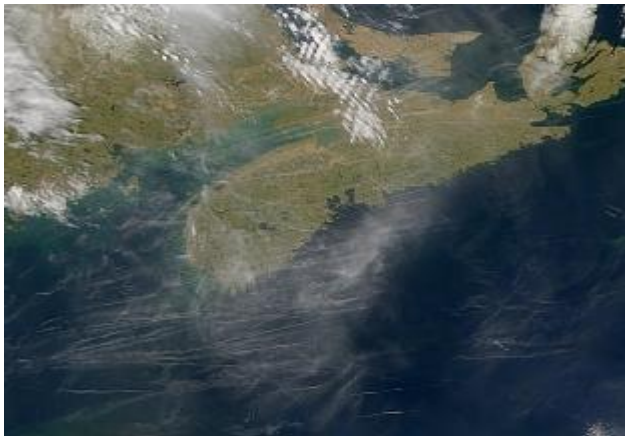


## A program of continental water restoration may stop global warming

American climatologist David Travis made use of the tragic event of the Twin Towers destruction in New York on September 11th 2001, when airplanes stopped flying for three days. Travis expected a drop in temperature caused by the reduction of aerosol emissions into the atmosphere. The results were shocking. The temperature during those three days did not go down, but rose by an incredible 1°C. In the whole history of climate monitoring on the American continent there had never been such a dramatic change in temperature. (see photo, Wikipedia)

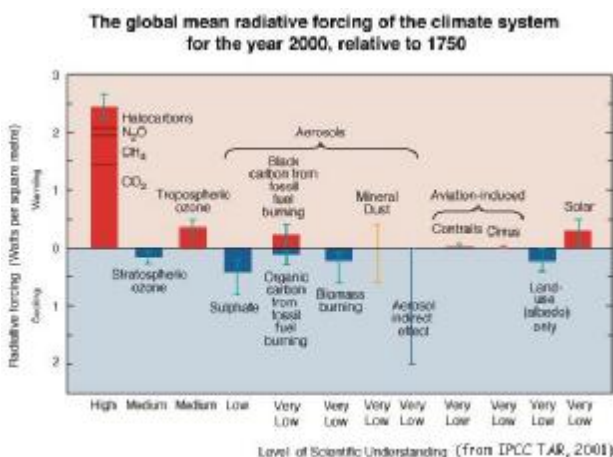
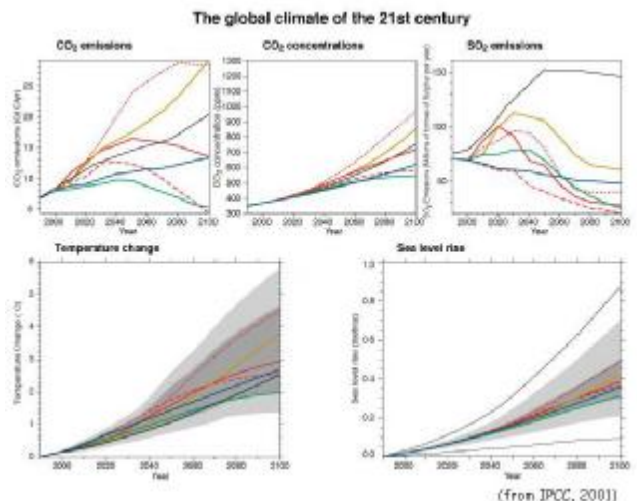


Research into climate change is too focused on scientific study of atmospheric pollution by so-called halocarbons ( $\text{CO}_2$ ,  $\text{N}_2\text{O}$ ,  $\text{CH}_4$ ). Other influences are considered unimportant (aerosols in the atmosphere, air travel, dust particles, radiation, land use). The possible influence on climatic change of the amount of water in the land is not the subject of research anywhere in the world (see IPCC graph). The excessive concentration of scientific research on greenhouse gases leads to the

conclusion that other factors influencing warming of the climate do not exist, or are negligible.

This position of scientific research leads to various kinds of speculation and lack of interest among those responsible for global climate change, and any other explanations of the causes of climatic warming are considered unscientific and are ridiculed. Similarly, the public is fed the opinion that certain lobby groups closely linked with certain large industrial concerns are seeking other reasons for global warming to prevent their own economic interests being threatened.

