

Michal Kravčík

WATERHOLISTIC, Slovakia

Nature's Solutions as National Policy Code Red Water: Three Global Perspectives

hosted by Biodiversity for a Livable Climate



Atossa Soltani

Director, Amazon Sacred Headwaters Initiative



Michal Kravčík

Author, New Water Paradigm



Chukki Nanjundaswamy

National Coordinator, India Farmers Movements

Zoom | Saturday, March 19 | 10am - Noon ET

A virtual conference on the importance of restoring water cycles



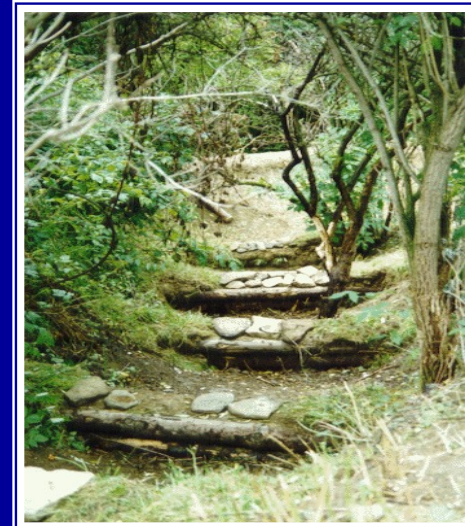
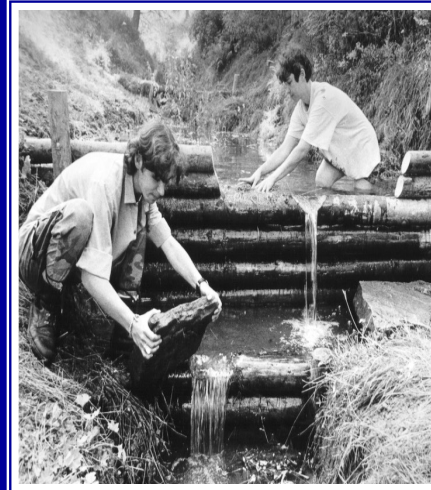
WATER HOLISTIC

Community participation

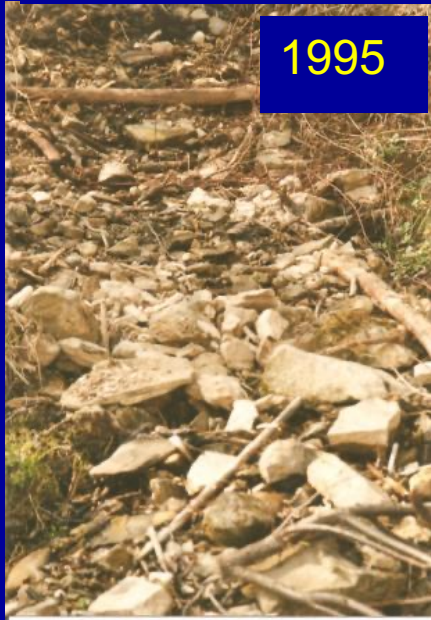
**Blue Alternative
on Upper Torysa Region,
how to save water in local
Ecosystems with Community**



**Beaver-analog dams
restore the hydrology
of the watershed**



Blue Alternative (People and Water, 1995)



WATER FOREST HIGH TATRAS



KOŠICE WATER PROTOCOL

2005



2010



2019



GOVERNMENT RESTORATION PROGRAM

2011
erosion gully repair,
collecting runoff

2021
collecting runoff restored
hydrological functionality

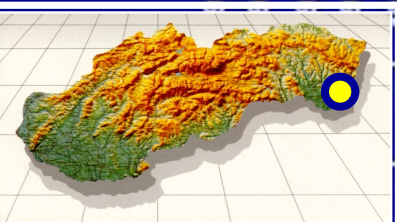
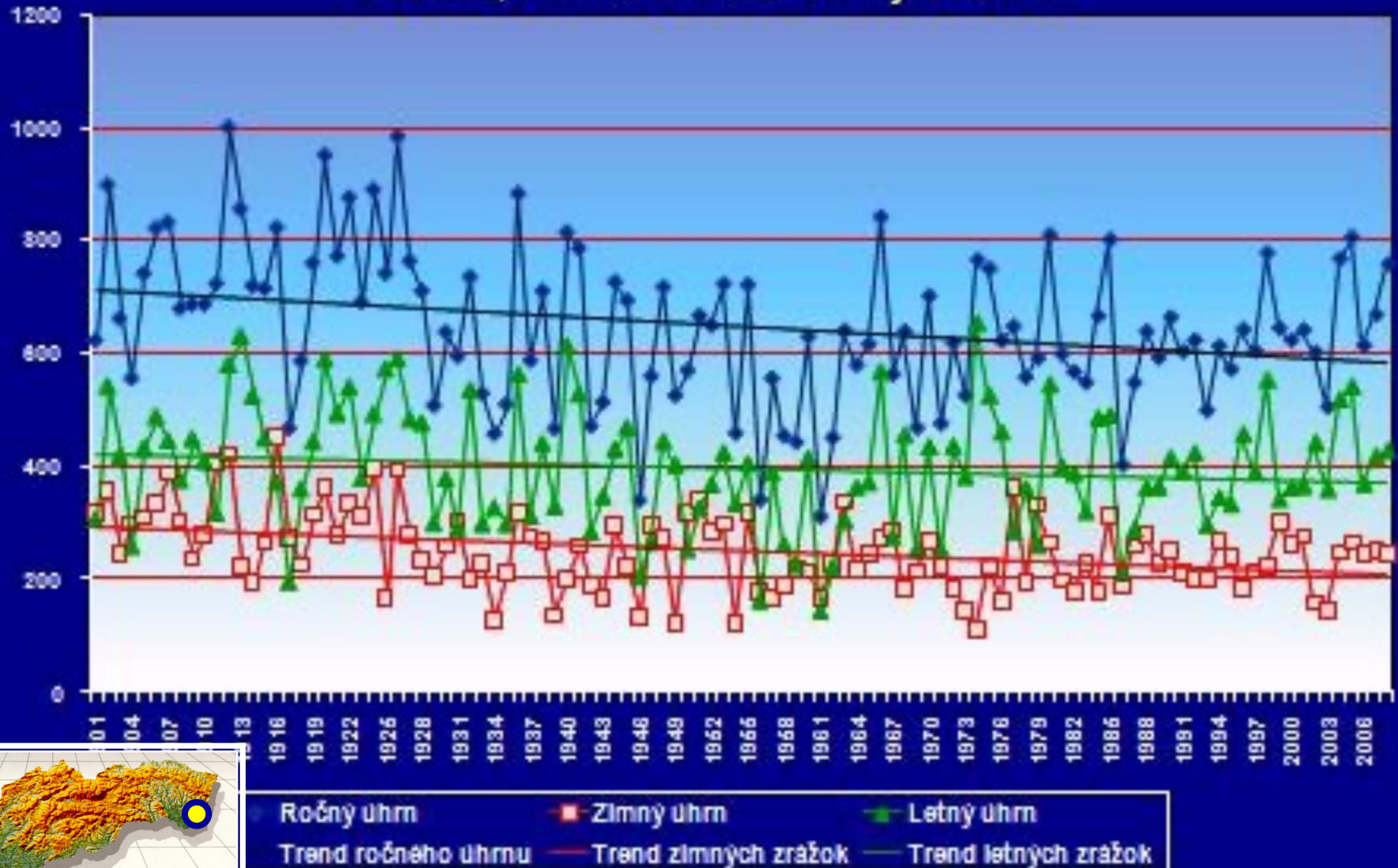


