

# CCD AND C2A NOTE

**Coordination SUD**  
Solidarité Urgence Développement



## THE '4 PER 1000' INITIATIVE: CAUTION!

After traditionally being conspicuous by its absence from public policy, the soil has been drawing increasing interest in recent months. The FAO (Food and Agriculture Organization) decided to proclaim 2015 International Year of the Soils, and soil has taken up center stage in an initiative launched by France, around two highly topical themes: agriculture and the climate. Agriculture is one of the main sectors responsible for climate change<sup>1</sup> but is also strongly affected by its impacts. With many years of experience in agroecology and soil, civil society organizations are pleased to see the growing interest in these issues. After receiving hardly any attention in previous climate negotiations, it is important that they now be considered priorities at the COP21.



Tree nurseries - Cambodia

In March this year the French Minister of Agriculture presented the '4 per 1000' initiative at the Climate-Smart Agriculture conference in Montpellier. A brochure<sup>2</sup> published by the ministry presents an initiative that puts agriculture at the heart of climate issues, not only as the sector most affected by climate change and as a producer of greenhouse gasses, but also as a solution in terms of mitigation. It also set the '4 per 1000' initiative within the Agenda of Solutions<sup>3</sup> promoted by the French and Peruvian presidencies of the COP20 and 21 and the Secretary General of the United Nations, despite the uncertainties surrounding it at this stage.

<sup>1</sup> 10-12 %, according to the 5<sup>th</sup> Report of the IPCC "Climate Change 2014: Mitigation of Climate Change", p.822.

<sup>2</sup> [http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc\\_wg3\\_ar5\\_chapter11.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter11.pdf)

<sup>3</sup> <http://agriculture.gouv.fr/sites/minagri/files/1509-climat-4pour1000-gb-bd.pdf>

<sup>4</sup> Lima-Paris action plan aimed at lending visibility to initiatives by states, local authorities and/or the private sector in the struggle against climate change in 12 sectors.



## OBJECTIVES OF THE INITIATIVE

### *Linking food security to the fight against climate change*

In 2015, 795 million people in the world are under-nourished<sup>4</sup> and by 2080 up to 600 million more may also be under-nourished due to climate change<sup>5</sup>. These changes affect farm yields and livestock, the nutritional quality of food and the quality of water, as well as the quality of the soil which, in many cases, is already severely depleted.

This situation has major consequences on food security and people's health. The most vulnerable groups, especially small family farmers in tropical and equatorial regions, are the first to be affected by the negative effects of climate change.

The '4 per 1000' initiative is intended to increase the level of organic matter in the soil and to encourage carbon sequestration, through agricultural practices that are suited to local conditions. It draws on the results of several years of scientific research at various institutes, including INRA, CIRAD and IRD, in France.

The initiative is based on the existence of a direct link between CO<sub>2</sub> capture by plants, carbon storage in the form of organic matter in the soil, and the improvement of soil fertility. The results are a sustainable increase in yields and in their regularity.

When the plant cover captures carbon dioxide, stores it in the biomass and releases oxygen through photosynthesis, the carbon becomes part of the organic plant matter. Then when the plant dies and decomposes, or when organic fertilizers are added to the soil (manure, compost), the carbon in the organic matter is stored in the humus of the soil, whose fertility is thus improved, notably because it can retain water and minerals better.

4 FAO, FIDA et WFP. 2015. The State of Food Insecurity in the World in 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress. Rome, FAO

5 UNDP (2007). *Human Development Report. Fighting climate change*. UNDP, New York, p. 90



Experimental farm to revive indigenous paddy seeds - India



### THE IMPORTANCE FOR AGROECOLOGY OF AN INCREASE IN THE ORGANIC CONTENT OF SOIL

An increase in the organic content of soil is one of the fundamental elements of agroecology, for it enables a reduction of fertilizers and pesticides and contributes to maintaining moisture in the soil, to enabling biodiversity to thrive, and to combating erosion. Agroecology thus participates significantly in the adaptation to climate change by agricultural systems and the populations that depend on them. It has various practices for facilitating carbon storage in the soil by increasing the production of plants (grass, plant cover, agroforestry, etc.) and the amounts of organic matter put back into the soil (spreading manure or compost, putting back crop residues, etc.).

