



« 4 per 1000 Initiative: Soils for Food Security and Climate »

Document Forum 5-1 – Report of Forum n°4 – Madrid (11 December 2019)



5th Forum Meeting

Wednesday 9 December 2020

12:00 to 15:00 (CET)

On-line via ZOOM

The **High-Level Segment** of the Forum meeting was opened with speeches from:

- Mr. **Luis PLANAS**, Minister of Agriculture, Fisheries and Food of the Kingdom of Spain, who particularly stressed the need for the new Common Agricultural Policy of the European Union to be inspired by the pioneering approach of the « 4 per 1000 » Initiative.
- Mr. **Didier GUILLAUME**, Minister of Agriculture and Food of the French Republic who stressed the importance of permanent soil cover, crop rotations introducing biodiversity and the return of trees to agricultural landscapes through the development of agroforestry.
- Mr. **Wolfgang ZORNBACH** of the Federal Ministry of Food and Agriculture of Germany, Representative of the College of National and Regional Governments of the "4 per 1000" Initiative and Chair of the Forum, for whom soil health was a treasure to be preserved through the adoption of nature-based solutions, and agriculture, an important sector for finding a solution to climate change in particular within the framework of the Koronivia Joint Work on Agriculture.
- Mr. **Chad FRISCHMAN**, Vice-President and Research Director of Project DrawDown made an inspiring presentation to the assembly:

"DrawDown" is the point at which greenhouse gas levels in the atmosphere begin to decline, and we believe that it is possible to stop and begin to reverse global warming with the solutions that exist today. It's a new way of looking at our future, a regenerative future, even if it seems impossible. There are viable technologies, tangible solutions that already exist to achieve "DrawDown", we just lack the will! More than 100 solutions have been identified by researchers and experts to be implemented worldwide to reverse global warming by 2050. Replacing fossil fuels, reducing consumption and restoring carbon through photosynthesis are the main means. Only 5 of the top 20 solutions come from the power generation sector, while 8 of the main solutions come from food systems and 4 are related to land use with the protection and restoration of natural landscapes. Much can be done with agricultural systems: regenerative annual crops (reduced or no tillage, cover crops, crop rotation, etc.), multi-strategy agroforestry systems, managed pastures and silvo-pastoral systems. These methods increase water retention, prevent erosion, improve fertility, etc. and thus regenerate soils and land. These are "win-win-win-win-win-win" solutions. Healthy eating (rebalancing plant and animal products) and the reduction of food waste (30% of food is wasted, both at producer and consumer level) are also part of the solutions. We need to think about the future in 20 to 30 years. We can also use the forest to store carbon through forest restoration, produce bamboo on land that is too degraded, facilitate forest management by indigenous peoples, marine permaculture, etc. DrawDown is possible by 2070 in the most conservative scenario, but we can go faster by changing priorities. We need all 80 solutions to achieve Draw Down, and this will also allow us to achieve the SDGs (UN Sustainable Development Goals). The cost of fully implementing these solutions over the next 30 years is \$30 trillion, or \$1 trillion a year

over that period. Compared to the annual global GDP of \$86 trillion, this is "a drop in the bucket to achieve the future regeneration we want". But the boost is the \$74 trillion in savings over 30 years that will come from adopting these solutions. It's really an opportunity, and it's going to change our whole system into one that is connected to nature and regenerative instead of extractive.

The following personalities then took the floor during the High-Level Segment:

- Mr. **Kimmo TIILIKAINEN**, Secretary of State and former Minister of Environment, Energy and Housing (Finland)
- Mr. **Pau ROCA BLASCO**, Director General - OIV
- Mr. **Rene CASTRO**, Deputy Director-General - FAO
- Mr. **Hamady DIOP**, Head of the Governance of Natural Resources, Food Security and Nutrition Program - NEPAD
- Mr. **J.A. GIL RIBES**, President of the Asociación Española Agricultura de Conservación. Suelos Vivos (AEAC.SV)
- Mr. **François MANDIN**, farmer & President of the Association for the Promotion of Sustainable Agriculture / ACS Network (France)
- Mr. **Marcelo TORRES**, member of the Board of AAPRESID (La Asociación Argentina de Productores en Siembra Directa) (Argentina)
- Ms **Elisabeth de CLAVERIE de SAINT-MARTIN**, Executive Vice-President for Research and Strategy - CIRAD (France)
- Ms. **Laura HOIJER**, Baltic Sea Action Group (Finland)
- Mr. **Vinícius PEREIRA GUIMARAES** - Embrapa - Labex Europe (Brazil)
- Ms. **Precious PHIRI**, Regeneration International (Zimbabwe)
- Ms. **Alana LEA**, IGiveTrees (USA)