BIOCLIMATIC PARK DRIENOVA



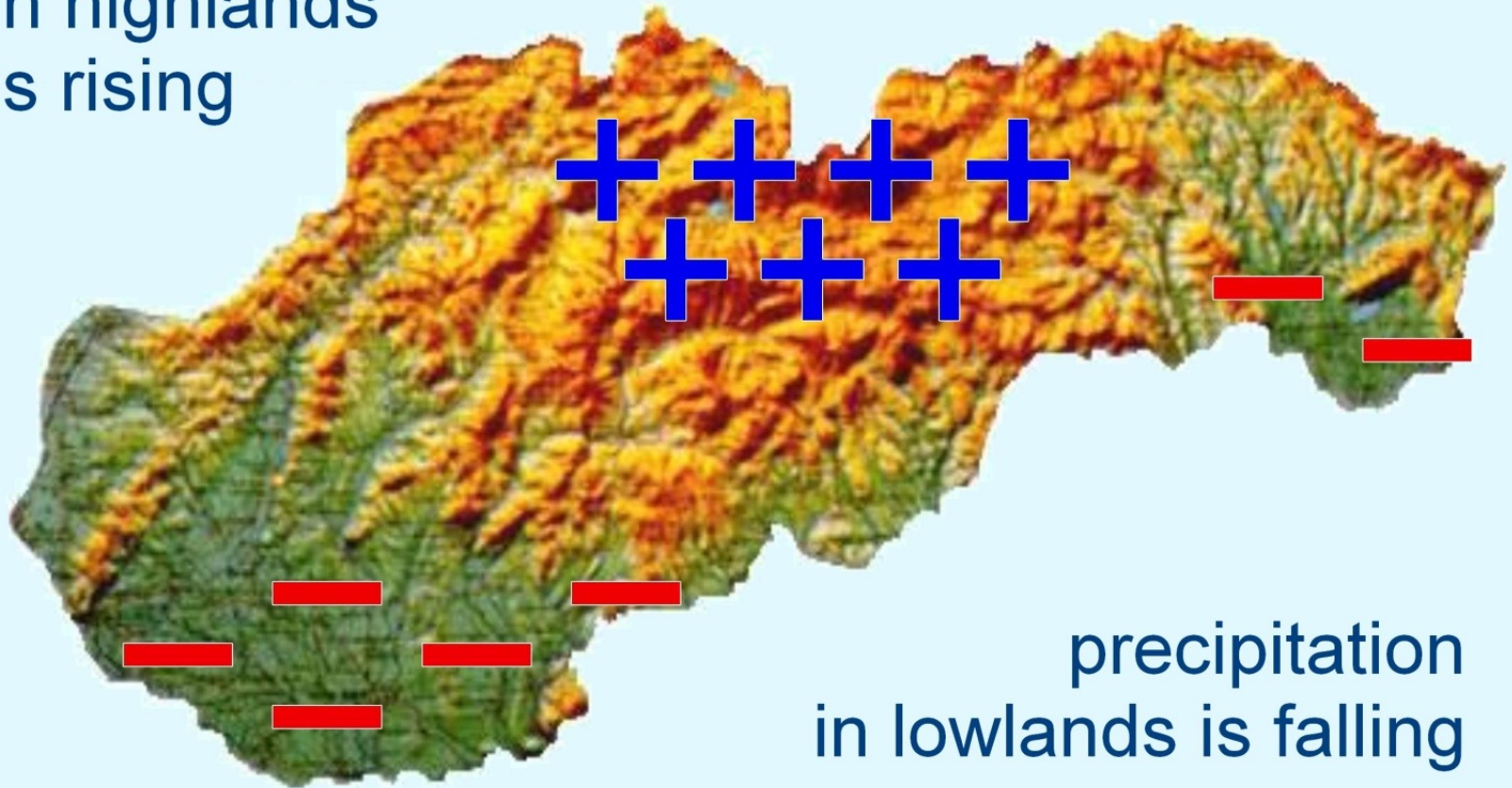
Precipitation trend in Michalovce 1901-2008

