



How to tell soil biodiversity?

Dr. Rolf Sommer and Michael Berger, WWF Germany

European Soil Observatory Stakeholders Forum - Session 3: Soil biodiversity

20.10.2021 - 14:00-16:30 CET



Why Soils at WWF?





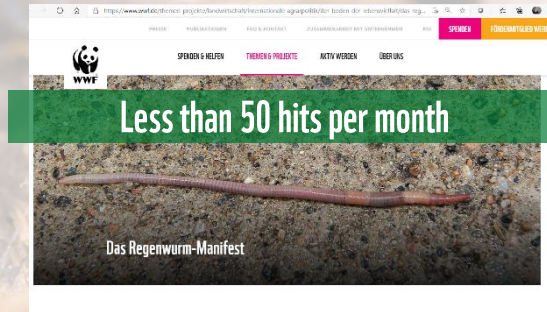
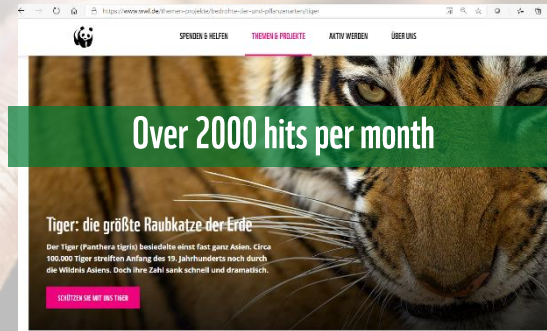
Why Soils at WWF?





Why is it so hard to tell?

- too far away from people's daily lives
- no public awareness (comparably few hits e.g. in Google search)
- the great unknown
- not “sexy”, not “cute”
- its “usefulness” is not as obvious





How to transport difficult topics?

We create pictures and tell stories

- About people, farmers, scientists etc.
- Showing contrasts „nice vs. ugly“
- Easy messages
- Cute animals and threats
- Emotions
- Fun facts, participatory formats (Quiz, “send us your pictures”)
- Consumer tips (garden, food)



250.000 hits since world soil day 2020

**REGENWÜRMER
IN GEFAHR**



Spannende Tierwelt





How to transport difficult topics?

Learning & fun events for children and students



WWF Youth Camp 2021



How to tell soil biodiversity?

Build on the urgency to address climate change! (...the utilitarian approach...)

- Soil organic matter/soils as a significant sink of CO₂
- Soil biodiversity is essential for fertile soils and hence climate resilience
- Soil biodiversity links almost automatically to the carbon farming debate
- ecosystem services instead of carbon metrics



How to tell soil biodiversity?

Why is it important to spread the word about soil biodiversity?

- People change behavior, consume more responsibly
- Informed people can put pressure on decision makers
- But, in the end it is not consumers who decide about soils...



Politics matter!

Four steps for more diversity in and on the soil:

1. Political frameworks and legislation must support joint/systemic actions, uniting soil protection and rehabilitation with nature conservation, agriculture, forestry and water management

→ Farm to Fork; Carbon Farming Initiative; Soil strategy

→ Conditionalties as well as Eco-Schemes of the EU CAP

POLITICAL STATEMENT

Soil and biodiversity –

Demands on politics*

Jeanette Mathews¹*, Frank Glante², Michael Berger³, Gabriele Broil⁴, Uta Esser⁵, Andreas Faensen-Thiebes⁶, Norbert Feldwisch⁷, Wilhelm König⁸, Nikola Patzel⁹, Rolf Sommer¹ and Willi E.R. Xylander¹⁰

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1. Introduction

During the conference "Rediscovering the soil with Alexander von Humboldt. Soil and Biodiversity. Everything is connected with everything" in Berlin on December 5, 2019, a political statement was prepared as a major result of the discussion. Many important German organisations for nature conservation and soil protection (Tab. 1) signed this political statement in the spring of 2020. A translated version of "Boden und Biodiversität – Forderungen an die Politik" is presented here, as it addresses the German and the EU common agricultural and conservational policy.

* Results of the conference "Rediscovering the soil with Alexander von Humboldt. Soil and Biodiversity - Everything is connected with everything" on 5 December 2019 in Berlin

2. Key player soil organisms

Healthy soils filter water, making it suitable for drinking, protect us from flooding, provide nutrients, and allow food to grow. It can do all of this and more only because benevolent creatures under our feet work together like the wheels in clockwork. They include bacteria, fungi, ants and other insects, earthworms, small mammals, and many more (Xylander et al. 2015). One teaspoon of soil contains more organisms than there are people on earth (Orgiazzi et al. 2016).

The countless microorganisms and soil animals crush and recycle leaves and other dead plant material. An important product of this process is humus, the most precious part of fertile soil. Humus contains nutrients, stores water, and stabilises the soil structure. The soil also stores carbon in the humus, thereby reducing the amount of the climate-relevant greenhouse gas carbon dioxide in the atmosphere. Thus, the protection of soil biodiversity also aids in climate protection.



Politics matter!

Four steps for more diversity in and on the soil:

2. EU must build on the Sustainable Development Goals (SDGs) in its soil protection strategy and EU agricultural policy/ies

→ A soil strategy with concrete objectives, measures, M&E indicators and funding programs, as called for by the European Commission's "Soil health and food" mission

→ EU soil framework directive needed

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Politics matter!