As the United Nations Secretary General announced, since the amount of carbon stored in the soil is two to three times greater than that in the atmosphere, increasing the carbon content of soils by 0.4 % (4/1000) annually would make it possible to store all current CO<sub>2</sub> emissions<sup>6</sup>. The '4 per 1000' initiative therefore aims to increase the organic matter in soil and to restore depleted soil, thus making use of the 'carbon sink' potential of agricultural and forest systems. This carbon increase can be achieved through a wide variety of agricultural and forestry techniques: increasing the plant cover by means of crop combinations, agroecology, agroforestry, simplified crop techniques, zero tillage, etc.

Scientists have not limited their work to agricultural soil only; the process is also being studied for forest soils, for example. Yet the Minister of Agriculture presented an initiative resolutely focused on agricultural land<sup>7</sup> (which accounts for 10 % of the land concerned) so that three essential objectives can be reconciled and made complementary with one another: food security, the adaptation of food systems to climate deregulation and the mitigation of anthropic emissions. The link between carbon sequestration in soil and the improvement of food security is however poorly documented and supported, and does not appear clearly enough in the initiative. The increase of agricultural yields put forward in the '4 per 1000' initiative is not enough to conclude that food security will follow (especially as regards the pillar related to food access).

While the emergence of concepts seeking to reconcile climate and agriculture are a seemingly positive step forward, a number of precautions are nevertheless essential to ensure that they really are effective and to guard against any negative impacts.

<sup>6</sup> Report of the Secretary-General, Agriculture development, food security and nutrition, 18 August 2015, A/70/333, §60

<sup>7</sup> See the keynote addressed by François Hollande at the Paris Climate Summit, 21 July 2015 (in French)

<http://www.elysee.fr/declarations/article/allocution-en-ouverture-du-sommet-des-consciences-pour-le-climat-2/>



Tree nurseries - Cambodia



## POINTS OF ATTENTION AND RISKS OF THE INITIATIVE

### *The urgency to frame the '4 per 1000' initiative by strong guarantees*

Because they are cross-cutting issues, the soil and food security must be linchpins in the fight against climate change. For the moment, the '4 per 1000' initiative raises a number of questions to which clear and coherent answers need to be given.

### THE '4 PER 1000' MUST NOT DELAY STRONG COMMITMENTS ON THE REDUCTION OF GREENHOUSE GAS EMISSIONS

#### *Between sectors of the economy*

More carbon storage in the soil should not be understood as a license to emit as much or more in other sectors of human activity. By presenting the '4 per 1000' as a vast mechanism of compensation for emissions, certain economic players could take advantage of the system simply to maintain their emission levels in their industry while funding soil restoration programmes in developing countries, to obtain a result of virtually zero emissions (the zero net emissions concept<sup>8</sup>).

This compensatory approach must be seen in relative terms, particularly in view of the limits intrinsic to carbon sequestration in the soil, related to non-permanency and reversibility<sup>9</sup>.

#### *In the agricultural sector*

Even though the soil's capacities for storage are currently largely under-exploited, a focus purely on carbon in the soil should not preclude the more general challenging of the productivist agricultural model and food system. Both of these contribute significantly to global warming, both upstream and downstream of production (over-processing of products, excessive packaging, transport, waste of food, over-consumption).

Moreover, by promoting more carbon storage in the soil, the '4 per 1000' initiative does not provide an answer to the challenge of reducing emissions in the agricultural sector. Agriculture contributes to global warming mainly through emissions of methane (CH<sub>4</sub>), nitrogen protoxide (N<sub>2</sub>O)<sup>10</sup> and carbon dioxide not emitted by the soil (production of fertilizers, farm implements, transport).

8 [http://www.peuples-solidaires.org/sites/files/actionaid/rapport\\_actionaid\\_zero\\_emission\\_nettes.pdf](http://www.peuples-solidaires.org/sites/files/actionaid/rapport_actionaid_zero_emission_nettes.pdf)

9 [http://www.fibl.org/fileadmin/documents/de/news/2012/calas/4\\_CaLas2011\\_Smith.pdf](http://www.fibl.org/fileadmin/documents/de/news/2012/calas/4_CaLas2011_Smith.pdf)

10 Methane (which will generate 25 times more heat than carbon dioxide in the next 100 years, and 72 times more in the next 20 years) and nitrogen protoxide (298 times more heat than carbon dioxide) will contribute respectively around 30 to 50 % of greenhouse gas emissions imputable to agriculture over the next 100 years.