Yearly, winter and summer precipitation balance



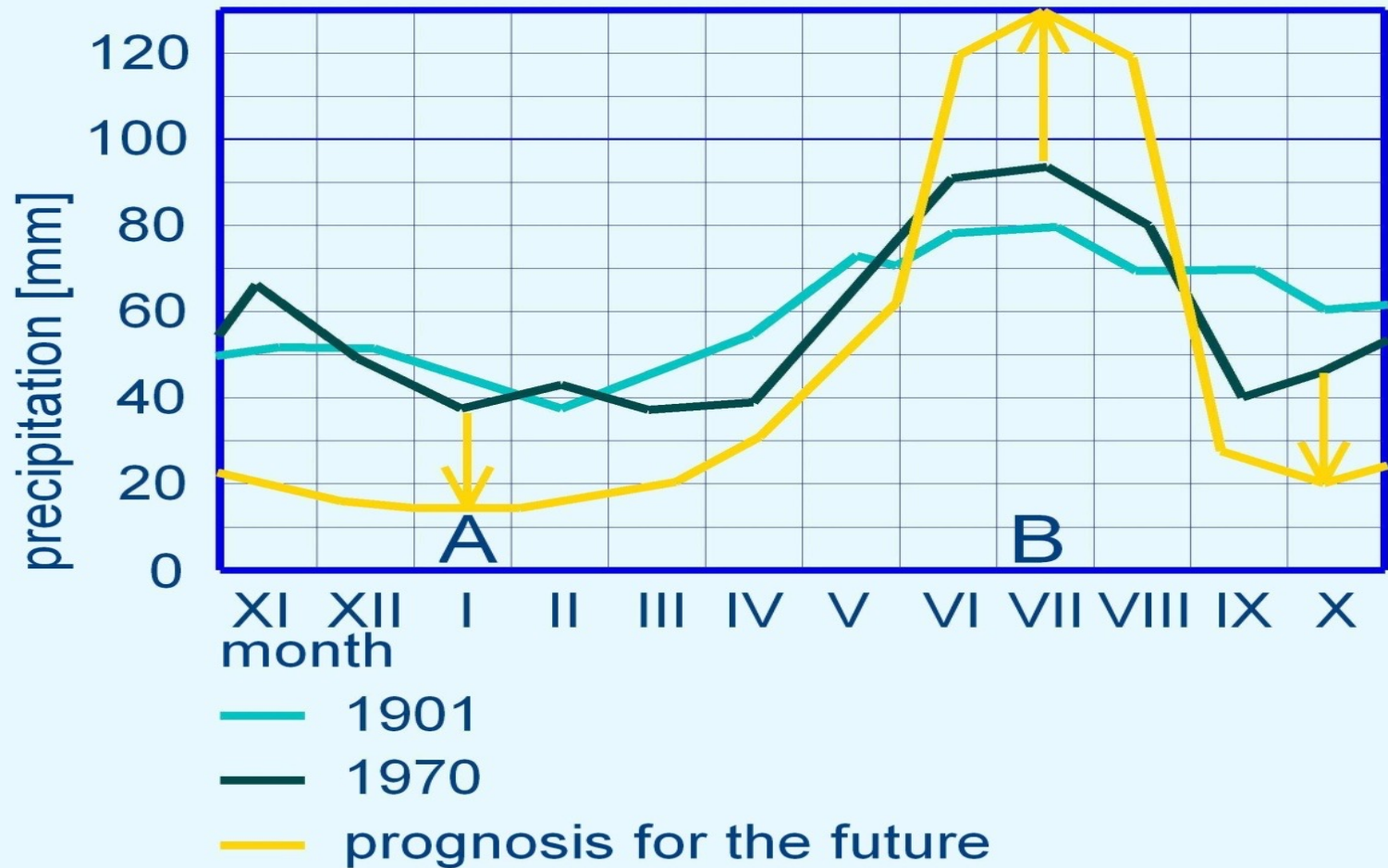
Space change the rain in Slovakia

precipitation
in highlands
is rising



precipitation
in lowlands is falling

PRECIPITATION TRENDS IN SLOVAKIA



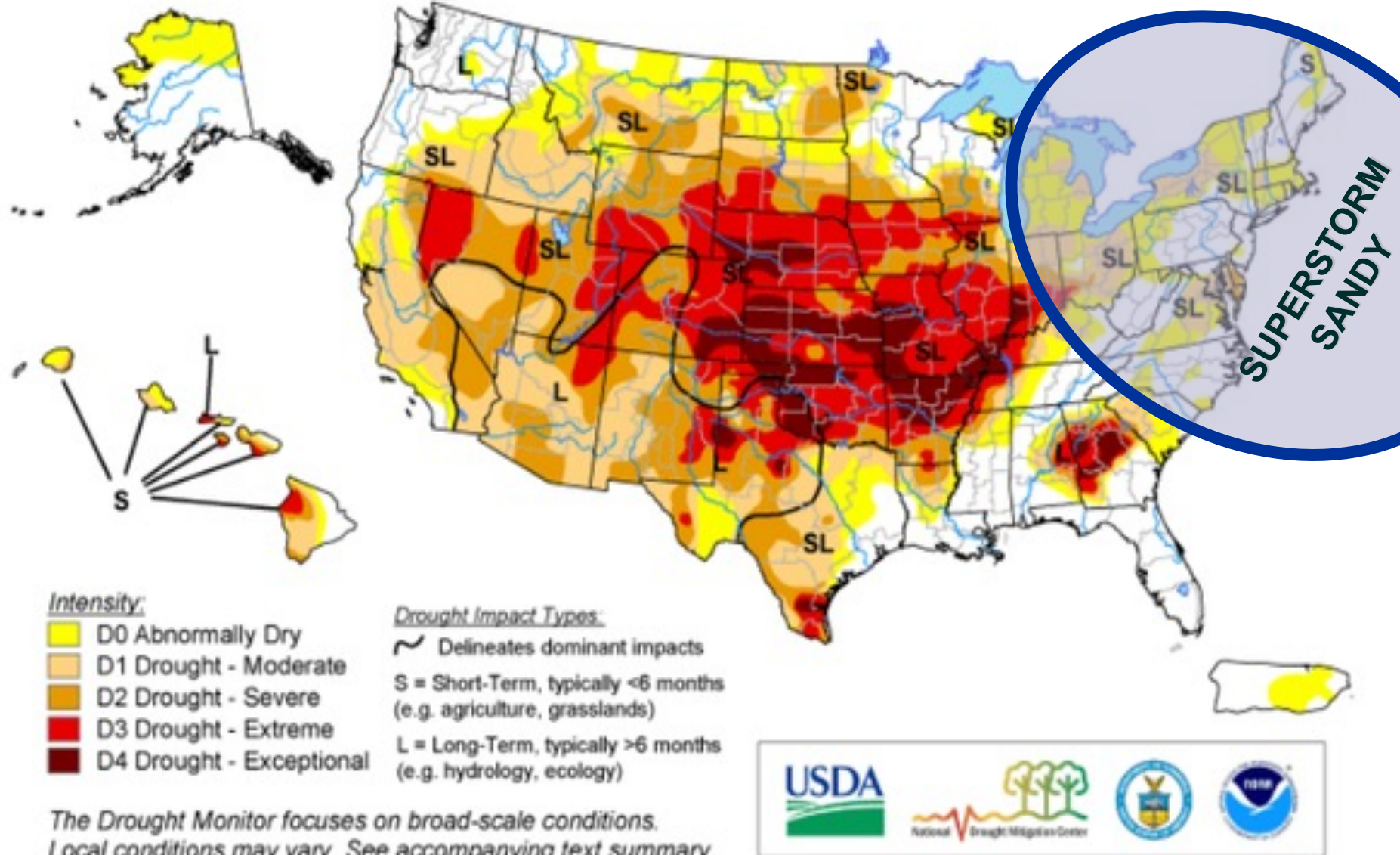


Out-dated methods: Old Water Paradigm



U.S. Drought Monitor

August 28, 2012
Valid 7 a.m. EDT



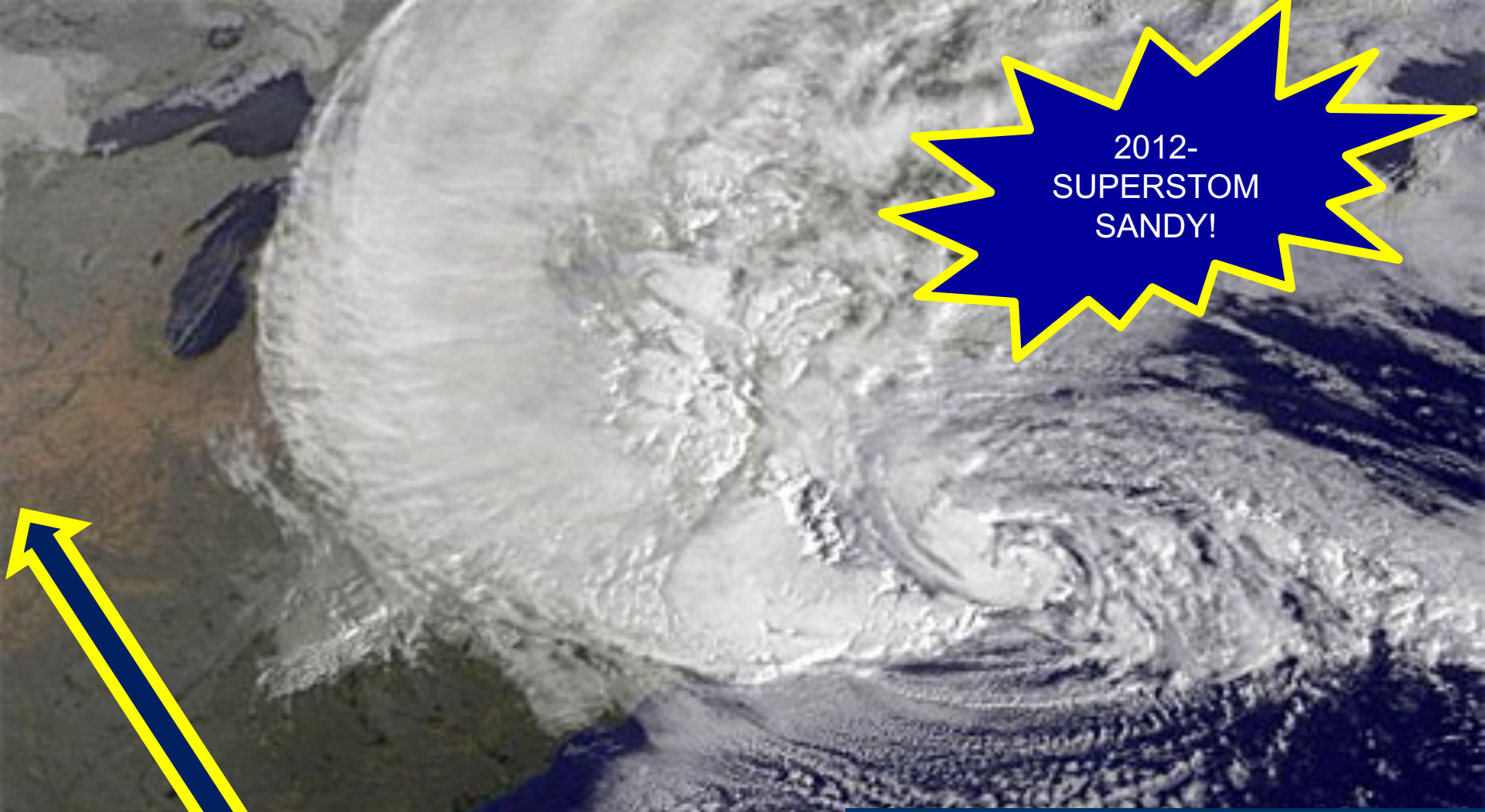
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, August 30, 2012

Author: Brian Fuchs, National Drought Mitigation Center



2012-
SUPERSTOM
SANDY!

South Dakota
July, 2012



Superstorms...can be traced to the production of sensible heat in dried out areas of the country's interior

