



The international «4 per 1000» Initiative “Soils for Food Security and Climate”



Document Forum 7-1 – Report of the 6th Forum Meeting – Glasgow (10 November 2021)

7th Forum Meeting **Wednesday 16 November 2022** in Sharm El Sheikh (Egypt) & on-line via Zoom

The High-Level Segment of the Forum meeting was opened with a welcome address by **Vice-President Gabrielle BASTIEN**.

".../ Since March 2020, the world has been living at the rhythm of the COVID-19 pandemic. This long period where our lives have been put on hold and confined for many of us is hopefully coming to an end. The potentially natural origin of this virus has got us to wonder about the consequences of human activities on our environment on natural ecosystems and on biodiversity in general. For many of us, this has also been revealing of a necessary change in our lifestyle in our interaction with nature and in our vision of development which can no longer be only sustainable it needs to become regenerative. The recovery period which is beginning is making us wonder about our collective attitude facing climate change which has not been the first priority in the last couple of years. Nothing has changed in this regard, and it is still imperative as the theme of COP26 mentions, to unite the world to fight against climate change. The recent IPCC publication is more alarming than ever about the need for all parties to maintain their commitments taken in the context of the Paris accord in 2015 in order to limit global warming to 1.5 degrees. According to this publication it is really more urgent than ever to take concrete measures on the ground. For many this is obvious for others it's a discovery but managing our soils to improve their health and increase carbon sequestration is a serious source of hope. Since 2015 the "4 per 1000" initiative is pursuing its commitment to increase soil carbon stocks in order to mitigate climate change and foster food security. The health of our soils is at the heart of this commitment. Maintaining it and improving it is fundamental to capture carbon through photosynthesis via agriculture and forestry and fits in the sustainable development goals of the United-Nations seeking to improve food security to help agriculture and forestry adapt to climate change and to contribute to climate mitigation. The initiative works hard to raise awareness to all stakeholders about the importance of soil health as a major tool to make our agriculture more resilient our climate more stable and our biodiversity restored. Six years after its creation now 660 member and partner organizations strong and after adopting last year its strategic plan 2050, the initiative is entering a new phase. The initiative will now present to you its implementation plan. Through this new phase, the time has come to mobilize all of its stakeholders, partners, members and friends so that its strategic plan 2050 becomes a reality through strategic alliances and partnerships that will lead to deep transformations. The initiative will participate to defining solutions and will call upon countries of all continents to align on new and adaptive technical itineraries in order for Glasgow to be a major milestone in everyone's commitment. Thank you all so much for contributing to the immense task which is ahead of us and to the long journey towards regenerating our soils through a regenerative agriculture."

Ms. Leigh Ann WINOWIECKI, Soil System Scientist at ICRAF and Professor Rattan LAL, Professor of Soil Science at Ohio State University, both vice Chairs of the Action Track 3 of the UNFSS United Nations Food Systems Summit 2021 gave an inspiring presentation to the assembly:

▪ **Professor Rattan LAL**

Carbon stock present in the atmosphere is: 880 Gigatons (Gt)

Carbon stock present in soils: 2,500 Gigatons (Gt)

The SOM Soil Organic Matter is the heart of Soil Health.

“Soil Health is the Soil’s capacity, as a dynamic & biologically active entity, within natural & managed landscapes, to sustain multiple ecosystems services including net primary productivity, food and nutritional security, biodiversity, water purification and renewability, carbon sequestration, air quality and atmospheric chemistry and elemental cycling for human well-being and nature conservancy.”

- Threshold level of Soil Organic Matter in 0-30 cm layer: SOM: 2.5-3.5% / SOC: 1.5-2.0%.
- Rate of Soil Carbon Sequestration: wetland: 1.500 (kg/ha/yr.)
- Crop yield increase with increase in SOC: Sequestering 10 Mg/ha of SOC in 4PT may increase agronomic yield by 400-1,000 Kg/ha.
- Carbon based Fertilization: Carbon NPK rather than NPK.
- Farming Carbon: “Growing soil carbon as a farm commodity that can be traded: bought and sold and create another income stream for farmers.”
- Societal value of SOC: inherent value: USD 130/ton C = USD 35/ton CO₂. Ex: For 0.5 ton Carbon/ha = USD 65 / ha.
- The One Health Concept: The Health of Soil, plants, animals, people, ecosystems & the planet is one and indivisible.
- The Mantra:
Healthy Soil = Healthy Diet = Healthy People = Healthy Ecosystems = Healthy Planetary Processes.