Salinization and loss of soil fertility - Senegal

## AGROECOLOGY AND LOCAL FAMILY FARMING: LEVERS TO PRIORITIZE

Not all the agricultural models contribute equally to climate change. Industrial agriculture contributes heavily to the problem, whereas local family farms<sup>11</sup> contribute far less and are far more resilient when it comes to the impacts of climate change. Small scale farmers should be the first to benefit from the initiative because they have a fundamental interest in taking care of the land they farm. Yet, because they do not often have the means to do so, they could paradoxically be excluded from the initiative if everything possible is not done to protect them (from competition from products imported cheaply or from land grabbing) and actively to support them on their own scale. At the same time, certain models and practices of economic and financial players could be promoted by the initiative, simply because of their impact on soil carbon, even though they could contribute to the exclusion of rural communities, to land grabbing, and so on. The agricultural models and practices supported in the framework of the initiative must therefore be clearly defined in terms of criteria of exclusion and/or inclusion, so that small farmers are favoured.

This implies a global evolution of agricultural policies so that agroecology and small scale farmers are prioritized. It is therefore important to closely associate farmers, farmer organizations, and women. Small scale farmers produce 70 % of the world's food and as such have a key role to play in protecting the soil. Due to gender inequality in access to land<sup>12</sup>, it is also important to work on women's participation and to take their opinions into account in the institutions that implement and monitor this initiative. Apart from the technical challenges of restoring the soil, there is a lack of clarity on how the initiative is to be implemented.

How can agroecology and local family agriculture be operationalized within the '4 per 1000'? And how can this vast majority of farmers in developing countries be involved?

### AN INITIATIVE LIKELY TO BE ATTACHED TO THE CONCEPT OF CLIMATE-SMART AGRICULTURE

The '4 per 1000' initiative has been described several times as relating to the concept promoted by many international players, such as the FAO, under the name of Climate-Smart

Agriculture. This is supposed to be based on the implementation of three pillars: the sustainable increase of productivity and farm income; the strengthening of resilience to climate change; and the reduction of emissions wherever possible. In this respect, and even without the Climate-Smart Agriculture concept having been defined with any precision, an international Global Alliance devoted to this "climate-intelligent" agriculture was launched in September 2014. Its composition has fuelled many doubts as to the intentions, and the concept has now been adopted by climate-incompatible firms to legitimize their actions<sup>13</sup>. Linking the '4 per 1000' to Climate-Smart Agriculture is taking the risk of leading it into the same dead-end, with two main dangers: losing all substance and implementing actions that do not really contribute to the objectives of mitigating climate change and improving food security.

11 <http://www.coordinationsud.org/wp-content/uploads/Les-Notes-de-la-C2A-N%C2%B017-Ann%C3%A9e-Internationale-de-l'Agriculture-Familiale1.pdf>

12 Women own less than 1 % of the land but make up 43 % of all farmers in developing countries.

13 <http://www.climatesmartagconcerns.info/>

## IDENTIFICATION OF LAND: INDISPENSABLE PROTECTION OF LAND RIGHTS

Launching a world programme to restore and protect the soil requires in-depth reflection on land-related issues. As a source of tension between local communities, states and firms, land is often a subject of intense implicit or explicit conflict.

The identification of land that could be funded by '4 per 1000' is an essential prerequisite. It should clarify any possible risks of speculation or land grabbing, and secure existing land rights.

The announcement of millions of hectares to restore on so-called unused land is likely to attract land grabbers, which would be particularly dangerous for local communities for which degraded land nevertheless remains useful (for gathering, pastoral activities, etc.). The application of voluntary guidelines on the responsible governance of tenure of land, fisheries and forests (the VGGT-2012) and the principle of free prior and informed consent should be unquestionable prerequisites.



## FINANCIAL MECHANISMS: A DECISIVE CHOICE

There is considerable lack of clarity as to the methods of financing this initiative. Close attention needs to be paid to the choices made, since financial mechanisms to combat climate change can have significant consequences on local populations' land rights and, by extension, on their food sovereignty.