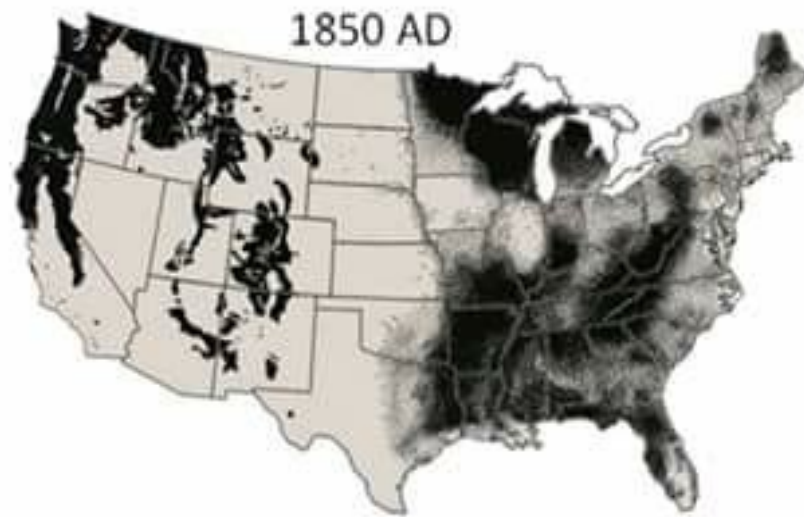
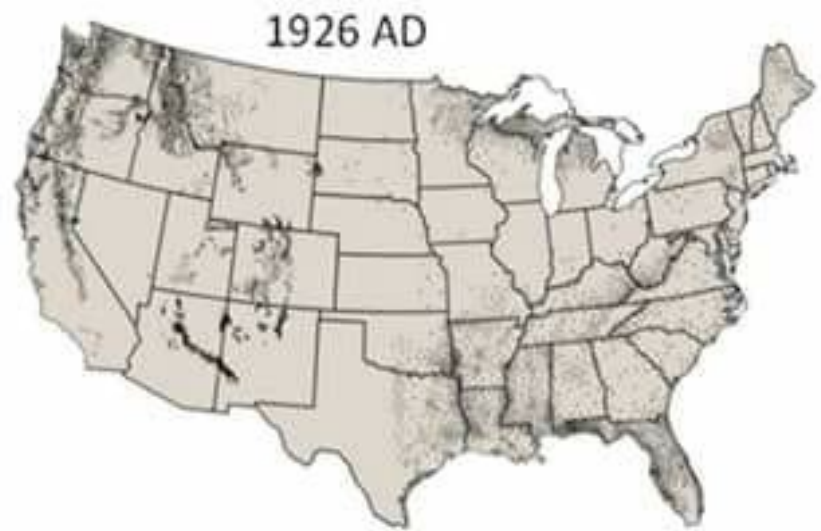
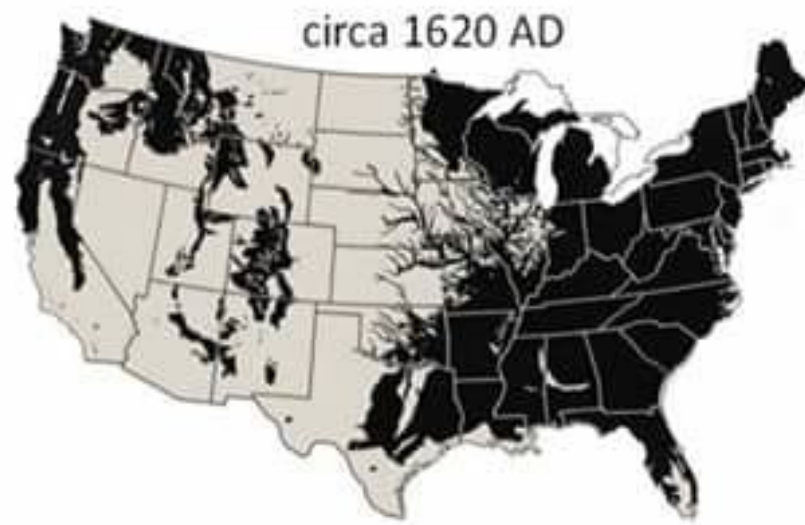
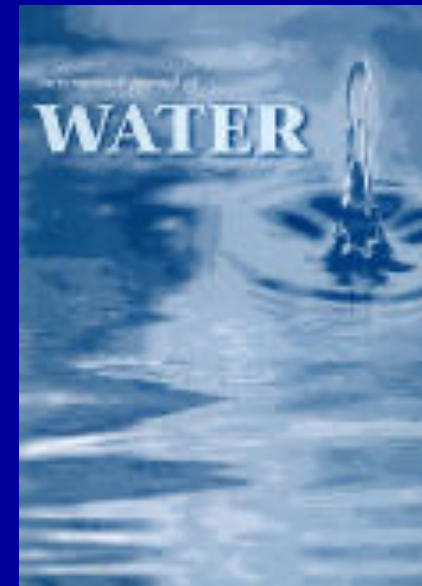
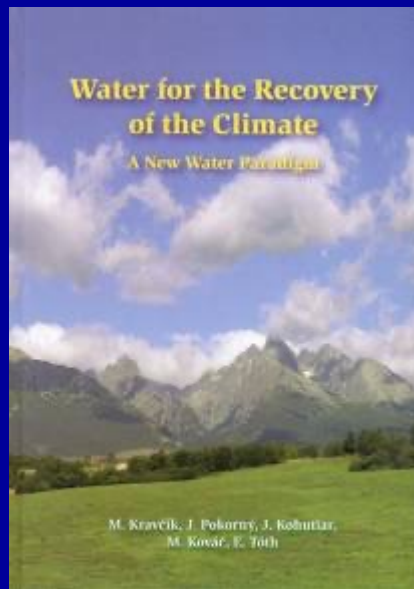


Figure 2. Changes in virgin forest cover within the continental United States through time. In the maps for 1850 to the present, each dot represents ~10,000 ha (25,000 ac).
 Source: Maps from World Resources Institute (<http://www.slideshare.net/WorldResources/virgin-forests-southern-usa>).

