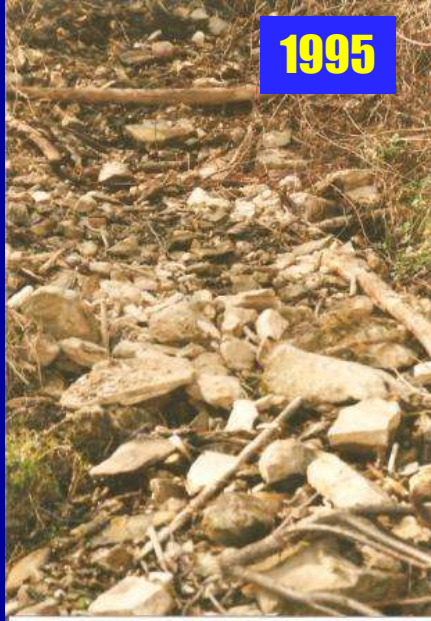
more evaporation from lands

more vegetation and biodiversity
more groundwater recharge

THE NEW WATER DEAL

- creation of over 30.000 jobs
- water-holding measures to collect 250 mil. m³ rainwater a year
- duration ten years
- 0,008 EUR/m³, while current technologies require cca 0,3 EUR/m³
- costs about 1 billion EUR next 10 years

BLUE ALTERNATIVE - alternative to Tichý Potok water dam





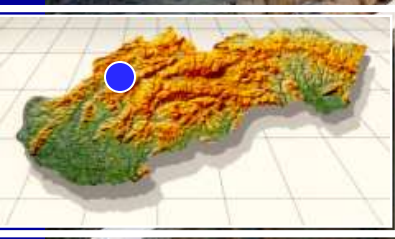
Water Forest (July – September 2005)

Flood prevention, High Tatras, Tatranska Lomnica



Rainwater harvesting in urban zone (Košice)





Hričov Water Ways, October 2008

**The average runoff from a residential
roofs is 70 m³ per year**

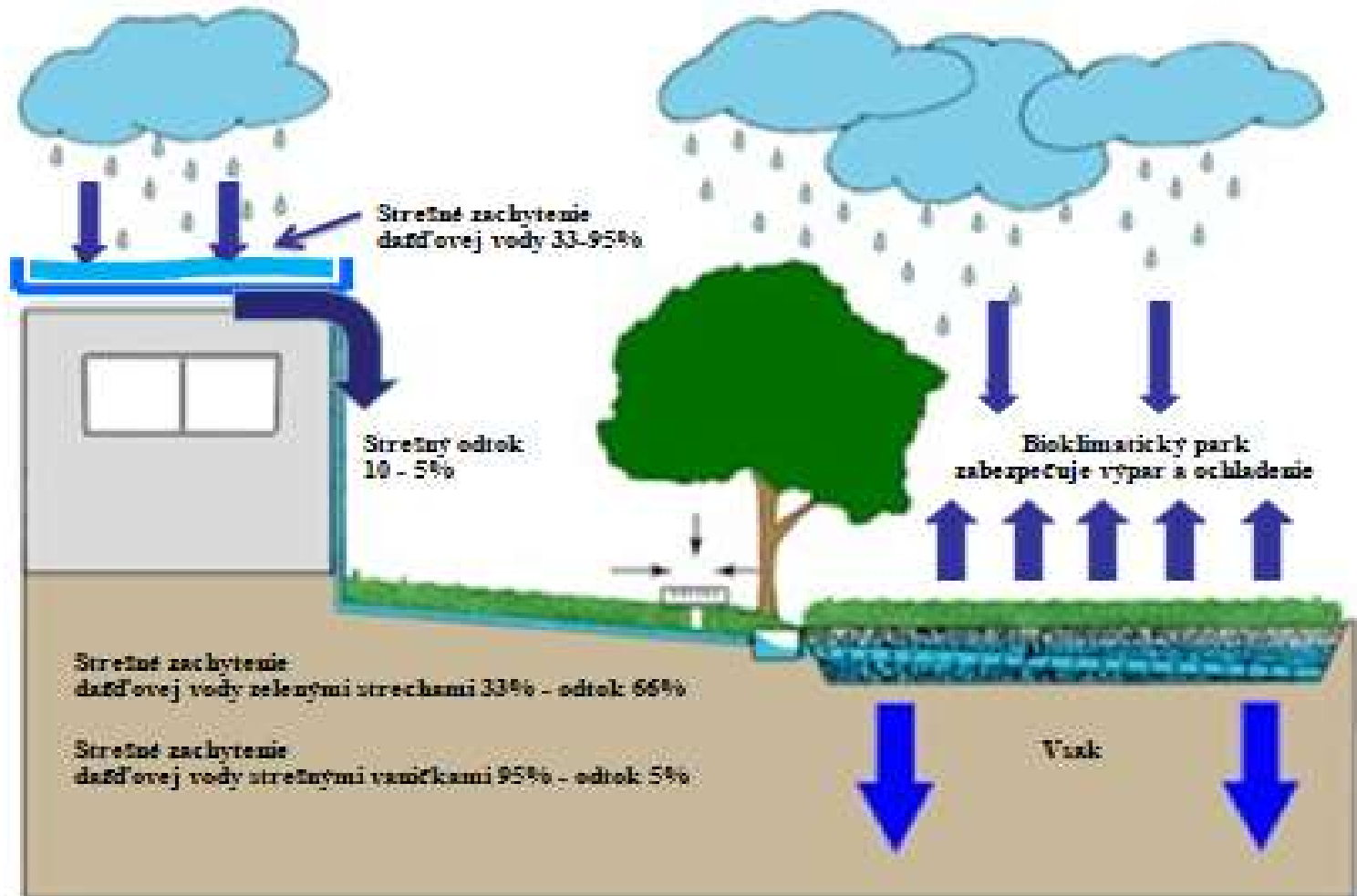
(The contribution to floods from our houses).