### THE LAND DEGRADATION NEUTRALITY FUND:

#### A FUNDING MECHANISM FOR THE '4 PER 1000'?

In 1994, in the wake of the Rio summit, the United Nations Convention to Combat Desertification (UNCCD) was adopted in Paris with the aim of curbing land degradation. An Intergovernmental Working Group (IWG) within the UNCCD was tasked with drawing up a list of concrete actions to attain land degradation neutrality (LDN)<sup>15</sup>. With 12 million hectares (UNCCD estimate) to be restored annually in order to attain this neutrality, a private-public partnership via the Land Degradation

Neutrality Fund (LDN Fund) was devised to finance this ambitious objective. Still in the draft stage, the LDN Fund would be based on various types of investment fund, depending on the surface area concerned. Large areas, where the restoration cost is lowest, would receive purely private funding, whereas small plots (< 4 hectares) might receive private funding under a public guarantee. Based on the principle of loans, with profitability that can be largely deferred, which would not suit small scale producers, this mechanism could prove to be particularly preoccupying.

These risks are related in particular to market instruments which, if they are not accompanied by robust safeguards, are likely to morph into tools for speculation and for the financialization of nature that could lead to land grabbing. The '4 per 1000' initiative is based on scientific research that seeks to measure the processes of carbon sequestration in soil. By thus quantifying carbon, it results in the emergence of an approach based on the carbon market concept. The World Bank has already experimented with it in Kenya, where it has been shown to be of little value for small scale farmers. In fact the inappropriateness of this type of financial mechanism was revealed<sup>14</sup>. Recourse to contract farming between an operator and a small scale producer to finance the restoration of his/her land could also constitute a second danger when the latter carries all the risk. This situation can cause the small scale producer to fall into debt, thereby undermining his/her food security.

The funding modalities will thus be decisive in assessing the coherence of the '4 per 1000' initiative.

14 S. Sharma, *An Update on the World Bank's Experimentation with Soil Carbon. Promise of Kenya agricultural carbon project remains elusive.*, Institute for Agriculture and Trade Policy, September 2012

15 The LDN concept is incorporated into the Rio declaration on 'the future we want', in Objective 15 on sustainable development and Target 15.3. Still lacking clarity, this concept seeks to establish compensation between degraded and restored land (reduction of degradation and restoration of land).

**Coordination SUD** is the French national platform of international solidarity NGOs. Founded in 1994, it brings together more than 160 NGOs active in the fields of humanitarian aid, development assistance, environmental protection, the defense of disadvantaged people's human rights and international solidarity education and advocacy.

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**The Climate and Development Commission (CCD) of Coordination SUD** works to influence the strategies of the development actors, to pass on good practices and to influence international negotiations. It brings together about 20 international solidarity NGOs: **4D, Acting for Life, Action Contre la Faim, AgriSud International, Agronomes et Vétérinaires Sans Frontières, Association la Voûte Nubienne, ATD Quart-Monde, Bolivia Inti-Sud Soleil, CARE-France, Centre d'Actions et de Réalisations Internationales, CCFD-Terre Solidaire, Electriciens Sans Frontières, Fondation Energies pour le Monde, Groupe Energies Renouvelables, Environnement et Solidarités, Gevalor, GRDR, Gret, Initiative Développement, Institut de recherches et d'applications des méthodes de développement, Médecins du Monde, Oxfam France, Peuples Solidaires-ActionAid France, Planète Urgence, Secours Catholique-Caritas France.**

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**The Agriculture and Food Commission (C2A) of Coordination SUD** brings together international solidarity NGOs working to realize the right to food and increase support for smallholder farming in policies that impact world food security: **4D, ACF, aGter, Artisans du Monde, AVSF, CARI, CCFD-Terre Solidaire, CFSI, CIDR, Crid, Gret, Inter Aide, Iram, Oxfam France, Peuples Solidaires-ActionAid France, Plate-Forme pour le Commerce Equitable, Réseau Foi et Justice Europe, Secours Catholique-Caritas France, Secours Islamique, Solidarité et Union Nationale des Maisons Familiales Rurales.**

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