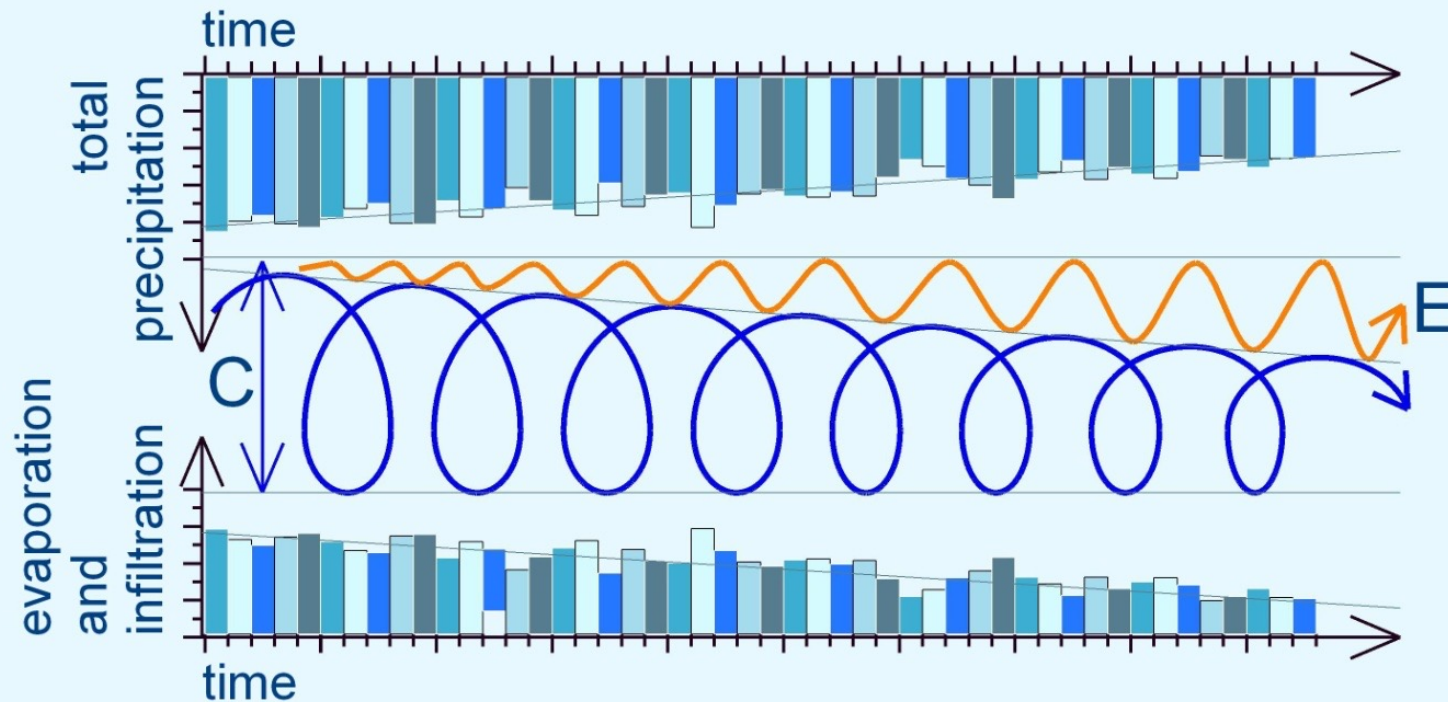


Water for the Recovery of the Climate

A New Water Paradigm



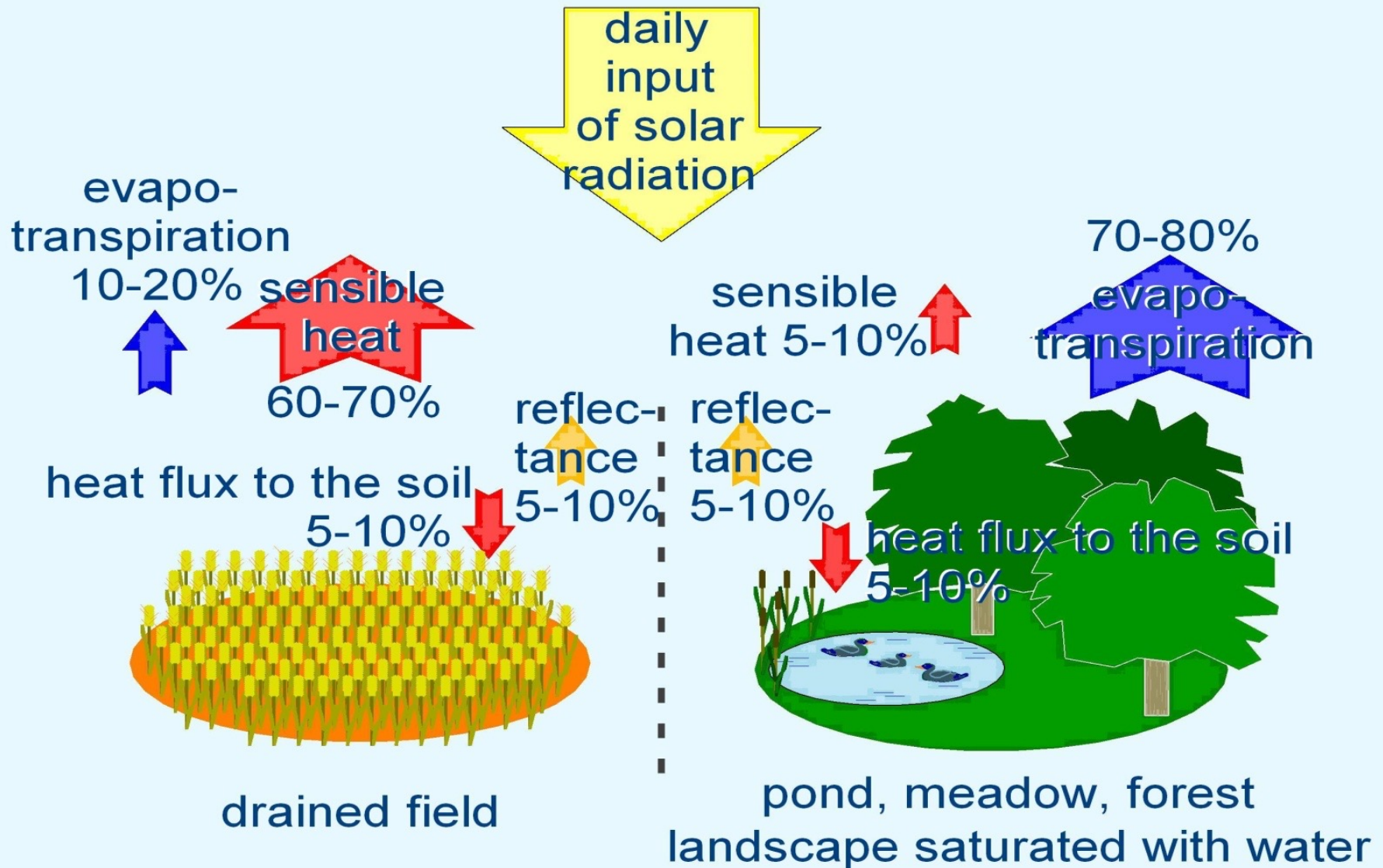
GROWTH OF EXTREME WEATHER WITH DECLINE OF SMALL WATER CYCLE



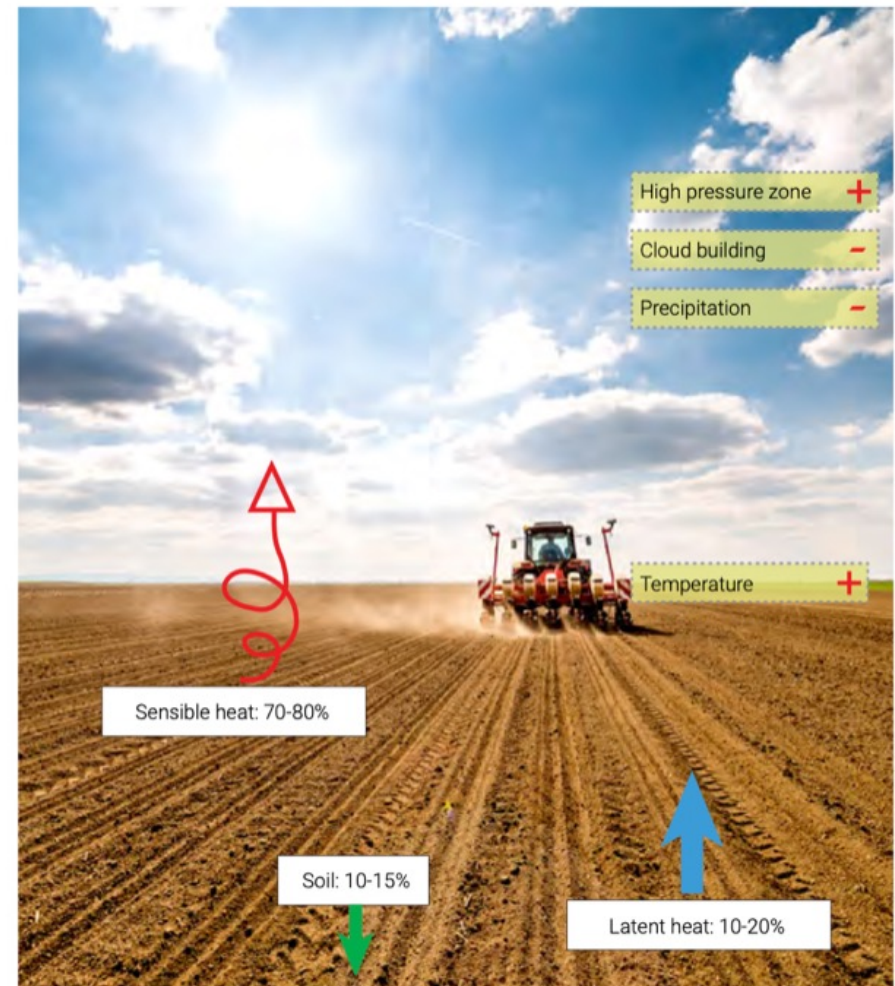
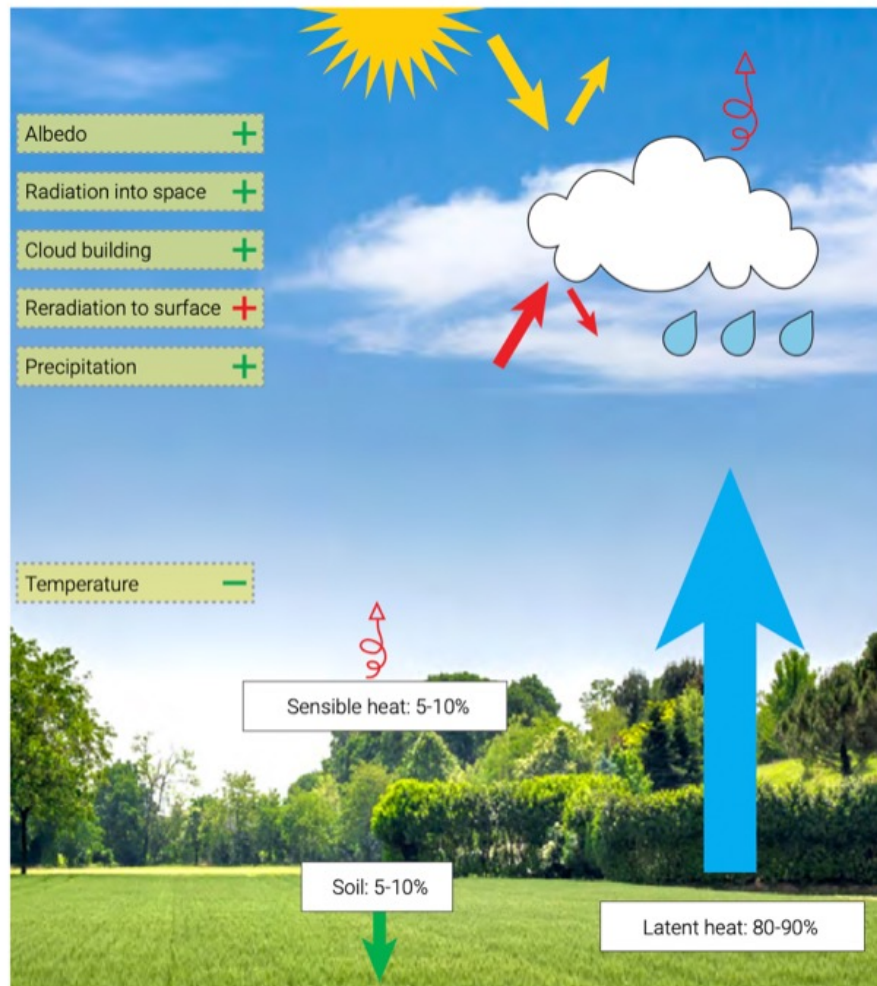
C - diagram of the circulation of water on land