▪ **Ms. Leigh Ann WINOWIECKI**

Global collaboration for Scaling Soil Health.

At UNFSS 2021, 5 Action Tracks emerged.

The 3rd one consists in boosting nature-positive production. It is led by WWF.

- The Goal: Boost nature-positive production systems at scale to globally meet the fundamental human right to healthy & nutritious food while operating within planet boundaries.

Healthy Soil is essential to achieve UN SDGs.

Investments in Soil Health and practices which promote Soil Health are urgently needed.

So, creation of CA4SH: Coalition of Action for Soil Health. The goal consists of to scale Soil Health. It is about Implementation on the ground, MRV (Monitoring, Reporting & Verification) and Investments to empower smallholder farmers.

Soil is a unifier.

CA4SH will cooperate with other Initiatives and especially with the international "4 per 1000" Initiative.

The following **ministers** spoke during the High-Level Segment, to introduce it:

- Mr Julien DENORMANDIE, Minister for Agriculture and Food (France)

".../... France supports this "4 per 1000" Initiative. Because today, as we all know, we need more than ever to take action to address together a set of challenges that we cannot address separately. My determination is that today, thanks to the science and knowledge developed and widely disseminated by the "4 per 1000" initiative, we know how important soils are, but soils are also a major player in the fight against climate change, in order to contribute to capturing carbon in the soil... / ...The second element of determination is that we know that soils are essential to ensure the sustainable food system that we all want. The third element of determination is that today, we must mobilize. There is a need for this mobilization for the benefit of our soils ... /... And then an element of method, finally, to tell you that to implement this mobilization, this determination, we need a clear course, shared strategic axes, a roadmap ... /... The Initiative "4 per 1000" will now focus on the implementation of its strategic plan 2050, by mobilizing all parties ... /... I am convinced that the soil approach is probably the most important agronomic approach, just as the "One Health" approach is the most important integrated approach from an ecosystem and health point of view. Soil is to agronomy what the "One Health" approach is to the health challenge we face today."

- Mr Uwe FEILER, Parliamentary State Secretary for Agriculture and Food (Germany)

".../... the World Hunger Index 2021 published in October has once again made it clear that the Covid pandemic is exacerbating the hunger crisis. At the same time, the climate crisis is getting worst, and more action is needed. In many countries of the world, climate change is now a serious threat to agriculture and thus to harvests and yields. That is why the "4 per 1000" initiative is more important than ever. It is dedicated to the great potential of our soils as carbon sinks and emphasises the importance of building humus for agricultural land. .../... More humus improves the ability of our soils to store more water. Fertile, healthy soils can provide food for an adult world population. It is the vision of the "4 per 1000" initiative to achieve healthy and carbon-rich soils worldwide by 2050. To make this vision a reality, it is important that all members are actively involved and that other stakeholders are also involved. Through new alliances, through a lively exchange and, above all, for joint solutions and concrete measures. .../... We, the BMEL, support the initiative! We share its vision. .../... As part of our Climate Action 2030 programme, we are funding a wide range of national projects with many millions of euros for innovative and long-term humus development. .../... Another important contribution to the discussion will take place at the GFFA event in January: Sustainable Land Use. I would like to invite you all to this and the "4 per 1000" initiative will be there. We can only be successful if we link our activities wisely and create synergies. Finally, I would like to assure you that Germany will continue to be a reliable partner and an active member of the "4 per 1000". "

- Mr. Luis PLANAS PUCHADES, Minister of Agriculture, Fisheries and Food of the Kingdom of Spain

".../... It is clear that we need to fulfil our commitments under the Paris agreement to limit the impact of global warming. It is the future of our planet, what is at stake, specific actions are essential. .../... It means that the initiative enters in an implementation phase to achieve tangible results. .../... From the Spanish Ministry of Agriculture, Fisheries and food, we are articulating a coherent and diverse package of tools to support the evolution of agriculture in line with European Union strategies aim at reaching a climate neutral economy. Naturally, soils need to play an essential role in this transformation .../...The future regulation, fully integrates the "4 per 1000" Initiative, seeking to increase the organic matter of agricultural soils as well as preserve and improve the biological properties enhancing their management as living soils. It is the basis of a resilient agriculture. In addition, I would like to point out the importance of the new common agricultural policy for the 2023-2027 period .../... In this sense, the Spanish National strategic plan for execution of the next CAP provides a customized response to the different sectors and sub-sector needs .../... Spain will implement specific actions under the carbon free agriculture model through Eco Schemes and innovative elements of the coming CAP promoting agriculture and livestock practices aim at improving the structure of soils, reducing erosion and desertification and increasing content in carbon from them, and reducing emissions.../... Moreover Farmers will also collaborate in achieving these goals by adopting agricultural practices such a direct sowing, conservation agriculture .../... As a member of the Initiative, we will continue to support it and play a key role in facing the challenges for the good of our Generation and the good of our planet. "