The high-level segment concluded with a video message to the Partner Forum by Latin American farmers.

All the videos of the interventions of the above personalities during the High-Level Segment are available on the YouTube channel of the "4 per 1000" Initiative:

(https://www.youtube.com/channel/UCvBmNtaHxi3PcvbUkkL_UQg)

Forum Meeting

- Adoption of the agenda

The agenda was adopted by the Forum

- Approval of the report of the Forum n°3 - Katowice of December 12, 2018

The report was adopted by the Forum.

- Annual Activity report for 2018 & 2019

The annual activity report for 2018 and 2019 was presented to the Forum by Mr. Paul Luu, Executive Secretary. The Forum took note of all the work accomplished in recent years. The main achievements since COP 24 in Katowice have been the organization of statutory meetings (3rd Partners Forum, 4th Consortium, 6th and 7th CST meeting, Regional Symposium "4 per 1000" in Asia), participation in international meetings, collaboration and extension with other initiatives and partnerships, work on the website and collaborative platform and work on the communication strategy (newsletter and social networks).

- Where do we stand at the **scientific level?**
 - **The latest IPCC report on land and soil use**

Prof. **Jean-François SOUSSANA**, member of the IPCC & Vice-President of INRAE - International Policy - explained, during his presentation of the latest IPCC report on Land and Soil Use in the fight against Climate Change, that gross emissions from AFOLU make up 23% of total global emissions; but if the global food system is considered (incl. transport and agro-food industry, etc.), emissions are estimated 21 – 37% of total net anthropogenic GHG emissions. However, significant mitigation potential exists through decrease of food losses, increase of soil carbon sequestration & agroforestry. Land degradation occurs over ¼ of the Earth's ice-free land area. Agriculture is a dominant driver of it. By combating desertification and land degradation, there are co-benefits for climate. Combating desertification would improve soil fertility, increase carbon storage into soils and biomass. However, global warming is a huge threat for food security. Large-scale deployment of mitigation option such as bioenergy and afforestation would have negative impacts on food security and land degradation. On the contrary, changes in food diet and diversification of production systems could release millions of km² of land with co-benefits for the environment and health.
 - **The CIRCASA Project and prospects of an International Research Consortium (IRC)**

Mrs. **Cristina ARIAS-NAVARRO**, Scientific Manager "Soil and Climate Change" INRAE - CIRCASA Project, recalled that the International Initiative "4 per 1000" is one of the 22 partners of the European project CIRCASA. CIRCASA's objective was to develop International research synergies concerning research and knowledge transfer on carbon sequestration in agricultural soils at the European and global levels. (It has a direct outreach to 82 countries accounting for 85% of the world's total research on soil carbon sequestration in agriculture) with the aim of eventually creating an International Research Consortium (IRC). The results of the online survey, conducted in 2018, on stakeholder perceptions of the role of soil organic carbon are now available online. CIRCASA has identified 14 challenges for research on soil organic carbon and has co-established a strategic research agenda with 3 themes: 1. unlocking the potential of soils; 2. soil carbon MRV; 3. innovation for the development of soil carbon sequestration. Ms. Cristina ARIAS-NAVARRO also presented the preliminary vision of the IRC International Research Consortium and the different collaborations envisaged for each theme of the research agenda. The website: www.circasa-project.eu ; the open source collaborative platform: www.ocp.circasa-project.eu
 - **The activity report of the Scientific and Technical Committee (STC).**