E - diagram of extreme weather events

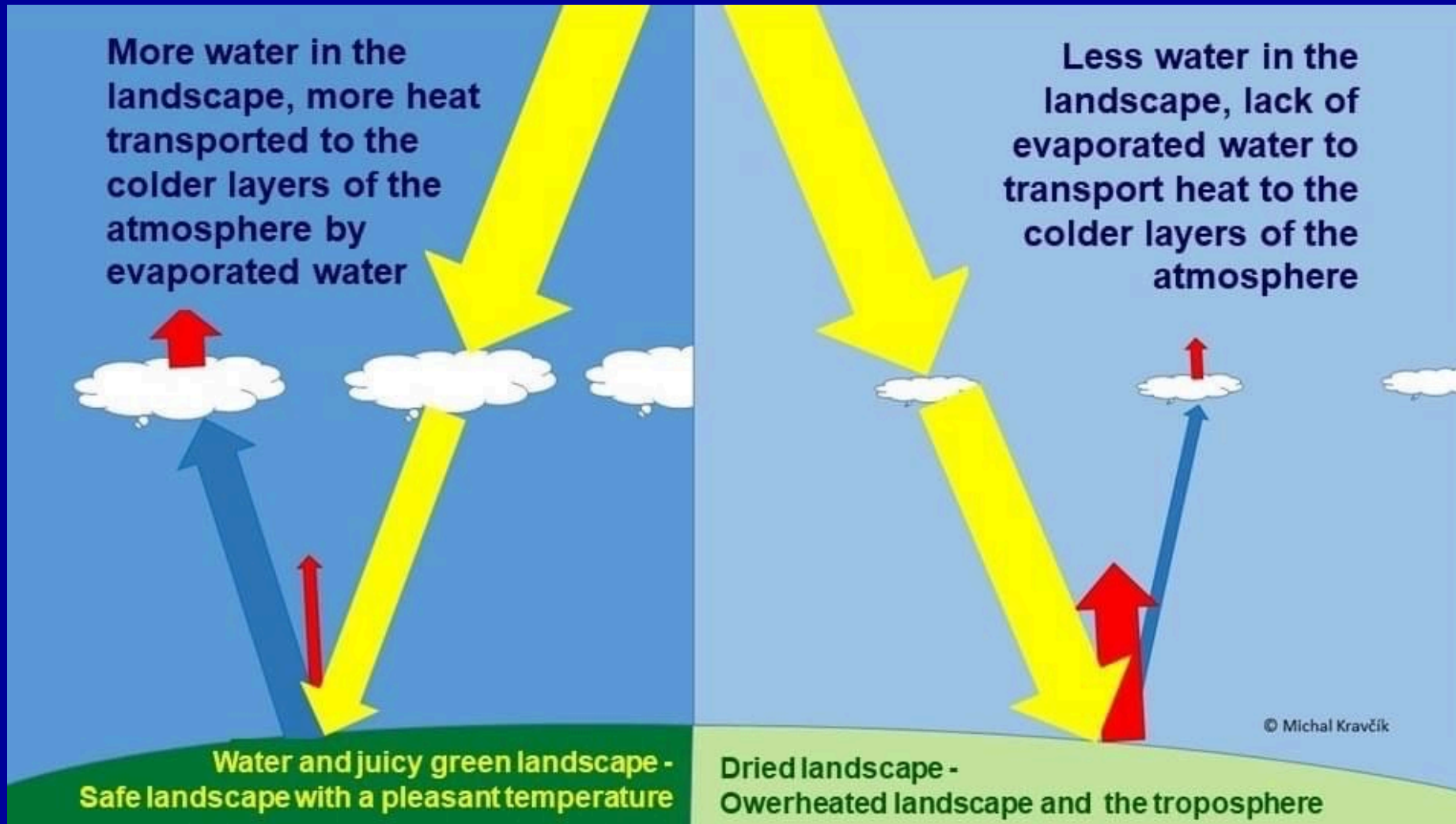
DISTRIBUTION OF SOLAR ENERGY



Working with plants, soils and water to cool the climate and rehydrate Earth's landscapes