Based on their simplified notion scientists have prepared various climatic warming scenarios which suggest that warming is going to occur in any case (see IPCC graph). The most pessimistic of them forecasts a rise in average temperatures of as much as 5.6°C during this century. These same scientists actually claim that even if atmospheric pollution were eliminated immediately, climatic warming would supposedly continue for at least 50 more years, and only then would there be a drop in temperature. These scientists may well subconsciously admit that they are wrong, but they do not want to bear responsibility for the



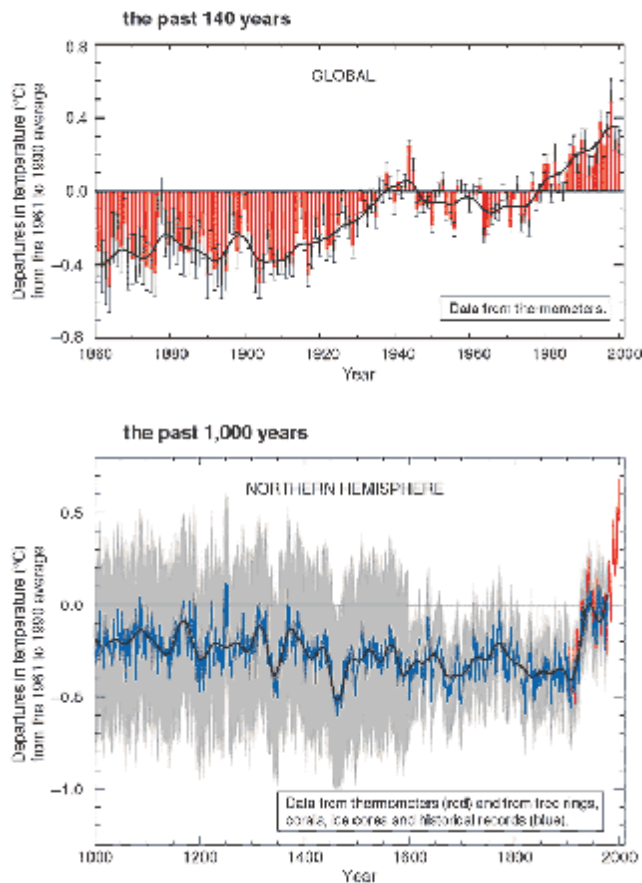
state of their research. What happens after they die is not their concern.

The essential cause of climatic warming, however, appears to lie somewhere other than in greenhouse gases. This idea is confirmed by temperature changes during the 20th century. Up

until 1940 there was a dramatic rise in temperature (average increase 0.45°C). Between 1940 and 1975 there was a gentle dip of 0.2°C, and since 1975 another dramatic rise of 0.5°C has been recorded (see IPCC graph). Based on these trends in temperature change it is possible to define with a high degree of probability the influences of particular factors on climate change.

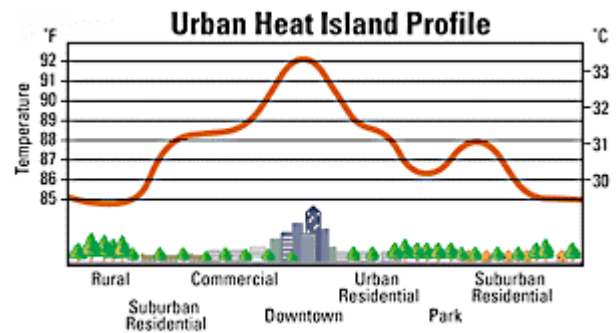
The period of prosperity and economic development (climatic warming) in the early 20th century was interrupted by wartime (climatic cooling). These changes have a logical explanation in the trend of weakening and strengthening of the greenhouse effect.

**Variations of the Earth's surface temperature for:**



Population growth and the spread of human inhabitation, asphaltting and concreting, roofing, drainage systems, management and use of agricultural and forest lands, all combine to accelerate the weakening process of the greenhouse effect and thus also climatic warming. A simple illustration of temperature differences across an urbanized area gives clear proof of the impact of land use on the temperature regime of that land, for example a typical city (see diagram – Temperature

differentiation in an urban area, U.S. Environmental Protection Agency).



Ignoring the influence of land use on the state or amount of water in ecosystems (water is a thermoregulator) leads to erroneous interpretations of climate change. This could potentially entail tragic consequences for civilization. For this reason it is possible to expect that consistent implementation of the Kyoto Protocol in practice without making efforts to change land use methods will cause an escalation in climatic warming to such an extent that the most pessimistic scenarios of climate change will be fulfilled 50 years earlier than forecast (2050). This temperature change will only come about, however, so long as worldwide military conflict does not break out in the meantime.

The solution lies in cooling down the climate using rainwater. Through comprehensive conservation of rainwater on the continents it may be possible to achieve cooling of the climate back to the 1960's level within ten years.