- **Ms. Pippa HACKETT**, Minister of State for Agriculture (Ireland)
".../... In the context of contributing to our national efforts to respond proactively to the climate change challenge, my government has committed to supporting reduced management practices on up to 80,000 hectares of organic soils under agricultural management. .../... In recent months we have launched two research projects to address knowledge deficits in this area. .../... My government has also provided funding for the formation of a nationwide network of best practice demonstration and research farms known as signpost farms and this network will allow farmers to view novel approaches to carbon sequestration activities such as using multi-species sorts, using lime and incorporating straw into arable lands and improved fertilizer management. .../... I hope that some of the activities that my government has initiated in recent months can act as a test bed for other countries to assess how policy options can be used to protect and grow our valuable soil carbon resource and also to inform farmers and the wider agriculture sector not only on the economic benefits but also the environmental and social benefits of protecting this valuable resource. .../..."
- **Dr Nagy ISTVÁN**, Minister of Agriculture (Hungary)
.../... The Hungarian agriculture is a committed member of the international "4 per 1000" Initiative. Sustainable land use and the preservation of good soil condition are also extremely important for our country, which is why we have been happy to join this excellent program for 5 years now. .../... We also understand that farmers need tangible help to deal effectively with the challenges posed by climate change. .../... We have prepared a map of Hungary's organic carbon stock. We have created and published the Soil Protection Action Plan, which aims to map soil degradation problems in all fields across the country, with the involvement of soil conservation experts. Cost-effective solution plans will also be prepared for the necessary interventions. In addition to professional assistance, we also provide financial support to farmers. The National Soil Database is under development, digitized, georeferenced soil data allow the time-series analysis and monitoring of the condition of

soils, especially the content of organic matter. These measures also serve to achieve the objectives set by the “4 per 1000” Initiative stakeholders. Finally, I would like to indicate that we are just in the process of joining the Coalition of Action for Soil Health which initiative has been launched at the World Food Systems Summit in September. .../...

- **Mr. Georgi SABEV**, Deputy Minister of Agriculture, Food and Forestry (Bulgaria)

“.../... The likelihood of a food crisis caused by climate anomalies and trends of accelerated population growth on earth is a global problem that is further aggravated by the Covid 19 pandemic. .../... The goals of the Strategic Plan 2020-2050 of the international “4 per 1000” Initiative are important, now more than ever, for our partnership with many stakeholders in the field of food security and climate change bringing together nearly 650 Members and Partners. .../... Soil is a key natural resource that is at the heart of food security, and we must all pay serious attention to its protection. In terms of soil resources, our country is working on projects under national and EU programs as well as construction of pilot sites for demonstration and training. .../... I consider that serious attention should be paid to the contribution of science, and we are ready to take part in research the results of which should be disseminated among farmers as sustainable results can only be guaranteed when every farmer starts to make individual efforts in this direction at this difficult time for all of us when we face significant challenges. I believe that our efforts to continue the implementation of the Strategic Plan 2020-2050 of the “4 per 1000” Initiative must continue both at the national level and throughout our unification regional and globally. .../...”

- **Mrs. Karen ROSS**, State Secretary for Agriculture, CDFA [California Department of Food and Agriculture] (USA)

“.../... Soil health is part of our new suite of climate smart agricultural practices, but the state of California is making a significant investment in this because we understand its critical importance to our continued productivity, one that is being hugely impacted by climate change. .../... I'm very pleased that, just last month, the legislature passed, and the governor signed for sustainable agriculture 1.1 billion dollars, that's US dollars, in our suite of practices. .../... capacity building is especially important when we look at the diversity of the world's farmers and ranchers. .../... And this is where I have great hope that we, working together, can connect the dots, that we focus on soil as a unifier and that we really focus on how to translate what we know will work, so that every farmer on every acre can incorporate healthy soils practices into their farming, that we have helped them understand what the economic tradeoffs are and how we can help them by showing demonstration projects how they can manage that risk because many times what we know is what we will continue to do, making the change may represent a risk and that's why the last point I want to close in is the critical importance of the whole supply chain being involved in this discussion. .../... There is a saying I learned in Africa that I love: "If you want to go fast, go alone. If you want to go far, go together". That is the purpose of us coming together here and virtually to learn from one another to connect the dots and at the end of the day take home what we have learned and translate it for our farmers and ranchers of every size, of every crop, on every continent. .../...”