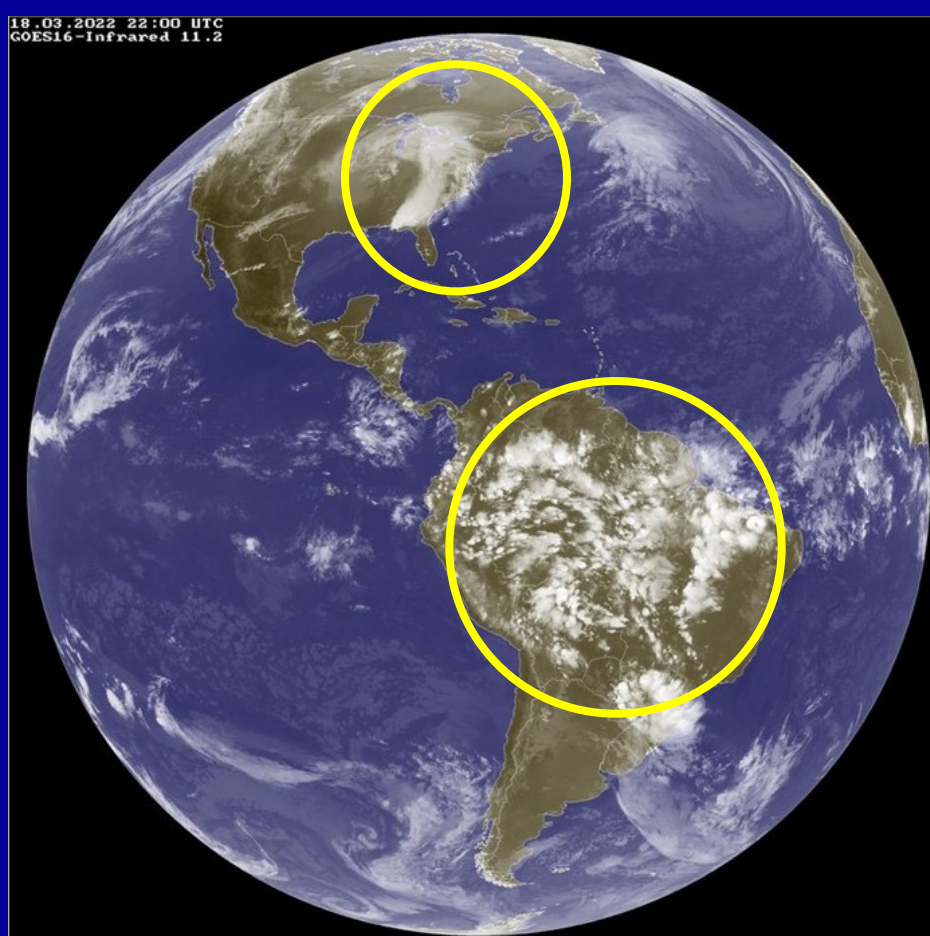


SOLAR ENERGY AND WATER FLOW



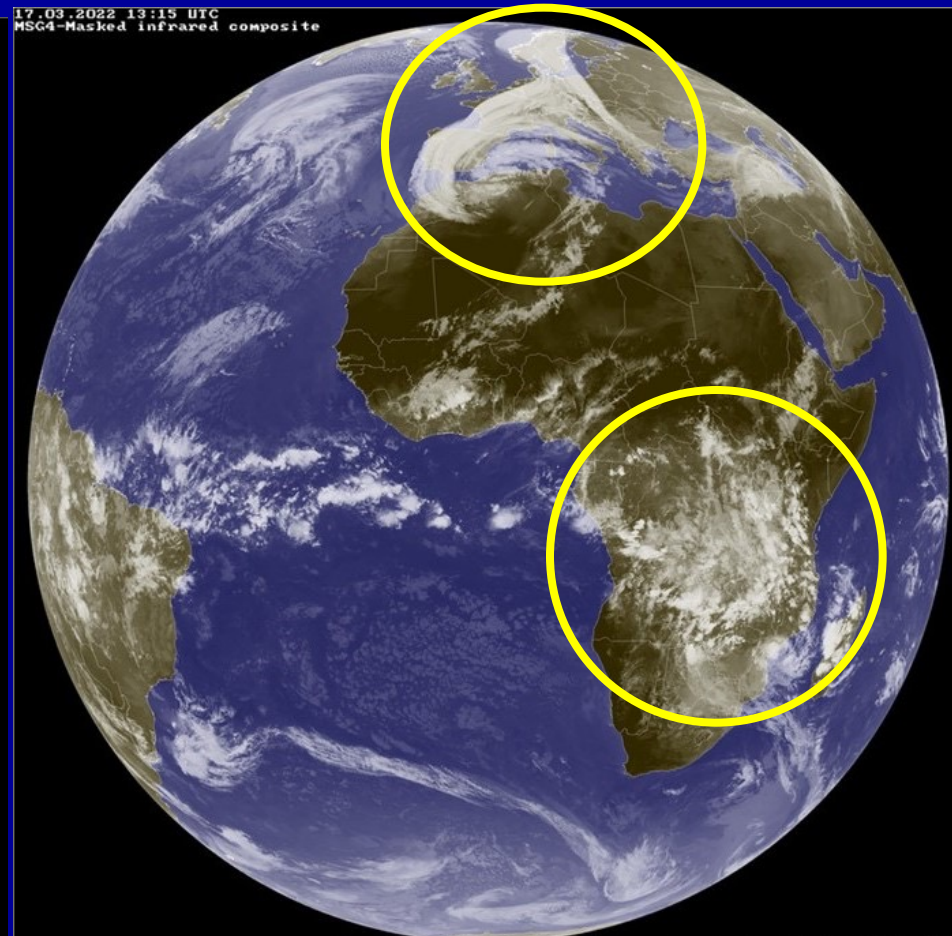
Water Regulates Climate

18.03.2022 22:00 UTC
GOES16-Infrared 11.2



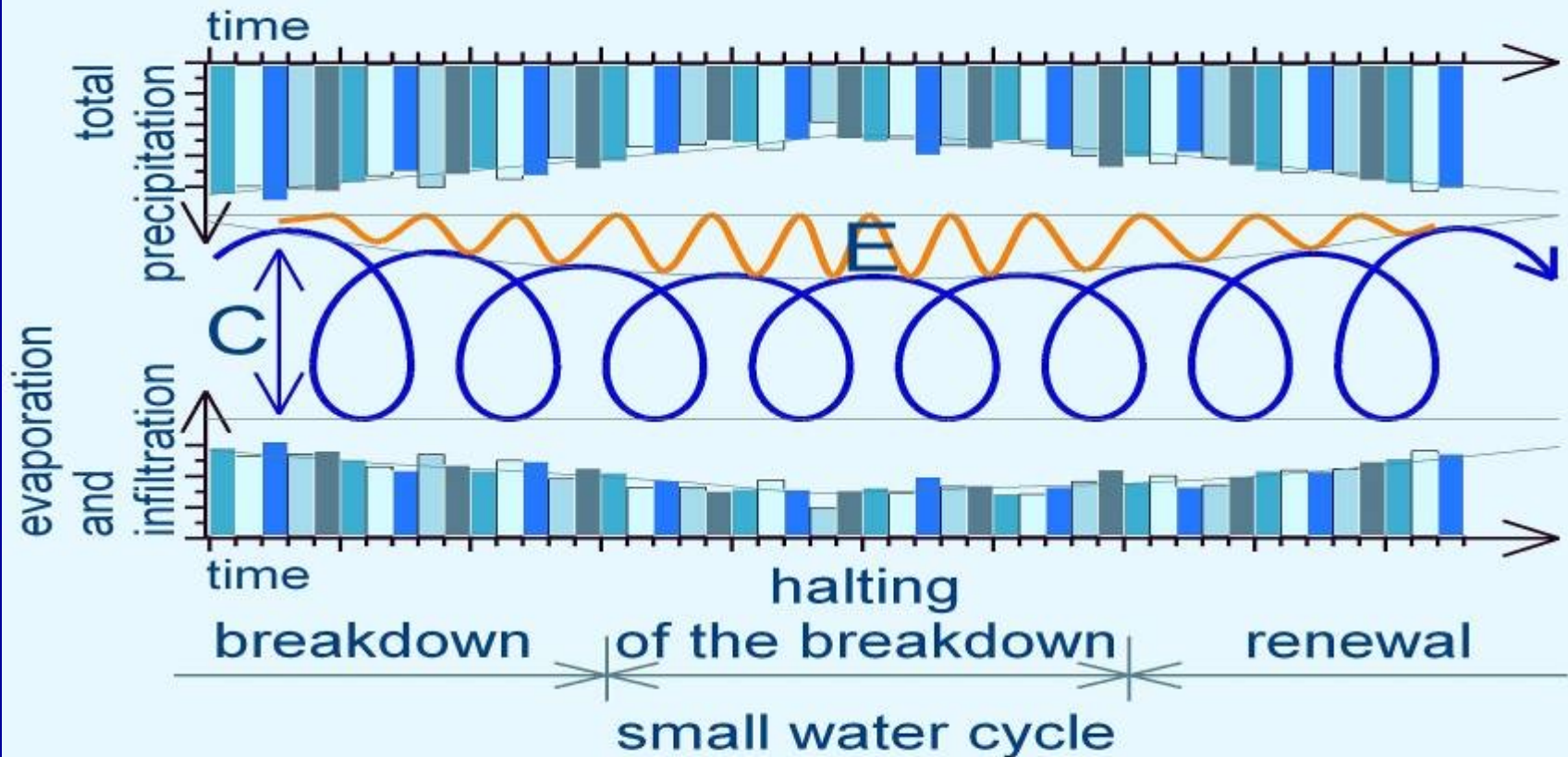
Copyright (c) 2022 SHMU. Data - Originator (c) 2022 GOES NOAA

17.03.2022 13:15 UTC
MSG4-Masked infrared composite



Copyright (c) 2022 SHMU. Data - Copyright (c) 2022 EUMETSAT

DESTRUCTION AND RENEWAL OF SHORT WATER CYCLE



- C - diagram of the circulation of water on land
- E - diagram of extreme weather events

Nature-based solutions heal climate



Water for the Recovery of the Climate

A New Water Paradigm

M. Kravčík, J. Pokorný, J. Kohutiar,
M. Kováč, E. Tóth

- humanity accelerates the runoff from land
- more solar energy is transformed into sensible heat
- draining of a land can be reversed through comprehensive conservation of rainwater
- renewal of small water cycle over land can temper extreme weather events and ensure a growth in water reserves
- www.waterparadigm.org



