# **Constructive solutions**

There is really good news in the muddled climate discussion. Irrespective of one's position on the question of the necessity of  $\mathrm{CO}_2$  reductions, in my opinion it is much easier to reach a social consensus on the following  $\mathrm{CO}_2$  relevant environmental and development concepts than with political actions that in the long term would lead to the deindustrialisation of Germany and Europe.

A central basic idea is to use plant growth

- Atmospheric CO<sub>2</sub> to bind, which directly reduces the possible CO<sub>2</sub> conditional greenhouse effect
- to reduce the emission of heat, which immediately lowers the air temperature,
- to intensify evaporation and thus cloud formation, which reduces the irradiation of solar energy due to the reflection of the clouds,
- to transport the humidity of the atmosphere close to the sea further inland, which then also improves plant growth there.

There follow some special outstanding model concepts which appear to be suitable not only for reducing  $\mathrm{CO}_2$  on a large scale, but also for significantly improving the quality of life of humans and the ecosphere.

The other idea is to achieve energy savings through targeted measures and good information on a voluntary basis in the industrialised countries that make economic sense and at the same time save significant amounts of "greenhouse gases".

For political decisions it will be essential to be aware of the boundary condition of finite financial resources and to ask how, with limited resources, to achieve the best result for the largest possible number of people.

### Which policy measure is most effective?

In fact, it should be a matter of course that before any political decisions are taken, measures are first asked what the expected effort for the expected effect is. In the case of competing measures, evaluation and prioritisation must be carried out with a view to maximising effectiveness and, if necessary, weighing up possible risks.

The way in which the climate debate is currently being conducted and how serious decisions are being brought about with predominantly emotional rather than fact-based arguments leads in consequence to a dramatic loss of trust in those in power.

There's another way. The Danish economist Björn Lomborg, head of the Danish institute <u>Copenhagen Consensus</u> has carried out a careful analysis of the top 20 development goals on behalf of the UN and has come up with surprising consequences:

For good reasons, he is proposing an innovative approach to the current climate debate, instead of endangering our economic livelihoods through subsidies and taxes:

This goal-oriented way of thinking is also **consensus in international organisations**. Among the "<u>sustainable development goals</u>" of the United Nations, "affordable energy" is much more important (7) than "climate actions" (14):

- 1. Eradication of poverty
- 2. Combating hunger
- 3. Good health care
- 4. High quality education
- Gender equality
- 6. Clean water and sanitation
- 7. Payable and clean energy
- 8. Dignified work and economic growth
- 9. Industry, innovation and infrastructure
- 10. 17. <u>in original document</u>

# **Holistic Management**

This concept developed by Alan Savory since the 50's of the 20th century is a way to green the huge semi-arid areas of the earth on a large scale and to bind potentially so much  $CO_2$ . If half of these areas turn green again, the  $CO_2$  level before industrialization will be reached again.

#### Reforestation of the Caledonian Forest in Scotland

The initiative of an individual, Alan Watson-Featherstone, shows that it is possible to turn steppe areas back into forests with wild animals that bind much more  ${\rm CO_2}$  through an ecologically wise approach.

# Agroforestry - Agriculture together with trees

Agroforestry is the interaction of agriculture and trees, including the agricultural use of trees.

here the translation of the long <u>history of this approach in</u> <u>Portugal</u>:

Tree shelter is first mentioned on 13 June 1310, when King D. Dinis forbids the thinning of his land by decree. The need for wood for naval construction in the XIV and XV centuries led to the exhaustion of the landscape trees, although D. Dinis is considered the mentor of the Leiria National Forest (11,000 ha maritime pine), which still exists today. In the XV century "felling and burning" was already described as overburdening land use practice on agricultural land (Lobo, 1903). At that time, the explicit recognition of the depletion of existing soil and wood resources already in the XVI century led to some laws, such as an "Alvará of 3 October 1565", in which the necessity of planting trees on agricultural land was established. The Restoration War (1640-1668) between Portugal and Spain led to the abandonment of cultivated areas, the promotion of shrub development and natural tree regeneration.

In the XVIII century the charcoal business began and in the XIX century this market reached the highest prices with the industrial revolution and the associated exhaustion of the trees in abandoned areas. In the first half of the XX century (1926), the "wheat campaign" organised by the Salazar dictatorship forced intensive agriculture, removing trees from agricultural fields, and high fertiliser values were applied due to the lack of soil fertility. Currently, the main agroforestry tree species in Portugal are cork oak (Quercus suber L.) and holm oak (Quercus rotundifolia L.). Statistics on agroforestry are blurred. This is related to the nature of the agroforestry systems themselves, as the boundaries of classification between forest and agroforests are blurred, as underground management is a dynamic land use that alternates between conventional cultivation, grazing and set-aside, sometimes lasting more than a year, and promotes the emergence of shrubs that are classified as forest at that time by misinterpretation of the land management context or interpretation of aerial/satellite images. According to the National Forest Inventory (NFI) 2010, the forests/agricultural forests cover 716,000 and 413,000 ha respectively for cork oak and holm oak, representing 30% of the total carbon (C) present in the Portuguese forests, with cork oak storing  $64 \times 106$  Mg CO2 equivalents and holm oak storing 20 x 106 Mg CO2 equivalents. The figures show a slight increase in cork oak (713 to 716 kha) and a slight decrease in holm oak (462 to 413 kha) since 1998.

## Power plants without exhaust

Conventional power plants, which continue to generate most of our electricity reliably, have been on the losing list since the recommendations of the "Coal Commission" at the latest, although it has not yet been clarified how the systematic seasonal and accidental supply gaps ("dark lull") can be bridged. A promising, constructive approach is to build gas and coal-fired power plants in such a way that they do not

emit any exhaust gases, i.e.  $CO_2$ , into the atmosphere. <u>An invention with a new turbine technology makes this possibility a reality</u>. Such a pilot plant has now gone into operation in Texas:

Auf dem Weg in die Kohlendioxid-Ökonomie

# And in a normal town in Germany?

The way in which climate policy is conducted in Germany appears to be aimless, chaotic and, above all, aimed at drawing money out of citizens' pockets with new taxes, levies and coercive measures, without it having any measurable effect. On the contrary, the "energy revolution" has increased the emission of  $\mathrm{CO}_2$  and will continue to do so — at immense cost. Only the increasing impoverishment is measurable, especially of those who have little anyway.

But there is another way. Under the motto "Too cheap to declare a climate emergency in a city" this article shows how the city of Bottrop can achieve the so-called "climate goals" through clever initiatives and voluntary participation.

The City of Mannheim takes the planned Federal Horticultural Exhibition in 2023 as an opportunity to to redesign the city by, among other things, expanding the green spaces, also on and in buildings, in such a way that in summer a local reduction of the temperature by up to 2 degrees will take place.