- **Ms. Mairi GOUGEON**, Cabinet Secretary for Rural Affairs and the Islands (Scotland).

“.../... And I really just want to start with some good news first of all and I can announce that Scotland will be joining the international “4 per 1000” Initiative sharing your goal of improving carbon storage and health of our soils. .../... That's why the work that I'm leading

as the rural affairs secretary here in Scotland is seeking to transform how we support farming and food production to make Scotland a world leader in sustainable and regenerative agriculture. .../... We have a soil regenerative group made up of farmers who are working together to establish how best to support, enhance and protect their farm soils. We're also supporting peatland restoration, an important soil in Scotland and we're supporting that through a funding package of 250 million pounds over 10 years. .../... And then from next year, we'll begin a new national test program investing up to 51 million pounds to support farmers and crafters to tackle climate change, improve the environment and support biodiversity. .../... In joining the international "4 per 1000" Initiative, I'm excited that we'll have the chance to learn as well as to share practical application of actions and best practice with other members because the key to successful change is all of us working together by listening and learning along the way and our success will mean that we get to pass to future generations a land and a climate that works for their benefit as well as for the benefit of the whole planet. .../..."

Also speaking during the High-Level segment were the following personalities:

- **Mr. Keiji BANNAI**, Director General of the Agriculture Department, Yamanashi Prefectural Government (Japan)
- **Mr. François MANDIN**, Farmer & President of APAD [Association pour la Promotion d'une Agriculture Durable / Association for the Promotion of a Sustainable Agriculture] / ACS network (France)
- **Mr. Gábor FIGECZKY**, Senior Manager of Global Policy, IFOAM Organics International (Germany)
- **Mr. Juan Lucas RESTREPO**, Director General, The Alliance of Bioversity International & CIAT [International Center for Tropical Agriculture] (Columbia)
- **Dr Bram GOVAERTS**, Director General, CIMMYT International Maize and Wheat Improvement Center (Mexico)
- **Dr Jean BALIË**, Director General, IRRI International Rice Research Institute (Philippines)
- **Ms. Valérie VERDIER**, CEO, IRD [Institut de Recherche pour le Développement / Research Institute for Development] (France)
- **Ms. Elisabeth CLAVERIE de SAINT-MARTIN**, CEO, CIRAD [French Agricultural Research and Cooperation Organization] (France)
- **Mr. Philippe MAUGUIN**, CEO, INRAE [Institut National de Recherche sur l'Agriculture, l'Alimentation et l'Environnement / French National Research Institute For Agriculture, Food and Environment] (France)
- **Dr Hsueh-Shih LIN**, Director General, Taiwan Agricultural Research Institute, Council of Agriculture (Taiwan)
- **Mr. Eduardo MANSUR**, Director, Office of Climate Change, Biodiversity and Environment (OCB), FAO [Food & Agriculture Organization of the United Nations] (Italy)
- **Mr. Stephen QUEST**, Director General, JRC [Joint Research Centre] (European Commission)
- **Ms. Laura HÖIJER**, Ph.D, Content Director, BSAG Baltic Sea Action Group (Finland)
- **Dr Martin FRICK**, Director, World Food Programme Global Office (Germany)
- **Ms. Katharine HAYHOE**, Chief Scientist, TNC The Nature Conservancy (USA)

- **Dr Bruno OBERLE**, Director General, IUCN [International Union for Conservation of Nature] (Switzerland)
- **Mrs. Carmen MUÑOZ-DORMOY**, President of Planet A® (France)
- **Ms. Margaret KIM**, CEO, The Gold Standard (Switzerland)
- **Mr. Aziz BOUHEJBA**, President, APAD Tunisie [Association Pour une Agriculture Durable / Association for a Sustainable Agriculture] (Tunisia)
- **Mr. André LEU**, International Director, Regeneration International (Australia)
- **Mr. Bharat KAKADE**, President and Managing Trustee, BAIF Development Research Foundation (India)
- **Ms. Delphine SMAGGHE**, Senior Vice President Purchasing, Quality, Sustainable Development and Communication at McDonald's France (France)
- **Mr. Seth ITZKAN**, Co-Director and co-Founder of Soil4Climate (USA)
- **Dr Muhammad IBRAHIM**, Director General, CATIE (Costa Rica)
- **Ms. Eva VANDEST**, Head of Public Affairs, Amarenco Group (Ireland)
- **Mr. Axel REINAUD**, Co-founder & President, NetZero (France)
- **Mr. Youssef BRAHIMI**, Chair, DesertNet International (Belgium)
- **Mr. Iain COPPING**, Director, Springfield Agri SOS Save Our Soil (UK)

Before opening the floor to the various colleges of the Forum to express their views on how coalitions could work, three presentations were made to launch the reflection.