WATER HOLISTIC

Principle „Keep rainwater on the land“

MIKROŠTRUKTÚRY NA ZACHYTÁVANIE VODY V TERÉNE

1. VRSTEVNICOVÉ HRÁDZKY



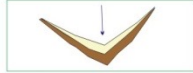
2. TERASY



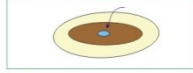
3. POLOOBLÚKOVÉ HRÁDZKY



4. TROJUHLNÍKOVÉ HRÁDZKY



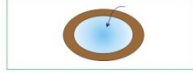
5. OČNÉ TERASY



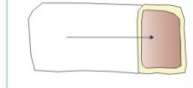
6. ŽLABOVÝ TYP MIKROPOVODÍ



7. JAMKOVÉ ŠTRUKTÚRY



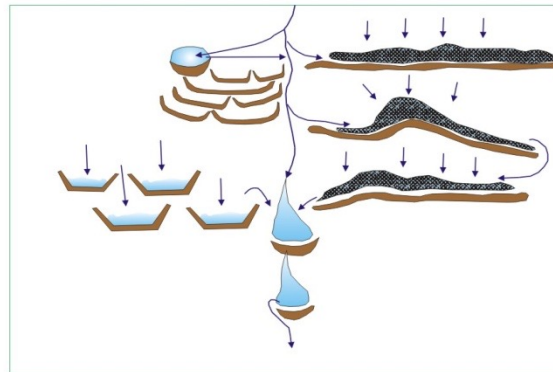
8. KAZETOVÉ ŠTRUKTÚRY MIKROPOVODÍ



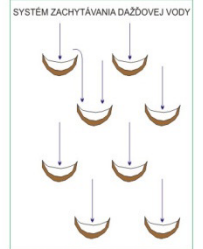
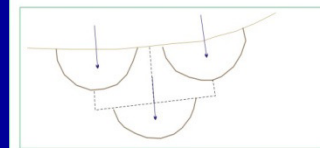
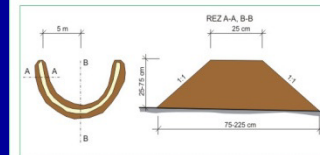
9. ŠACHOVNICOVÉ ŠTRUKTÚRY



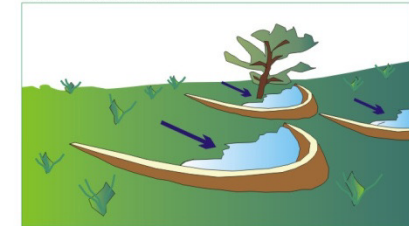
KOMBINÁCIA RÔZNYCH TECHNÍK ZADRŽIAVANIA DAŽDOVÝCH VOD



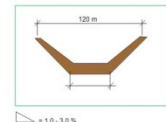
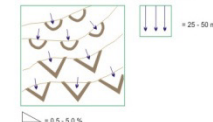
POLOOBLÚKOVÉ HRÁDZKY



RIEŠENIE POLOOBLÚKOVÝCH HRÁDZOK



RIEŠENIE POLOOBLÚKOVÝCH HRÁDZOK



Global Action Plan(GAP) is available online at

www.bio4climate.com



WATER HOLISTIC

GLOBAL ACTION PLAN FOR THE RESTORATION OF THE NATURAL WATER CYCLES AND CLIMATE

Author: Michal Kravčík

Editor: Jan Lambert

*A global plan of climate restoration of the **small water cycle**¹ of regional landscapes, with a goal of decreasing floods, drought, natural disasters, and other undesirable climate changes, and increasing the biodiversity and production potential of all continents, through the introduction of various measures of rainwater retention suitable for all areas of human habitation and usage.*

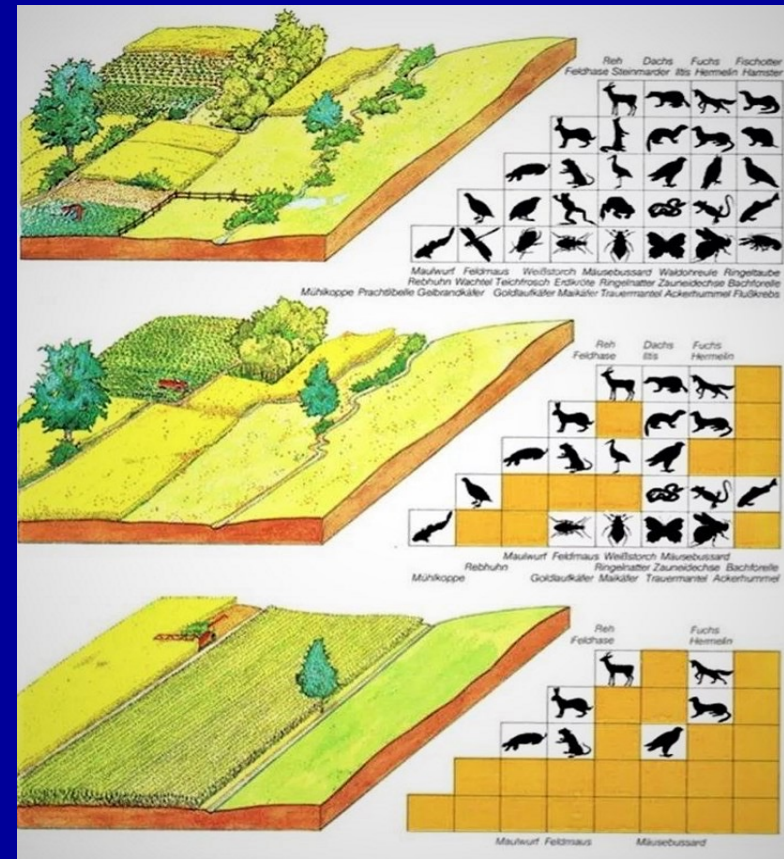


picture: Michal Kravčík

The Mulloon Institute in New South Wales, Australia is committed to developing the knowledge and practical experience required to advance regenerative land and water management techniques, including but not limited to permaculture techniques for soil hydration and natural sequence farming, and rural landscape management techniques aimed at restoring natural water cycles that allow the land to flourish despite drought conditions. See <http://themullooninstitute.org/> and <http://www.nsfarming.com/>.

Stop desertification and bring back water, vegetation, biodiversity and climate:

- Air-conditioning via short water cycle
- More biomass, more food
- Biodiversity increase
- Carbon sequestration
- Recycling of nutrients and water
- Employment
- **Any negative effect??**



PROCESSING OF THE LANDS RESTORATION OF
KOŠICE REGION PROTECTION PROGRAM
AGAINST LOCAL FLOOD, DRY AND CLIMATE
HEALTH



CALCULATION OF BENEFITS

EXPECTED ACTION PLAN BENEFITS	Arable Land	Vineyard	Garden	Orchard	Grassland	Forest	Built-up Urban Land	Other Land	Total by region (in million m ³)
Retention measures in million cubic meters (m ³)	29,768	0,552	0,741	0,172	8,337	10,450	4,786	4,820	59,626
Financial investments (in million EURO)	148,86	2,76	3,71	0,85	41,67	52,24	133,75	24,59	408,43
Aquifer recharge Yield/ Water augmentation (in l/s)	5943	111	149	66	1666	2089	954	965	11943
Annual crop yield increase in million EURO	16,32	0,24	0,85	0,15	5,13	8,88	0,00	0,00	31,57
Evapo-Transpiration gain (million m ³)	19,82	0,37	0,49	0,21	5,56	6,97	3,18	3,21	39,81
Sensible heat mitigation in GWh	15 694	258	380	163	4 145	5 441	2 591	2 556	31 228
Temperature mitigation in °C	-1,190	-0,940	-0,440	-0,760	-0,650	-0,360	-1,130	-1,770	-0,770
Soil and biomass carbon storage (thousands of tons)	571,30	8,27	37,66	5,64	310,66	753,59	96,49	61,76	1 845,37
Workforce estimate	1 191	22	29	6	334	418	1 070	197	3 267

WATER PARADIGM SHIFT:

Keep
rainwater on
the land

700 km³
rainwater
retention
measures

Investment 5
trillion \$

More than 100
mil. new jobs

50 bil. ton CO₂
carbon
sequestration
annually

300 billion \$
crop yield increase
annually

Reduction of damage
from natural disasters by
100 billion \$ per year

Aquifer
recharge
140 000 m³/s
yield

Sensible heat
flux reduced
significantly
each year:
300 000 TWh

300 000 TWh
annual latent
heat release

Sea levels
decline.
More than 2
mm annually

Average
temperature
mitigation:
-1,00 °C

EcoRestoration, Economic recovery
of Planet Earth against water, food,
climate and social crises





WATER HOLISTIC

**THANKS !
ĎAKUJEM !**



www.waterparadigm.org, www.waterholistic.com

30 years experiences brings global recognition