By conserving rainwater where it falls on the land it is possible to cool down the climate of our planet and thereby accomplish the following:

1. Cause ocean levels to drop to the equivalent of the year 1900.
2. Secure sufficient sources of water for humankind, even given the current trend in population growth.
3. Reduce the risk of natural disasters occurring – floods and droughts.
4. Resolve the problem of poverty – for example by transforming the Sahara (or the majority of it) into fertile, green land.
5. Reduce international tensions and ensure greater global security.
6. Avert the risk of military conflicts occurring.

## Basic scope of the continental water restoration program

Solar heat evaporates water from the seas, rivers, the ground and plants into the atmosphere. Evaporated water cools in the atmosphere and returns to planet EARTH in the form of rain. This ingenious cooling apparatus of planet EARTH functions thanks to heat and water. Without water, planet EARTH would be lifeless, and without heat it would be eternally frozen.

Heat and water are the engine of the global water cycle. The global water cycle maintains not only the thermal system of planet EARTH but also creates the conditions for the existence of life itself. The global water cycle is composed of a large<sup>1</sup> and a small water cycle<sup>2</sup>.

Molecules of evaporated water in the atmosphere absorb, reflect and diffuse heat, light and UV rays and at the same time produce the greenhouse effect which maintains the planet's average temperature. This unique greenhouse effect balances the thermal extremes between day and night, between the individual seasons, between individual regions and at the same time eases weather extremes. The more water there is in the atmosphere, the stronger the greenhouse effect and the smaller the fluctuations in the weather. The less water there is in the atmosphere, the weaker the greenhouse effect and the more extreme are fluctuations in the weather.

Less water evaporates into the atmosphere if a country is dry. Mankind can cause the drying of a country by the clearing of land and urbanization for the production of food or for building its homes.

Mankind turns wooded land into agricultural land through the clearing of forests, turns agricultural land into his own settlements through asphaltting, roofing and the canalization of the earth's surface. This transformation, and above all the drainage of rainwater from the land, brings with it the risk of limited accumulation of water on land, decreases evaporation into the atmosphere and increases the drainage of rainwater into streams, rivers and oceans.

The limiting of natural accumulation and the increase in the drainage of rainwater

decreases the volume of water in the small water cycle. The drainage of rainwater limits the natural accumulation of rainwater on land, dries out whole regions, lowers the evaporation of water into the atmosphere, decreases the formation of clouds over dry land and causes a drop in precipitation activity.

Population growth, the transformation of the land, the draining of rainwater, the limiting of the natural accumulation of rainwater and the lowering of water tables in the global water cycle creates a global imbalance in the water cycle (the decrease of water from continents and its accumulation in the oceans). Each year more than 700 billion m<sup>3</sup> of rainwater is sluiced away. Over the past 100 years the continents have been drained of more than 37,000 billion m<sup>3</sup> of rainwater. The oceans, in turn, have swelled by this same volume of water. The level of water in the oceans has risen by about 10 centimeters.

The rising of sea levels has thus far been blamed on the melting of icebergs caused by climate change. Surveys of glaciers in Greenland, for example, confirm that in the interior of the country the thickness of the ice is permanently growing because in an environment of permanent frost, snow doesn't melt and thus accumulates. The increased intensity of melting icebergs in the polar seas has a mechanical origin, because the rising levels of the oceans causes stress in the icebergs themselves and a more intensive breaking off of ice shelves, which then float into warmer seas, where they subsequently melt. The melting of ice in the seas is not causing the rise in the levels of the oceans<sup>3</sup>.

Therefore, it is possible with great probability to state that the reason for rising sea levels is the drying out of continents caused by the drainage of rainwater. Over the last 100 years more than 37,000 billion m<sup>3</sup> of rainwater have been drained from the continents into the oceans<sup>4</sup>, which is identical to the increasing levels of the oceans by 10 cm over this same period.

The drainage of rainwater from continents into the oceans means a decrease of water in the small water cycle. A decrease in water in the small water cycle means the deepening of scarcity of water for people, food and nature, growth of extremes in the weather, more common occurrences of natural disasters,

floods, droughts, fires and climate change. The decrease of water in the small water cycle at the same time means a deepening of the differences in atmospheric pressure between the atmosphere and that of the oceans and continents. The decrease of water in the small water cycle also means the creation of a global imbalance in the water balance (less freshwater and more saltwater) on planet Earth. This in turn causes changes in pressures in the atmosphere with rapid changes of weather on the continents.

The decrease of water in the small water cycle at the same time means a thinning of the protective envelope around planet Earth and the subsequent increase in thermal radiation from the Sun<sup>5</sup>. Some skeptics of climate change use this fact to claim that climate change is in fact a natural phenomenon.

