The « 4 per 1000 » Initiative
General presentation

Paul LUU, Executive Secretary

April 4th, 2019
An annual increase of 4% of the world soil surface C stocks (860*0.004) would nearly compensate the annual CO2 increase of the atmosphere.
Why storing C in soils?

• To **Mitigate climate change**
  - Attenuate GHG emissions. OC can be stored in soils for decades to millenia
  - Low cost negative emission technology

• To **Adapt to climate change**
  - Soil organic matter increases water retention capacity by soils,
  - Decreases sensitivity to erosion

• To **Contribute to food security & restore degraded soils**
  - Major role of soil organic matter in soil fertility
  - Yields stability
  - 30% world soils severely degraded (FAO - 2015)
Goals of the 4°/oo Initiative

Increase carbon sequestration in soils as organic matter, for:

➢ increasing food security
➢ adapting agriculture to climatic changes
➢ mitigating climate change

Pursuing the objectives of sustainable development adopted by the United Nations.
Targets of 4°/oo and SDGs

Direct TARGETS

Wi是中国

ASSOCIATED TARGETS

Safeguard TARGETS: help Ex-ante assessment to avoid harmful impacts
Governance of the initiative

**THE FORUM OF PARTNERS**
A CONSULTATIVE BODY
Any organization sharing the principles and goals of the initiative
Focuses, collaboration, partnerships

**THE CONSORTIUM**
A DECISION-MAKING BODY
Any not-for-profit, non-commercial organization committing to the initiative
Decisions on focuses, policy, work programmes, budget, indicators for inclusion in the project evaluation reference criteria, etc.

**THE SCIENTIFIC AND TECHNICAL COMMITTEE**
A SCIENTIFIC BODY
14 scientific experts
Focuses for the research programme, scientific and technical advice for projects, indicators for the reference criteria, database for the resource centre, etc.

**The Executive Secretariat**
AN EXECUTIVE BODY
providing support to the three bodies above

Action plan
Research program
How to become a partner or a member?

Paris - 2015
Declaration of Intention to support « 4 per 1000 » Initiative

Marrakesh - 2016
Declaration of Intention for the formation of « 4 per 1000 » Initiative Consortium

Signing to become a PARTNER and participate to the FORUM

(Not open to commercial or for-profit organizations)
Some Partners & Members in 2018
Partners & Members (Dec. 2018)

FORUM partners
359 signatories of the Paris Declaration
Including 42 countries & provinces, 12 international organizations, 14 foundations & development banks, 110 NGOs, 80 research & education bodies & Universities, 40 Farmers organizations and 61 enterprises

CONSORTIUM Members
Already 183 signatories of the Declaration of Intention n°2

Chair: Dr. Ibrahim MAYAKI (ES NEPAD)
Vice-Chair: Mr. Stephane LE FOLL (ex - Min. Agriculture – France)
Scientific & Technical Committee

- Dr. AMIRASLANI Farshad – Socio-eco natural resource management (Iran)
- Professor CHENU Claire – Soil scientist – soil organic matter (France)
- Dr. GARCIA CARDENAS Magali – Agroclimatology (Bolivia)
- Dr. HENRY Beverley – Plant ecophysiologist & agroecosystem modelling (Australia) *(from Jan. 19)*
- Dr. KAONGA Martin – Agroforestry carbon biogeochemistry (Zambia)
- Dr. KOUTIKA Lydie-Stella – Soil scientist – soil organic matter (Rep of Congo)
- Dr. LADHA Jagdish – Soil fertility and plant nutrition (India)
- Dr. MADARI Beata – Soil scientist – C and N cycling (Brazil)
- Dr. RUMPEL Cornelia – Forester – terrestrial organic matter (Germany)
- Dr. SHIRATO Yasuhito – Agricultural and soil scientist (Japan)
- Professor SMITH Pete – Soils and global change (United Kingdom) *(until Dec. 18)*
- Professor Soudi Brahim – Agronomist – soil science (Morocco)
- Dr. SOUSSANA Jean-François – Plant physiologist (France)
- Dr. WHITEHEAD David – Crop physiologist – forestry (New Zealand)
- Dr. WOLLENBERG Lini – Natural resource management (USA)
Scientific & Technical Committee

Countries where STC members are coming from
Set of reference criteria for evaluation of projects & actions
Criteria, indicators, methods and units

**Soil carbon and land conservation or restoration**

- **Agricultural practices**
  - Permanence, Additivity, No leakage
  - Methodology based on IPCC (Tier 1, 2 or 3)
  - (tonnes C per ha) Depth > 20 cm Duration: 20 yrs or more

- **Land conservation**
  - Fraction of area under soil conservation/restoration
  - Methodology based on WOCAT
  - (tonnes C per ha) Depth > 20 cm Duration: 20 yrs or more

- **Forestry practices**
  - Permanence, Additivity, No leakage
  - Methodology based on IPCC (Tier 1, 2 or 3)
  - (tonnes C per ha biomass & soil) 20 yrs or more

**Mitigation**

- **N₂O & CH₄**
  - Any increase in GHG emissions should not be greater than soil C sequestration
  - Tier 1: Activity data and default emission factors; Tier 2: site-specific data
  - (tonnes CO₂e per ha per yr)

- **Fossil energy**
  - Any increase in fossil energy use should not be greater than GHG balance improvement
  - Same as above
  - (tonnes CO₂e per ha per yr)

- **Lifecycle assessment**
  - e.g. (GLEM, IUCN)
  - Number and diversity of livelihoods and crops
  - (kg CO₂e per ha, kg ag. product)

**Safeguards**

- **Enhanced land rights**
  - Access and rights for local and natural resources
  - Avoided grievances on land and water rights
  - (Qualitative)