- **Presentation of the Operational Framework of the "4 per 1000" Initiative and the importance of partnerships and alliances/coalitions for the implementation of the Strategic Plan**

Ms. Béatrice BRETON-ASKAR: In June 2020, the Consortium of member validated the Strategic Plan 2050 which included 24 objectives with targets 2030 and 2050. Following that important step, 24 Task Forces were established to work on the implementation plan, with the help of a Delphi Study methodology and the use of the collaborative platform. The 24 objectives were then split in two families: the Core facilities (actions mainly led by the Executive Secretariat on its own budget through partnerships) and the Global facilities (very important matters which will be conducted by Alliances/Coalitions on specific budgets and facilitated by the executive Secretariat). The Task Forces created in 2021, will be associated, in a form or another to that work of implementation. Ms. BRETON-ASKAR concluded her presentation with the complete "4 per 1000" Operational Framework centered on the "4 per 1000" Initiative bodies (Forum of Partners, Consortium of members, Scientific and Technical Committee, and Executive Secretariat) and the Task Forces with the Core facilities on the left and the Global facilities on the right converging towards the beneficiaries (refer to the presentation document). She launched the call for engagement in partnerships and alliances/coalitions to support respectively the Core facilities and the Global facilities.

- **"4 per 1000": C sequestration for soil health, climate and food security from scientific concept to massive implementation by farmers**

Mr. Gérard RASS from APAD, GCAN and with GODAN, underlined the fact that the initiative is an exciting concept and a wonderful group of people for 6 years. The project presented to you aim to transform the scientific concept to a massive implementation by farmers. In Madrid, it was discussed the potential of soil conservation agriculture for carbon sequestration. The

conservation agriculture in Europe represents only 5% of annual crops. In Africa, the potential is also important and accessible for all farmers. Everywhere in the world, conservation systems exist for all farmers including for animal husbandry, trees and vegetables. The impact of the network is effective for instance when Latin America farmers work together with African farmers. The result on farmers income could be as much as a multiplication by 30 (from 119\$ to 4,000\$ / year in 7 years) with an improved family life.

Scaling up such system is the challenge, and the 2021 Food System Summit considers “healthy & resilient Food Systems as Foundation of Sustainable Development”. High adoption of highly productive conservation systems is vital for food security, but only 12% of cultivable area are under conservation. With an annual increase of 10%, 80% of the arable land could be under conservation agriculture in 2040.

The “4 per 1000” operational framework is a good basis to explain how we can reach that scaling up. RECSOIL – Recarbonization of global soil from FAO-Global Soil Partnership is also a good vector. Evaluation of soils by multiple criteria is very important in the process (MRV protocol, for instance from GSP for SOC, also reviewed by the “4 per 1000” Scientific and Technical Committee).

How can this work through carbon offsetting? In France, APAD, 250 farmers were certified and labelled “In the Heart of soils” to proposed to private companies to pay for the offsetting of GHG emissions and achieve neutrality, for each ton of carbon stored in soils by farmers (proved by a certificate in the framework of “Label Bas Carbone”, but other standards exist such as VERRA or Gold Standard).

Mr. RASS stressed some points of vigilance to ensure farmers participation such as : 1) new systems must ensure better results for farmers 2) results of the change must be visible in the fields by all, 3) policy makers must guarantee the availability of enabling technologies on the long term 4) Using the power of the group to ensure the transition, the farmers organizations leading the change must be recognized by policy makers and stakeholders as legitimate operator of the transition 5) Simplification of data collection through digitalization (GODAN) 6) price of ton of carbon must be stable and high enough to pay for the effort (presently from 4 to 100 € : very variable). In summary, the added value should help the farmers to change their Farming Systems, and not just becoming a business for the middlemen.

This mechanism a real way to support agricultural transition for farmers with a real impact on environment and the climate, not only reducing GHG emission, but also increasing SOM which improves all related ecological functions, this is a real transformation of the ecosystem. But the price of the carbon must enable to fund the development of a serious project, this is not greenwashing.