The intensity of the drainage of rainwater from the continents varies. It is dependent on population density and the expanse of agricultural and urban land. The creation of a so-called dried "hot plates" (of agricultural-urban areas) in the low regions on the continent in the interaction with the colder, damper mountain regions causes an unprecedented concentration of clouds over mountainous areas. Thus, the water from these clouds rains down on the colder mountain regions, where tragic flood waves originate which hit the lower agricultural-urban areas despite the fact that in these regions it rarely rains. The breakdown in the weather is shown also through rapid changes in the weather, with more frequent extremes, with a change in the time and space of different impacts and with extreme torrential rains, wind storms and extreme drought.

From all of this, it follows that regions which are dry are also the most susceptible to the extremes of rains and floods. The case of the Danube floods confirms this statement. The river basins which were the driest are at the same time the most frequently affected by extensive flooding (the Morava, Tisa and Prut Rivers). The most expansive changes of drying land in the 20th century took place in Indochina. Population growth and the industrialization of the land associated with it in this region causes vast flooding and extreme droughts with a destabilization of the socio-economic surroundings.

### **Starting points and a solution**

More rainwater on the land, more evaporation of water into the atmosphere, more clouds and a saturated water cycle are therefore the keys to resolving the global water crisis and the global cooling of planet EARTH. Through the renewal of the water cycle it is possible to achieve a stability in the global water cycle, to have more water for people, food and nature, to minimize the risk of the breakdown in the weather, to protect people preventively from natural disasters, floods and drought, to stop the rise in ocean levels<sup>6</sup>, to transform yellow and dry land into fertile green country<sup>7</sup>, to cool planet Earth, to guarantee global security<sup>8</sup> and to create millions of job opportunities throughout the world<sup>9</sup>.

This is possible to achieve through a simple global program "***Leave rainwater on the land***" so that this water, which for the past 100 years has been lost from the continents, can be returned to the water cycle.

A saturated water cycle is a cooling mechanism for planet Earth. The leaving of rainwater in ecosystems cools the surface of the earth and evaporation acts as a filter against the sun's rays, warmth and light. Clouds create shadows over the earth, which stabilizes the temperature of the Earth's surface.

Irrigated land is cooler and stabilizes the water cycle, stabilizes the weather, strengthens biodiversity and renews precipitation activities. By irrigating land with rainwater, it is practically possible to achieve the cooling of land because water is a natural thermoregulator.

The basic principle, then, is to retain as much rainwater as possible on the land so that it has the opportunity to seep into the ground and evaporate into the atmosphere. It is necessary to create such conditions on land in order to increase the seepage of rainwater into the ground across the board on all continents.

In order to retain rainwater on the land it will be necessary to implement an entire order of systemic measures and changes in legislation, in the methods of utilizing forested-agricultural and urban land, in the management of water sources and technological processes for the seepage of rainwater into the ground and its evaporation into the atmosphere. It is necessary to start a program of watering the land on all continents of the world. That's why we want to publish a

monograph and make a film "*Water for global cooling*" why it is necessary to do so, how it is possible to do so and what will happen if we don't.

## Footnotes

<sup>1</sup> The large water cycle is the exchange of water between oceans and continents. Water in the large water cycle is water evaporated from the oceans, rained over the continents and then returned via rivers down to the ocean.

<sup>2</sup> The small water cycle is the exchange of water between the ground and the atmosphere. Evaporated water from the ground, from plants, from wetlands, from rivers and from freshwater lakes cools and then falls as rain over a country.

<sup>3</sup> For the melting of icebergs in the seas, Archimedes' principle applies, which means that the volume of water from the melted ice doesn't change.

<sup>4</sup> A 10 cm rise in ocean levels over 361 mil. km<sup>2</sup> corresponds to a volume of water of 36,100 billion m<sup>3</sup>

<sup>5</sup> A NASA survey confirms that over the last 3 decades thermal radiation from the sun falling on the EARTH has risen by 0.6 0C.

<sup>6</sup> A program of watering the land would mean practically not only stopping the rise in ocean levels but also lowering these levels because returning 37,000 billion m<sup>3</sup> of water to the global water cycles will cause a fall in ocean levels.

<sup>7</sup> It is possible to water dried regions with rainwater with a simple solution. If on the land we create a blanket system of reservoirs for catching rainwater, it is possible in the course of 10-20 years to change dry, yellowing land into fertile green land.

<sup>8</sup> Global security emerges from sufficient water resources and above all sufficient food. Having more water means the preventing of global conflicts. Most aggressiveness, intolerance and terrorism grow in dry regions with limited water sources. A dry environment fields a more aggressive-acting culture.

<sup>9</sup> According to current estimates it is possible through the "*Leave the rainwater on the land*" program to create some 100 million work opportunities around the globe

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