Dr. **Cornelia Rumpel**, President of the STC, presented the main activities of the STC over the past year. The STC was able to meet twice in 2019. The STC was able to work on the Koronivia process and encouraged partners to communicate soil carbon targets in their submissions to the Koronivia process. The STC supported the report on the importance of soil carbon sequestration in NDCs (Nationally Determined Contributions). The STC has contributed and reflected on various reports including the GSP (Global Soil Partnership) technical manual on soil organic carbon management. The STC also worked on the vision of the "4 per 1000" Initiative and then recalled the historical rationale for the "4 per 1000" designation in order to avoid future scientific controversies, recalling that 4 per 1000 is an aspirational goal and not a normative goal. The STC also recalled that it is important to consider a diversified strategy in terms of space and geography. Specific actions for the five different parts of the globe will be implemented in the near future through locally organized workshops and meetings.

- What is the status of **implementation in the field**?

- **What about soils in the NDCs of countries that are parties to the UNFCCC?**

Ms. **Liesl WIESE-ROZANOVA**, Agricultural Science and Policy International Consultant, then presented us a map of the 10 countries with the greatest potential for storing organic carbon in soils, including the USA, Canada, Brazil, China, etc. The problem is that out of 196 countries, only 10 countries mention soil organic carbon in the targets of their NDCs Determined National Contributions; and only 3 countries mention soil organic carbon in the general text of their Determined National Contributions. 31 countries are, however, acting on agroforestry. There is a real opportunity for countries to integrate quantified soil organic carbon targets into their NDCs. The objective, including the "4 per 1000" Initiative, will be to ensure that the Nationally Determined Contributions (NDCs) of all UNFCCC country Parties contain references to soil health and Soil Organic Carbon (SOC), and that they are taken into account in their sustainable agriculture development programs.

- **The "4 per 1000" at the country level: what is France doing?**

Mr. **Frédéric LAMBERT**, Head of the Europe and International Department at the Ministry of Agriculture and Food (France), recalled the support of the French Ministry of Agriculture, as well as French research organizations (CIRAD, INRA, IRD) to the "4 per 1000" Initiative. Emissions from agriculture in France represent 20% of France's total emissions (85 Mt CO₂ eq. out of 402 Mt CO₂ eq.); however, France has a significant carbon sink of 36 Mt CO₂ eq. thanks to French forests. How does France implement the "4 per 1000" Initiative? First of all, since 2012, France has supported the Agroecology project, whose general objective is the adoption of agroecological practices by French farmers by 2025. This project also integrates the training of farmers. In 2019, 10% of farmers have converted (3.8% in 2013, 7.5% in 2018, the objective being to reach 15% in 2022); the development of protein crops has developed strongly with the objective of 500,000 ha in 2022. Other initiatives have expanded in parallel: Beef Carbon farms (an initiative of farmers from France); and 9,300 dairy farms committed to low carbon. Finally, Mr. Lambert recalled the importance of the "4 per 1000" study conducted by INRA in France:

<https://www.inrae.fr/actualites/etude-faisabilite-4-1000-france-preserver-augmenter-stocks-carbone-sol>

in order to know the sequestration potential of French soils. This study should be duplicated in several countries.

- **The agricultural world in the face of the change of model: the situation in Latin America and elsewhere in the world**

Mr. **Pedro VIGNEAU**, Honorary President of AAPRESID (La Asociación Argentina de Productores en Siembra Directa), on behalf of GCAN (Global Conservation Agriculture Network), made his presentation on the situation of the agricultural world in Argentina. The mission of AAPRESID consists in promoting sustainable production systems of food, fiber, and energy through innovation, science and network knowledge management. In Argentina, the no till areas evolved from 2% to nearly 90% between 1989 & 2019 (on 6 main productions). This has induced the reduction of erosion by 90%, among others. Argentina is now called the world leader in soil loss reduction. Their willingness is to move the Argentinian agriculture towards an "always green agriculture" with 1. Living plants all year long, 2. Photosynthesis, 3. Carbon sequestration. A net carbon increase in carbon stock has been stated: +12% (+6 T

carbon / ha); as well as reduction of the number of herbicides used and improved water management. The conclusion made by Mr. Pedro Vigneau is the following: "Conservation agriculture can be implemented by all farmers around the world".

