

## Global Soils: Germany

### Education Dealing with Soils: A *conditio sine qua non*

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The old times are gone! Those times in which soil – real estate – was considered merely to be a kind of property handed over according to family traditions, either bought, acquired by marriage or simply conquered from others are no longer. Likewise, those times are gone when the success story of ecological sciences brought soil into common minds as being the principal component, sink, resource or source of life together with water, air and biota, being a key topic of 'conservationist' activities and deciders. The new century, however, sees activities (at least in Germany) more concerned with the creation and protection of jobs, putting some financial ceiling to old-age and health insurance systems, a steady increase of state debts and, last but not least – particularly in Germany – with a pronounced misdevelopment of the entire idea of a welfare state. Thus, top-priority issues are seemingly pursued to be fulfilled, leaving aside or behind issues of nature, health and mutual confidence. No good situation to re-establish 'soil' as a key topic of research, education and management.

On the other hand, the contributions to this 'Overview on Global Soils' point out quite clearly that certain scientific activities, both by the EU (including COST 837) and single nations, do not yet recognise soil as a crucial ecological component of terrestrial systems (besides aquatic sediments, of course). Though research and education budgets are decreasing, top-level European research deals with soil systems once again. Apparently, though sciences such as molecular biology (favoured by the 6th research framework programme of the EU) are preferred, this political preference does not shift interest away from understanding more complex drawbacks in pedology, geosciences and of course environmental sciences. It is no longer possible to root out 'soil' from a European scientific agenda. What is the reason for this, how did we re-gain a 'relationship towards the soil system', nowadays being estimated in a way which apparently causes a strong desire not only to own it but also preserve it in its full integrity and thus stop putting additional burdens on it? I think this is simply a result of our kind of education. Some process took place during the course of years and decades, possibly derived from the recognition of a sustainable economy, originally conceived in forestry sciences during the 18th century (in Germany at least). This describes my own way of becoming aware of the soil and forest as a child and youngster:

At age 5–7, one usually learns from school/kindergarten and the parents that the Earth is spherical, bringing about an idea of some immensely big dimension of our environment.

Nevertheless, I do recall many complete days (and nights !) spent together with other boys of my age trying to get directly to Australia by digging a hole straightforward through the Earth, starting then at my home in Meppen (Emsland, NW Germany), with a tremendous effort in power and energy.

We started again and again in the late afternoons, after an engaged discussion where to begin – usually in some mother's garden. After the vegetation cover had been removed, both quickly and over large areas, the arduous work began, getting through roots of different sizes and stabilities. Deeper-sited roots of trees were cut by shovel or hand-axe, often being impressed by the mere size of 'what keeps a tree fixed to the soil'. Getting deeper into usually pure sand layers was just a matter of energy. It almost always got dark in between, a fire was lit and one mother brought supper to us.

As regular as this procedure, its end was 2–3 metres down where there was water, and we were convinced that this water was some part of the ocean more or less close to Australia. The next morning saw a round hole filled by water, at its edges some beetles and other insects busily moving around. Apparently, these got trapped in our hole during the night. During the next day, these interesting holes were jointly refilled with the material so arduously dug out the day before, never being sure that we had taken the proper point to start digging.

I urge all European schools and education facilities to give all children a chance to receive such similar experiences with soils as we had in those days. By this recognition, curious looking and finding, thought and discussion can be stimulated, thereby letting children act on their own and have experiences in order not to become fed up with "knowledge by itself" (Rumpf 2003). There are innumerable ways to allow children and teenagers to learn how to behave in a responsible manner, responsible for others, but also for the environment, soil and water. A few years from now, regions will be defined where being intrigued with soil, water, air and living beings means more than just gaining additional knowledge. We will discuss and speak with our children and grandchildren, astonished at recognising what 'life' really is. Moreover, they will learn about the role of soil in this context, that which we stand on, grow plants on and on which we should build and rely upon, carefully, acting cautiously, not destructive, but rather conserving and renewing. This attitude can then no longer be restricted to environment and the soil on its own. Rather, it is related to changing attitudes in general, replacing consuming and destruction with giving and conservation (Markert & Korschak 2003). The numerous contributions in favour of the international activities carried out in Germany encourage and stimulate us anyway.

#### References

- Markert B, Korschak R (eds) (2003): Mögliche Wege zu einem gesellschaftsfähigen Ethik-Konsens. Was können Hochschulen leisten? Peter Lang, europäischer Verlag der Wissenschaften, Frankfurt/Main
- Rumpf H (2003): Gegen die schleichende Verstopfung der Köpfe und Sinne. In: *Lehre & Forschung*, Oktober 2003