Four steps for more diversity in and on the soil:

3. Political awareness of soil as a limited resource

→ Political measures must be supplemented by education, communication and participation initiatives

→ Expertise, knowledge and awareness of the importance and protection of soil biodiversity must be a crucial part in farmer's qualification → adjustment of agricultural curricula required

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Politics matter!

Four steps for more diversity in and on the soil:

4. Reference data for soil health

- Expansion of monitoring programmes and digital documentations
- Inclusion of soil biological records; closer networking of peers
- Evaluation regarding the functions of soil organisms and their threats

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WWF Soil Work in Germany

Logo Row: WWF, BUND, GLS, Zukunftsthema, Bundesrat, demeter, NABU, BfL, BfU, SÖL, GKB, ABL, BfL, Soil Alliance, Deutsche Umwelthilfe, MISEREOR, BOLW, etc.

Text:
 Unterzeichnende: Johannes Augustini/Stiftung Ökologie & Landbau, Michael Berger und Dr. Rolf Sommer/WWF, Dr. Andrea Beste/Büro für Bodenschutz & Ökologische Agrarkultur, Benedikt Bösel/Soil Alliance und Schöngut Alt Madlitz, Josef Braun und Josef Schmidt/Vorstand Bund Landesverband Bayern, Jan-Hendrik Cropp/under_cover ÖBR, Jana Eppstein und Ludwig Weissmann/Gesellschaft für innovative Bodenbearbeitung e.V., Dr. Hansa Franke/Klimagratz GLS, Leni Großmaier/Bürgermeisterin Dietmannsrl e. D., Benedikt Haerlin/Zukunftsthema Landwirtschaft, Maria Legner/Klimabündnis Tirol, Dr. Felix Prinz zu Löwenstein/Bund Ökologische Lebensmittelwirtschaft e.V., BÖLW, Dr. Moritz Nabel, Jakob Sebeverz/Bundhof Büllmann/Demeter, Die Sebens/Anstalt „Humusrevoluzzer“, Stefan Schwarzer/Symposium aufbauende Landwirtschaft und Natur „Humusrevoluzzer“, Robert Strauch/InhaltsStilg e.V., Michael Unterthalby/Vorsitzender Schöne Ställe e.V., Dr. Hartmut Vogtmann/NABU, Prof. Dr. Birgit Wilhelm/Fachhochschule Erfurt

Die gemeinsame Basis für Landbau und Naturschutz ist der lebendige Boden

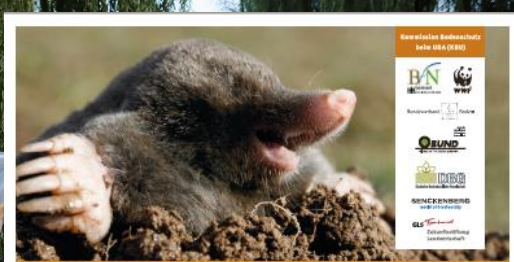
Lebendiger Boden ist als Grundlage allen Landlebens nicht austauschbar!
 Wir sehen: Böden, die Agrarökosysteme tragen, sind genauso belebte Natur wie natürliche Ökosysteme auch. Von der Bodenatur sind sowohl der Artenreichtum des Landes als auch die menschliche Ernährung unmittelbar abhängig, deshalb muss die Bodenatmosphäre in jeder Hinsicht Vorrang gegenüber kurzfristigen Ertragssteigerungen haben.

Soil Dialogue Group

Wir erkennen an, dass die Bodenatmosphäre ein zentraler Bestandteil der natürlichen Praxis werden muss. Die vollständige Durchmischung des Bodens für die Planung und die Umsetzung von Agrarpraktiken sind unerwünscht. Die Vielfalt an Wurmsarten und Chlorellen, von Pilzen, Flechten und Bakterien/Archaeen und ihr Zusammenspiel gilt es zu erkennen und in die praktische Landwirtschaft und in den Naturschutz einzubeziehen (alles ohne Genmanipulation). Dies erfordert ein Bodenbild, das die Sichtweise des Bodens als „Robustoff“ und „Dienstleister“ für rein menschliche Bedürfnisse hinausgeht.

Wir sagen: Weil Böden Natur sind, ist Bodenschutz Naturschutz! Für die Zukunft sehen wir es als unverzichtbar an, Bodenschutz im Landbau als Teil des Naturschutzes zu verstehen (Integrationsstrategie) zu einen ökologisch tatsächlich nachhaltigen, an Eigenschaften natürlicher Ökosysteme orientierten Landmanagement von Praxis, Forschung und Bildung zu etablieren.

Nur wenn im Boden Biodiversität zugelassen und gefördert wird, kann es auch oberirdisch Biodiversität geben. Acker- und Grünland sind zusammen mit Naturschutzgebieten als Gesamtsystem zu verstehen. Diese Grundsätze sollten sowohl Praktiker als auch Naturschützer in ihrer Arbeit berücksichtigen.



POSITION // JULI 2020 //
Boden und Biodiversität – Forderungen an die Politik

Handbooks
 WWF-Handreichung, Oktober 2020
Der kleine Humus-Faktencheck

Policy Paper



Thank you!