- **Well being, human rights**
  - Promote positive community relations and awareness of project activities
  - Free prior and informed consent, health, safety, equity (gender, indigenous people)
  - (Qualitative)

- **Education, training and participation**
  - Improved training, education and participation
  - Number and diversity of people
  - Semi-quantitative

- **Ecosystem services**
  - Biodiversity & ecosystem services
  - Critical natural habitats, no invasive species introduced, reduced use of bias
  - Semi-quantitative

**Food security**

- **Supply & stability**
  - Crop yields increased (reduced variability)
  - Field surveys compared to control or historical
  - (tonnes DM per ha, average and inter-annual variability)

- **Access**
  - Gross margin of ag. production maintained or improved
  - Costing methods
  - (Local price per ton ag. product)

- **Safety & Quality**
  - Healthy and safe food
  - Nutrient deficiencies in production mix
  - Health hazards surveys
  - Semi-quantitative

**Adaptation**

- **Yield & animal production stability**
  - Reduced variability (yields, dairymeat production)
  - Time series compared to historical (or controls)
  - (inter-annual production variability)

- **Resilience to extreme events**
  - Reduced production losses, increased recovery
  - Surveys, insurance premiums, early warning
  - (avoiding losses)

- **Water resources**
  - Water table, stream levels compared to historical
  - Relationships between water table, peak discharge and rainfall
  - (volume of water)

- **Biodiversity**
  - Maintained or increased landscape biodiversity
  - Plant species diversity, patrimonial species
  - Shannon index, patrimonial species
The Four pillars of the International Research and Scientific Cooperation Program

1st Pillar: Estimating the potential of soil carbon sequestration and associated benefits

2nd Pillar: Developing practices adapted to specific soil and climate conditions

3rd Pillar: Define and strengthen the enabling environment

4th Pillar: Monitoring, reporting and verification of soil carbon
Welcome to the "4 per 1000" Initiative

WHAT IS THE "4 PER 1000" INITIATIVE

The international initiative "4 per 1000", launched by France on 1 December 2015 at the COP 21, consists of federating all voluntary stakeholders of the public and private sectors (national governments, local and regional governments, companies, trade organisations, NGOs, research facilities, etc.) under the framework of the Lima-Paris Action Plan (LPAP).
Sign in with your 4p1000 Login in the top/rightmost corner of this screen in order to access the full functionality of the Hub (and click the "Keep me logged in" option in order to bypass this screen in the future).

Connectez-vous avec votre Login 4p1000 dans le coin supérieur droit de l'écran afin d'accéder aux fonctionnalités complètes du Hub (et cochez l'option "Keep me logged in – gardez-moi connecté" afin de passer cet écran dans le futur).

Inicie sesión con su nombre de usuario 4p1000 en la esquina superior/derecha de esta pantalla para acceder a todas las funciones de la plataforma (y haga clic en la opción "Mantenerme conectado" para omitir esta pantalla en el futuro).

WELCOME TO THE COLLABORATIVE PLATFORM OF THE 4 PER 1000 INITIATIVE

This platform allows the members of the initiative to get in touch, to discuss, debate and exchange knowledge, and possibly to collaborate together to set up concrete joint projects.

If you have joined the Initiative 4 per 1000 by becoming a member of the forum, you have been automatically registered on the platform and an official login + temporary password has been communicated to you by email...

If you have forgotten this information or accidentally deleted the email that contained it, send an

BIENVENUE SUR LA PLATEFORME COLLABorative DE L'INITIATIVE 4 POUR 1000

Cette plateforme permet aux membres de l'Initiative de rentrer en contact, de discuter, débattre et échanger des connaissances, voire éventuellement de collaborer ensemble pour monter des projets concrets communs.

Si vous avez rejoint l'Initiative 4 pour 1000 en devenant membre du forum, vous avez été automatiquement inscrit sur la plateforme et un login officiel + mot de passe temporaire vous a été communiqué par email.

BIENVENIDO A LA PLATAFORMA DE TRABAJO COLLABORATIVO DE LA INICIATIVA 4 POR 1000

Esta plataforma permite a los miembros de la Iniciativa ponerse en contacto, discutir, debates y intercambiar conocimientos, y posiblemente colaborar juntos para desarrollar proyectos conjuntos concretos.

Si se ha unido a la Iniciativa 4 por 1000 al hacerse miembro del foro, se ha registrado automáticamente en la plataforma y se le ha enviado un nombre de usuario de acceso oficial + contraseña temporal por correo electrónico.
International meetings identified as priority for the Initiative in 2019

<table>
<thead>
<tr>
<th>Meetings</th>
<th>Dates</th>
<th>Place</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>« 4 per 1000 » Asia Regional Meeting</td>
<td>Mid-May</td>
<td>Shiga (TBC)</td>
<td>Japan (TBC)</td>
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<tr>
<td>STC n°7</td>
<td>End of May</td>
<td>Montpellier</td>
<td>France</td>
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<tr>
<td>STC n°8</td>
<td>9th &amp; 10th December</td>
<td>TBC</td>
<td>Chile</td>
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<tr>
<td>Forum n°4</td>
<td>11th December</td>
<td>TBC</td>
<td>Chile</td>
</tr>
<tr>
<td>Consortium n°5</td>
<td>11th December</td>
<td>TBC</td>
<td>Chile</td>
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<tr>
<td>New England Agriculture and Climate Symposium</td>
<td>Begining 2020</td>
<td>Boston</td>
<td>USA</td>
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<tr>
<td>« 4 per 1000 » Mediterranean Regional Meeting</td>
<td>2nd semester or 2020</td>
<td>TBC</td>
<td>Tunisia or other Mediterranean Country</td>
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Thank you for your attention....