○ **What role for companies in changing value chains?**

Ms. **Dalma SOMOGYI**, Manager "Climate Smart Agriculture", WBCSD (World Business Council for Sustainable Development) based in Geneva, Switzerland, presented the actions of WBCSD and the role of private sector companies in changing their sources of supply-value chains. At WBCSD, their aim consists in accelerating land-based climate solutions. A clear call has been sent to private companies' CEOs to transform agriculture with the launch of the report hereafter, named "[CEO Guide to Food System Transformation](#)". It includes 7 pathways to reach this crucial goal. [Oct. 2019]. Another report has been previously launched, in Dec. 2018, at Katowice, during CoP 24 ; it is named: "[The Business Case for Investing in Soil Health](#)". This report puts soil at the heart of the following crucial items: 1. Climate Change, 2. Water availability and quality, 3. Livelihoods, 4. Biodiversity and Conservation, 5. Crop productivity and Nutrition. WBCSD is also working on other Natural Climate Solutions like the Integrated crop-livestock-forestry on soy and cattle farms in central Brazil with the following target: 150 farms, 7 500 ha, 1.8 Mt CO₂ eq.; with carbon finance as an enabling source of investment. Finally, Ms. Somogyi briefly introduced the Initiative OP2B (One Planet Business for Biodiversity), hosted by WBCSD.

Mr. **Facundo ETCHEBERE**, Director of Public Affairs at Danone, has presented OP2B (One Planet Business for Biodiversity), introduced during NYC Climate Week, at UN HQ, in September 2019. The Initiative OP2B comprises 19 global companies which have decided to take the lead and to scale up regenerative agriculture everywhere in their value chains. With the support of WBCSD, their hosting entity, they have been structuring a full agenda integrating the following aspects: 1. Diversifying their portfolio in terms of ingredients. 2. Reaching their consumers with new products aligned with regenerative agriculture, 3. Restoring biodiversity with no deforestation, 4. Developing a compendium of measurable solutions. Their aim is to be ready for the next CoP 15 on Biodiversity, in China, in Oct. 2020. To conclude, Mr. ETCHEBERE mentioned that OP2B is currently looking for new partners to enlarge critical mass.

○ **Results of the 1st "4 per 1000" Call for Projects.**

Mrs. **Paloma MELGAREJO**, Scientific Officer, within the Executive Secretariat of the "4 per 1000" Initiative, Spanish Ministry of Agriculture, Fisheries and Food, presented the first results of the "4 per 1000" call for projects. In 2018, the STC Scientific and Technical Committee of the "4 per 1000" Initiative has developed a tool to expertise and evaluate projects based on a [set on indicators and references](#)

Before the 1st call of formative project assessment, a definition of what is a project has been made: a project should be: 1. A specific action under defined temporal and spatial scales and ecosystems (e.g. arable, rangeland, forests, etc.) targeting changes in soil carbon; 2. Targeting changes in soil carbon; 3. Related to changes in land management and/or land use options with expected benefits and possible trade-offs for local communities. A definition of what an evaluation is has, also, been made. A formative evaluation: 1. advices to improve the projects; 2. projects which are aligned with the goals of the "4 per 1000" Initiative; 3. Projects more likely to be presented. Mrs. Melgarejo, then, presented a table with all the different projects submitted to the call. A specific platform on-line was opened for the duration of the call. 14 projects have been selected out of more than 50 received. The way forward is the following:

Alignment with the “4 per 1000” objectives; the use of self-assessment tools (Ex-Act, WOCAT); capacity building. There are 2 phases in the process: 1st: eligibility by the Executive Secretariat; 2nd, an assessment by STC experts. Then, feedback, follow-up and success stories.

All relevant presentations, documents and videos are available via the link: <https://4per1000day2019.sciencesconf.org/>

At the end of the Forum, President Zornbach warmly thanked the organizers of the Forum and all the speakers who shared a lot of very interesting information.