**That is
enough
water to fill
600
bathtubs**



What we need? To stop rainwater run-off!





GREEN Roofs

Rain Gardens





Rain garden, City of Maplewood MN



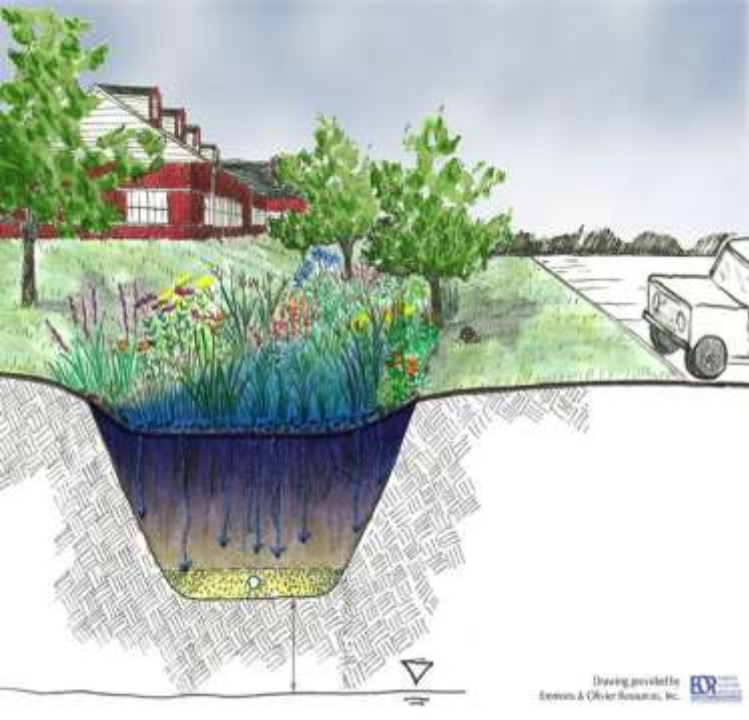
Examples of Rain Gardens from USA