The policy makers have the responsibility to stimulate the global carbon market: 1) price of a ton of C must be stable to enable long term investment by farmers 2) farmers must keep ownership of their data 3) simple and minimum costs systems of certification/verification (no bureaucracy) 4) digital data should be privileged. The added value must help the farmers organizations to grow and serve the farmers.

The expectations from farmers organizations are to reach a multiparty agreement on a methodology with scientists, farmers and at international level, with the recognition of sustainable practices for farmers, such as conservation agriculture and the increase of organic matter in soils. Making carbon offsetting favorable to farmers a way to accelerate our transition, with the support of public policies and society. It is time for all to engage with farmers to save our soils. And now, what is next?

- **A guide on Soil Carbon MRV for Agriculture by World Bank**

Mr. Nkulumo ZINYENGERE, Agricultural Specialist, Agriculture & Food Global Practice at World Bank presented the guide mentioned in title. Motivations of the World bank to prepare that guide was that agriculture and food systems must meet multiple challenges: feeding 10 billion people, without using more land, while lowering emissions, improving climate resilience, reducing water stress, and lifting the extreme poor who work in the food system out of poverty. In this regard, investing in soil health through soil organic carbon reaps multiple benefits among which climate change mitigation, enriched soil biodiversity and improved food security. Soil organic carbon is a key Natural climate solution to meet the Paris agreement objective. But investments and actions to effect SOC gains at scale are slower than needed, and one need. Driving investment-oriented actions promoting soil health and carbon storage need a strong business cases and track record of success of public and private investments, and compelling value proposition for farmers. So, on the investors side, very robust accounting protocols are needed even though they are costly, and on the farmers and land owner side, one needs convincing approach to adopt soil health enhancing practices and stick to them. So, what kind of incentives should be put in place to incentivize this indispensable transition. This led to the question of how the MRV protocol should be designed and what kind of finance models can be used. In order to help the team working at the field level, a guide to setting up SOC accounting, approaches and tools was elaborated, including simple specific points that project managers should be careful on. The right balance should be found between the low and the high complexity cost accuracy. It is then proposed to deploy SOC accounting in projects, particularly in developing countries to overcome barriers. For instance, as far as SOC direct measurements are concerned, cost of infrastructure needs to be studied, the possible solutions being portable, low-cost spectral techniques. But Practice-based monitoring, and modeling are also important aspects to consider. Mr. ZINYENGERE, listed some lessons for important areas of investment and action by stakeholder coalitions such as:

- Invest to dramatically reduce costs; combination of approaches and tools including emerging technologies;
- Invest in making protocols and frameworks accessible, embed in local systems, relatable to farmers, data widely available through integrated databases;
- Invest in capacity building, farmers, local institutions, to easily deploy SOC MRV systems in developing country contexts.

In conclusion, he indicated how the WB is continuing to engage in soil organic carbon MRV: 1) Soils embedded in the Climate Change Action Plan (2021-2025) as one key NCS 2) a strong focus on impact and 3) working with country teams to pilot SOC MRVs protocols in projects.

The floor is open to the various colleges (Countries and International Organizations, Farmers organizations, NGOs, Scientific institutions, Businesses)

Mr. John KAKANGA, a small holder farmer from Uganda, indicated that among the presentations which were all important, he has noticed one important subject which was that translating soil science into the field was still lacking. He also mentioned that it was discussed about carbon, carbon market, but that the language used should be simplified to be understood by the farmers at the grassroots. He emphasized the fact that World Bank, governments and even FAO are doing a very good job on soils for long time, but that the problem is that on the billions of money invest on that subject, the flow is not reaching the farmers at the grassroots. So as “4 per 1000” initiative entering in the phase of implementation, he expected that all partners will be careful about the fact that the people at the grassroots would effectively benefit from the carbon, mainly the poorest and the vulnerable

communities which are the one who benefit from the soil. He stressed the attendance to address that question, because if not all the meeting would have been only talking.

A lady supported the previous intervention and wished more time could have been made available for discussion. “Looking at the overall trend of the conversation today which was stimulating and showed that so much happen in this field, and that “4 per 1000” initiative is the epicenter of the discussion on soil carbon within COP 26, it is probably important to look at the balance of the conversation which seems to be still rolling ahead towards market solutions. Going forwards, it would be important to open up questions and debates around whether carbon market, carbon credits, can modify carbon which is a very exclusive language not necessarily accessible to grassroot farmers for example. Is it the most expedient and effective way of going about it, who does it benefit to, who does it exclude?”.

Vice-President Gabrielle BASTIEN thanked the two persons and recognize that those aspects even if they are not the only ones, are very important to be taken in consideration on how we can foster grassroot action on the ground for 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/featured)

Forum meeting

(All documents are available on the website dedicated to the "4 for 1000" day in 2021: <https://4p1000day2021.sciencesconf.org/>)

- Adoption of the Agenda

The Agenda was adopted by the Forum

- Approval of the Forum report n°5 – Online, 10 December 2020

The report was adopted by the Forum.

- Annual Activity report for 2020-2021

The annual Activity report for 2020-2021 was presented to the Forum by **Mr. Paul LUU, Executive Secretary**. The Forum took note of all the work done in the past year. The main achievements since the online meeting at the end of 2020 were the organization of statutory meetings (5th Partners Forum, 6th Members Consortium, 11th (online) & 12th (Hybrid from Glasgow) Scientific and Technical Committee meetings, 5 Bureau meetings), participation in international meetings, continuation of activities and partnerships with other initiatives. The Presidency has also been modified with the appearance of a presidency with a president and two vice-presidents (one incoming and one outgoing). The communication via the Newsletter (4 issues in 2021) and social networks has also been accentuated and continued, as well as the update of the database and the map of partners and members. The initiative held its 1st virtual fair on its collaborative platform with a launch during the European Union's Green Week. It also signed a new financial support agreement with the French Ministry of Agriculture, and a partnership agreement with the NGO AFRIS for the development and operation of the collaborative platform.

- Annual Activity Report 2021 of the Scientific and Technical Committee

Dr. Cornelia RUMPEL, Chair of the STC, presented the main activities of the Committee in the past year. The STC was able to meet twice in 2021, virtually for one and in hybrid condition

for another one, due to the context. The STC worked on the revision of the Set of indicators and criteria for project assessment and contribute to the definition of “regenerative agriculture” through the launching of the first issue of Soil carbon info notes. STC also reviewed the “Technical manual on Soil organic carbon management” for GSP FAO. Members of the STC participated to the Third call for projects for formative assessment (18 projects) and the “4 per 1000” Introductory workshop in Latin America and Caribbean online on 16th December 2020. The STC also prepared a paper submitted to Lancet Planetary Health on the “role of soil carbon sequestration to enhance human resilience for tackling global crisis including pandemics” and worked on the collection of articles for a special issue on “regional management practices with positive effects on soil carbon to meet the goals of the “4 per 1000” initiative” (5 regions considered and 30 manuscripts received (9 rejected and 8 published)). STC members contributed to a book “Understanding and fostering soil carbon sequestration”, and to articles on “Importance of soil carbon on NDCs” (28 countries) published in Climate policy in addition to two CCAFS notes on specific agricultural subsectors. Finally, the Committee presented its 10-point action plan for 2022.

- 1- Contribute to the implementation plan of the “4 per 1000” initiative
 - 2- Review of the synthesis of the Delphi Study
 - 3- Participate in project assessment
 - 4- Elaboration of info note on the link between social and biophysical sciences
 - 5- Revision of research pillars
 - 6- Writing of scientific paper about region specific boundary conditions for implementation of sustainable practices
 - 7- Finalization of special issue (to be published in 2022)
 - 8- Continue working with GSP
 - 9- Continue and strengthen collaboration with partners and specific projects
 - 10- Start to think about organization of a scientific conference on the “4 per 1000”
- Presentation of the Delphi Study on the 24 strategic objectives and conclusions and on the development of the “4 per 1000” Implementation Plan

Mr. Marc BERNARD with the help of Ms. Claudia SCHEPP recalled the structure of the 2050 Strategic plan, and the Delphi Study based on the 24 objectives of it. The idea was to develop a comprehensive implementation strategy on a strong contribution of partners. Each objective was studied to establish for each objective what is the problem at its origin, the causes, the critical success factors and the barriers, and finally the activities to fulfill it. 3 iterative rounds were organized with the assistance of the Executive Secretariat and the 24 task forces. On a total of 332 members of the Task Forces registered from the 5 regions of the world (region wise, more contributions came from Europe and Africa, while research institutions, NGOs and private companies were well represented in the contributors), 124 experts contributed very actively to that Delphi Study, through (3 hours of time contribution for each objective) 4519 statements as responses on the 24 objectives. Comments and proposal were also made on the wording of the objectives and the targets 2030 – 2050 and will be used to elaborate the version 2 of the Strategic Plan. The document was translated in French as well.