**Restoration of forest landscape in Austria,
Institute of Landscape Ecology, Vienna University**

Rainwater harvesting from the roads

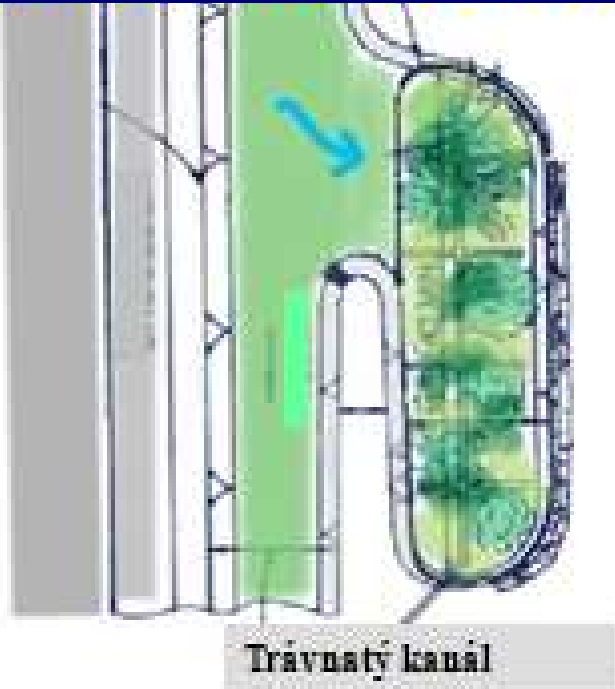




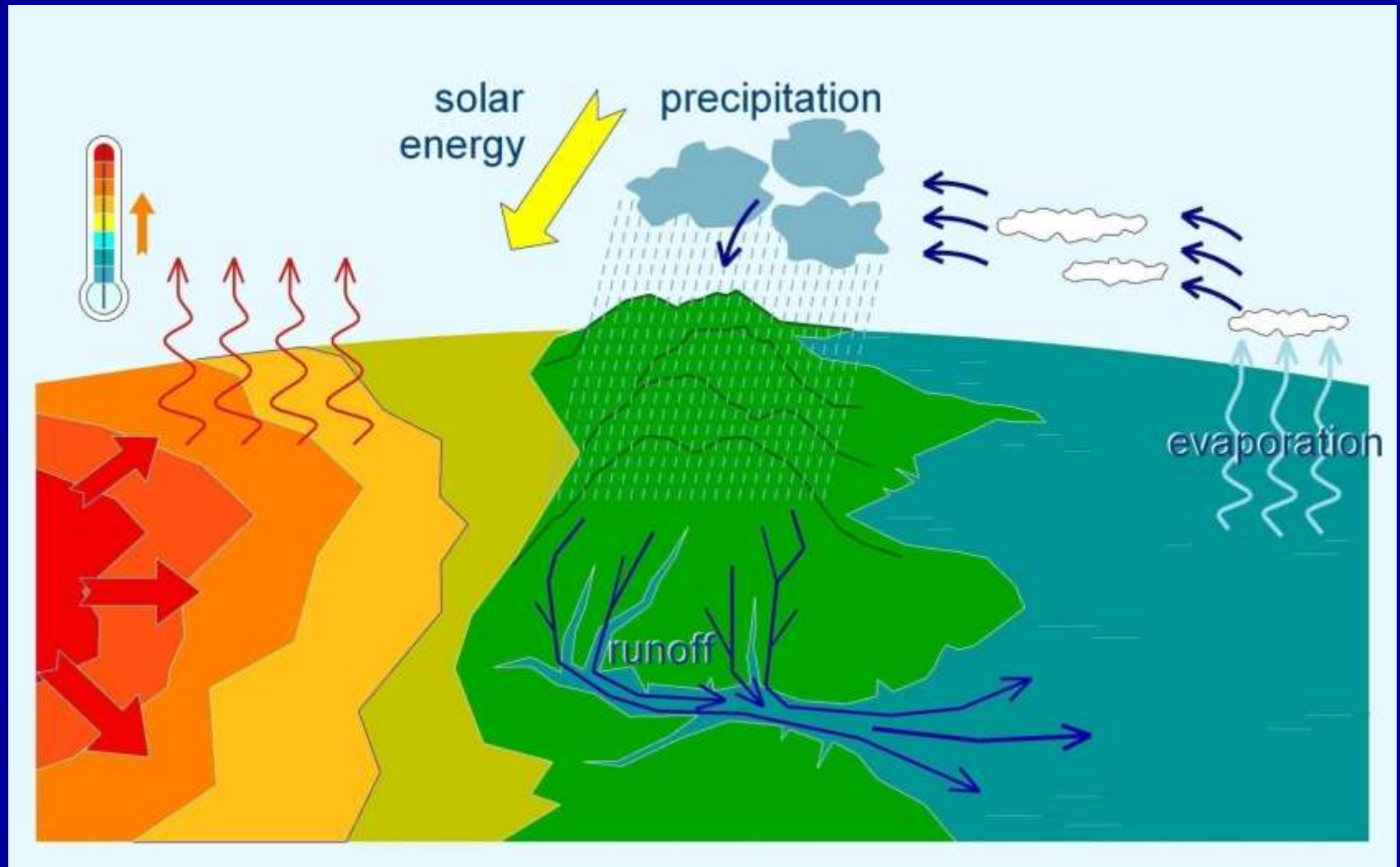
**Rainwater
harvesting
from Public parking
places**