Marc BERNARD also presented the “4 per 1000” operational framework, with the distinction of Core facilities and Global facilities. To reach that stage, the initiative will promote the constitution of alliances and partnership to implement projects on activities defined in the strategy, in the global context and stakeholders. By the end of 2022, he explained that it is expected to have some partners submitting projects proposal to funding organizations in that framework. He suggested and detailed the following next steps such as 1) getting organized,

2) Assess needs, core competences and funds, 3) Identify priority topics and 4) Build partnership and Alliances. He also insisted on the critical success factors of such a work: real teamwork, good planning, active participation of partners, sharing of the work, and adequate budget planning.

The following comments and questions were raised by the presentation:

Dr. Jean-François SOUSSANA underlined that what was proposed seems not to include what partners and members were already doing. It was clear after the HLS that many partners were developing their own plans, providing fundings, policy options for farmers. A systematic review of what partners and members were doing at the level of each country would be very helpful. He questioned the creation of alliances and the huge number of possible combinations of different stakeholders including funders, which will be difficult for the Initiative to handle.

Marc BERNARD recognized that the process proposed is ambitious and challenging, and answered that the Executive Secretariat team get reinforced to face the load of work, and that the existing projects and activities will be collected in the first hand to start the whole process.

Dr. Jean-Luc CHOTTE would like to get confirmation that the STC will assess the implementation plan, with the help of partners and members from the various colleges including the scientific and education institutions one. He also questioned the STC chair about the connections with other scientific bodies such as SPI from UNCCD, because only ITPS (from GSP-FAO) was mentioned in the STC report.

Paul LUU stressed the fact that since the beginning of the activities of the STC, such relations with other scientific bodies of international conventions and organization were established, starting with ITPS from GSP. In the future those relations could be developed and strengthen, according to the means allocated to the Initiative. He also confirmed that the STC will be deeply associated to the work on the final version of the implementation Plan, as well as the Scientific and education Institutions college representatives in the Bureau.

Cornelia RUMPEL also emphasize the importance of such connections to be developed in the future including UNCCD and UNEP.

Marc BERNARD concluded that the implementation Plan is a very important and high-level plan that more meetings will be needed to work in detail on it.

- Presentation of the "Twin Regions" Project and its implementation

Mr. Marc Bernard presented the Twin Regions Project (TR) objective and recalled that the project concept seeks a framework for decentralized international action and solidarity that enables self-determined and self-reliant citizen engagement in climate change mitigation and ecosystem restoration. It is based on innovation, but mainly on global cooperation and conflict management, and concern the beneficiaries and belong to the cross-cutting actions of the Strategy 2050. The reworded objective resulting from the Delphi Study is “The concept of TR to unleash the synergetic potential of cooperation between contrasting regions to combat climate change, restore ecosystems and improve livelihoods, is being adopted worldwide” (<https://twinregions.org>). Marc BERNARD mentioned the absolute need to change our life behavior and referred to RethinkX report of August 2021 and the publication from ETH Zurich on “How trees could help to save the climate” (July 2019) showing the potential of capture +/- 205 Gt of C (equivalent to 100 ppm of atmospheric CO₂) by forest regrowth on 0.9 billion hectares, not on agricultural lands in addition to storage in soils. The main problem being that the regions which have the ecological potential to capture and store carbon do not have the financial resources to do so, and reversely those which have the financial resources do not have the ecological potential to store. Twin Region proposes to use complementary skills and

resources of two places that come together to overcome their mutual environmental, economic and social, constraints. An example including Copargo in Benin and Alfter in Germany illustrated this complementarity. A possible Twin Region Carbon Market could be established in order to match demand of carbon sequestration from the CO₂ source region and the possible capacity of carbon sequestration in the other region. A Twin Region Market Authority should set the rule and the price for that relation and ensure the monitoring of the process to ensure also that development goals are met. TR can be seen as attractive because it proposes speed and economy, equality and fairness, free up resources, low transaction costs, employment opportunities, proximity and ownership, integration, advanced learning, mutual understanding, public support, aid effectiveness and proud and happy generations. A call for expression of interest will be organized and a social media campaign. Then a plan to start up activities will be proposed, and of course will rely on voluntary support. The aim would be to have TR start-up activities going in all regions by end of 2022.

At the end of the Forum, **Vice-President Gabrielle BASTIEN** warmly thanked the organizers of the Forum and the High-Level Segment and all the speakers who shared many interesting information.

All presentations and documents are available via the link:
<https://4p1000day2021.sciencesconf.org/>

and videos are available on the Initiative's YouTube channel:

https://www.youtube.com/channel/UCvBmNtaHxi3PcvbUkkL_UQg/featured

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