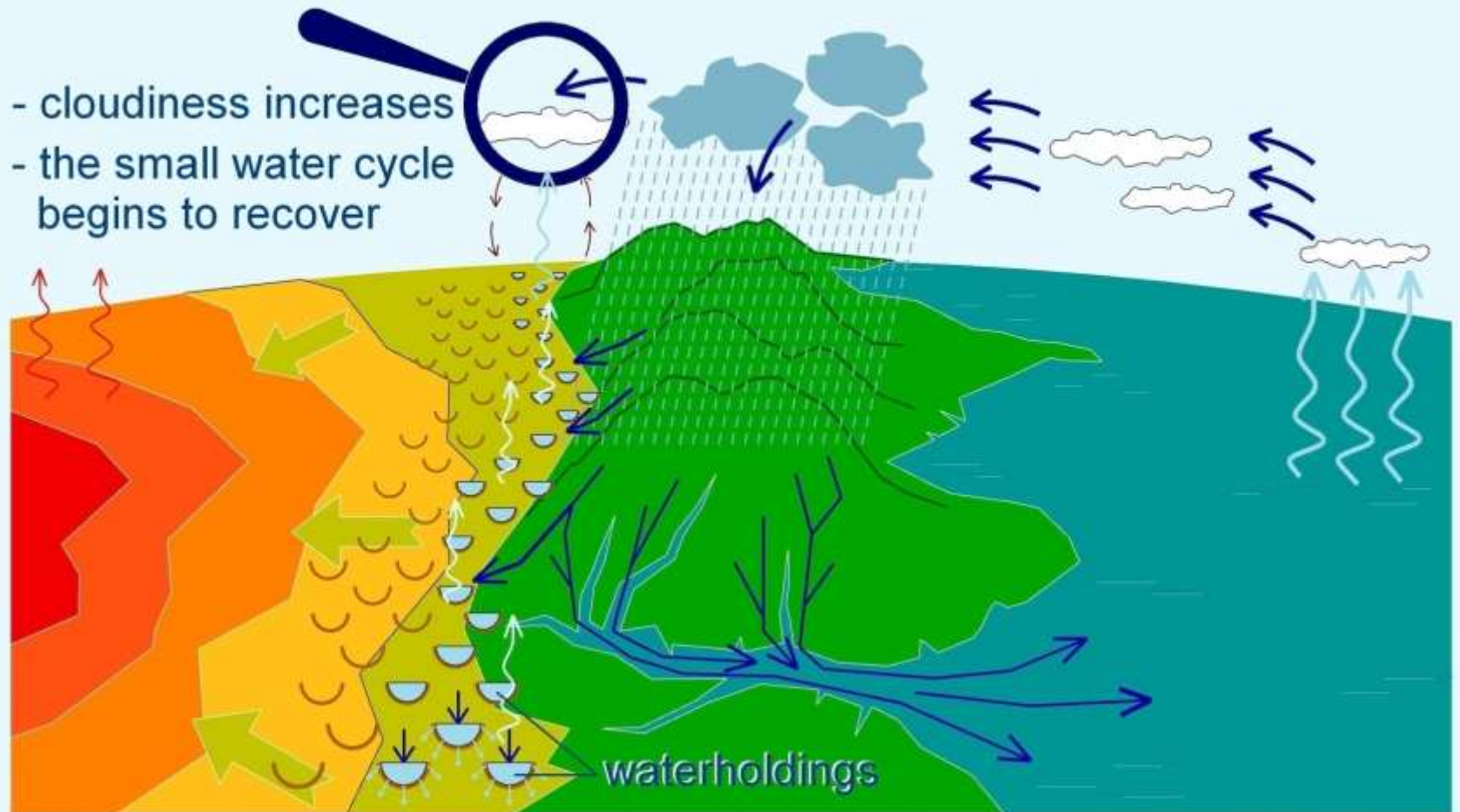
RAINWATER HARVESTING AROUND HIGHWAYS



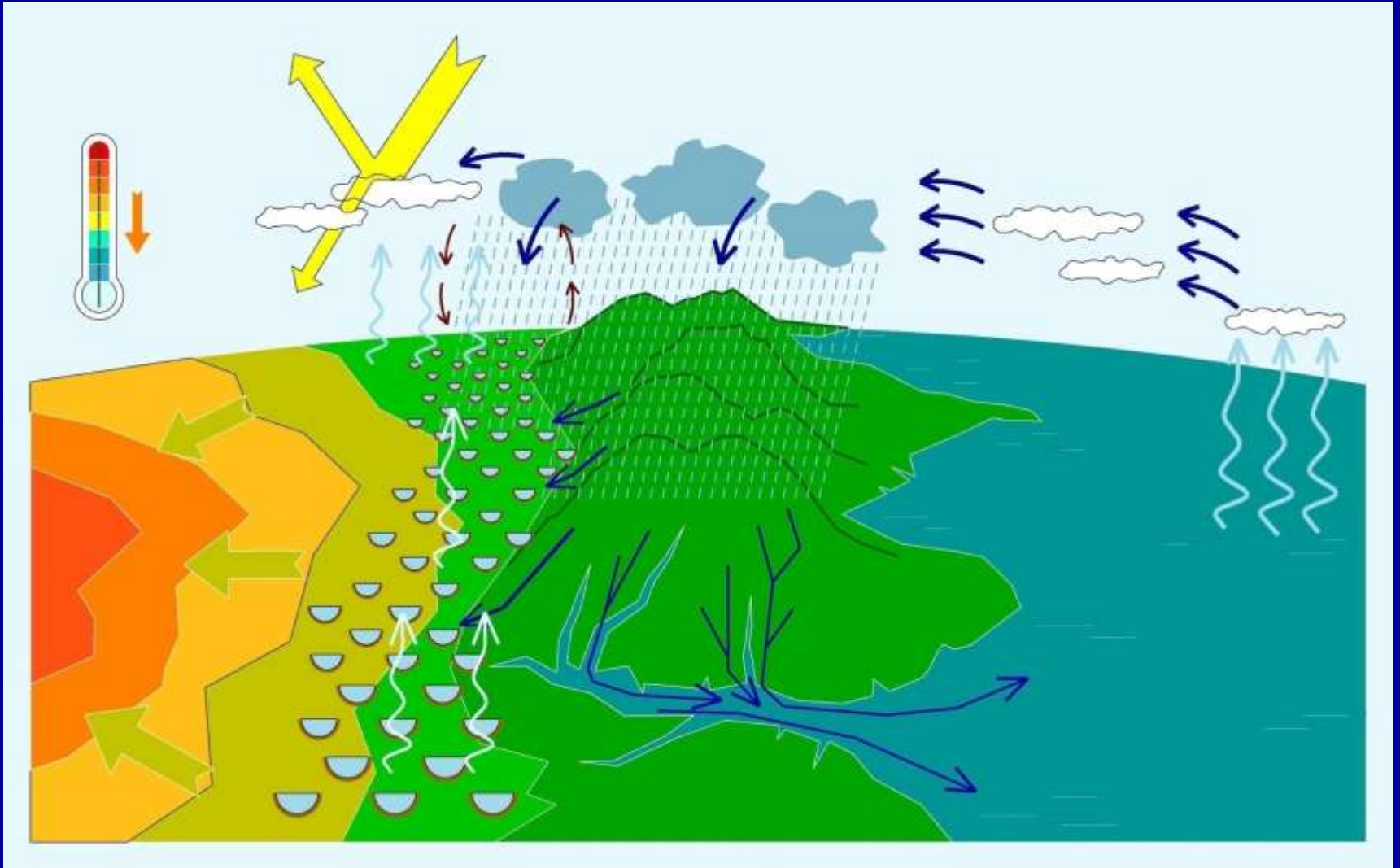
Expansion of deserts with the breakdown of small water cycle



Waterholding measures on the edge of critical areas



Decreasing areas of desert





Thank You very much for Your Attention.