

# **Climate change, health, agriculture and food**

## **Actions needed after COP 21 in Paris**



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It has been estimated that without significant reductions in greenhouse gas (GHG) emissions by the end of the twenty-first century, the global earth warming will rise up to 4.8°C<sup>1</sup>. It has been also observed that many negative impacts of climate change will continue for centuries even if anthropogenic emissions of GHG are stopped, and that the risk of abrupt or irreversible changes increase as the magnitude of the warming increase<sup>1</sup>. Concentrations of GHGs in the atmosphere have reached the highest levels of the modern era, and all efforts by everyone are needed in order to reduce global emissions up to 70% by 2050.

Only a few years remain to prevent an environmental catastrophe, biological ecosystem devastation and the death of individual living organisms (then Earth's final downfall). In these few years essential changes are necessary. In the case of inaction we, as Homo Sapiens, the dominant species of all terrestrial ecosystems, will not be able to prevent or rescue ourselves from the planetary disaster we have caused.

Citizens of the planet can act individually adopting good behaviour, but their main responsibility is to exert firm pressure on their representatives in order to follow up on the Paris agreement with immediate, fair, ambitious and global actions for saving the Earth's climate and our common future.

The main causes in the GHG increase and global warming are deforestation, fossil fuel use and an unsustainable linear model of consumption and uncontrolled growth<sup>2</sup>. We must start by ending the excessive exploitation of primary resources which ends with increasing amount of wastes and toxic effects on the whole environment- on humans, animals and vegetables.

While it is expected that the world population will reach 9 billion by 2050, food production will decline due to a drop in agricultural fields' yield. The fishing industry will share the same fate. The catch of some marine areas will drop by 40% to 60% with serious reverberations on the livelihood of tens of island states which base their nutrition on fishing resources<sup>1</sup>.

There are well-defined relationships between high temperatures, morbidity and mortality<sup>3,4</sup>. Climate change and its environmental and social consequences are able to generate a complex series of health risks<sup>5-8</sup> based on direct biological consequences linked to heat waves<sup>7,9</sup>, extreme weather events<sup>1,6,7</sup> and high levels of temperature-dependent air pollutants (i.e. ozone<sup>10</sup>, secondary particulate matter<sup>11,12</sup>), but also on changes in bio-physical and environmental processes and systems involving food /water availability<sup>7,8</sup> and the spread of vectors and infectious diseases originally confined to tropical areas<sup>13,14</sup>. Furthermore, tertiary risks can generate common effects like migrations, tensions and conflicts related to the scarcity of primary resources (water, food, wood, habitats) precipitated by climate change<sup>7,8</sup>.

No one in the world can consider himself exempt from the damage caused by climatic change. Populations with different economic, social and physical characteristics<sup>15</sup> or living in different geographical areas<sup>16,17</sup> will nevertheless face a variety of consequences.

Finally, the direct and indirect health costs generated by climate change are particularly relevant and have been recently estimated to amount to about \$220/ton of emitted CO<sub>2</sub><sup>18</sup>. The European Commission has calculated that, only in the EU, reducing air pollution through political control and mitigation of climate change would generate (only considering the reduction in mortality) benefits estimated in 38 billion euros/year by 2050. In a broader perspective, the EC predicts that considerably reducing coal consumption would shrink the costs involved in emissions control (excluding CO<sub>2</sub>) of about 50 billion Euros by 2050<sup>19</sup>. The greatest benefits are expected in East Asia, with 220,000-470,000 premature deaths/year avoided by 2030, and a financial saving of 70-840 dollars/tCO<sub>2</sub><sup>20</sup>. In the USA, it is estimated that the benefits (mainly in terms of health costs avoided) from policies reducing CO<sub>2</sub> emissions can be up to ten times higher than the costs required for the implementation of these policies<sup>21</sup>.

Policies leading to climate changes generate increase in gross domestic products (GDP) and this evidence has been, until now, the main justification to tolerate unsustainable models of growth. However, indefinite growth is impossible in a finite world. It has been demonstrated that the increase in GDP beyond a threshold of basic needs does not lead to further increase in wellbeing, since the individualised annual health costs deriving from externalities represent a large burden for the National Health Services and for the economy. Substituting externalities with a greener and more pro-social economy, with environmental sustainable consumption and sustainable behaviours involving non-

material consumption may increase the level of social equity and human wellbeing and may generate dividends in the absence of negative effects<sup>22</sup>.

Thus, a rapid turnaround should be considered the primary target for the whole world population.

An alternative model of evolution is urgently needed based on sustainable economic and social priorities, pointing to information and services, to a marked reduction in the employment of primary resources (mainly coal and other highly polluting fossil fuels) and to the introduction of technologies for efficient and clean energy, for waste reduction, for material recovering and recycling. All these measures will enable a fast and effective containment in GHG growth and global temperature, and a reversal of environmental and health risks.

Thus, a reduction of the global risks caused by GHG and global warming should be pursued in the short term (next 5 years) through specific actions:

1. The economically more advanced countries should invest resources to reduce the impact of climate changes on health and well-being not only of their peoples but also of those living in low and middle income countries.
2. Morbidity, mortality and environmental pollution should be reduced by ensuring a rapid and progressive abandonment of pet coke and coal, also through international cooperation and agreements. This strategy should also involve currently operative plants, by a fast planning of an exit strategy from highly polluting fossil fuels.
3. All efforts should be made to promote a rapid transition to a greater energy efficiency, to reduce waste production, to improve recycle and recovering of materials, to promote biological agriculture and, above all, to promote the use of renewables, also strengthening researches in these areas.
4. To encourage the transition of urban areas to healthier and more sustainable lifestyles and consumption modes both individually and globally. Examples can be considered the construction of buildings with high energy efficiency, low-cost and high sustainable mobility plans, availability of large green areas, promotion of sustainable forms of agriculture. All these measures enhance the communities' adaptive capacity and promote the reduction of urban pollution, GHG emissions and the frequency of acute and chronic diseases such as cardiovascular and respiratory diseases, but also cancer, obesity, diabetes, psychiatric and neuro-developmental illnesses.
5. To promote an adequate economic analysis of the savings (in terms of primary and secondary costs, health costs and externalities) reached through the implementation of measures aimed to reduce GHG emissions. Results should be extensively disseminated. This could contribute to a more rapid implementation of the cultural revolution necessary, in governance, to achieve climate changes interruption and regression.
6. To encourage the involvement of the Ministry of Health and of all stakeholders involved in health care (both at a local and national level) in decision making processes potentially generating climate changes and health damages.

Finally, regarding agricultural policies, we endorse requests by “*La Via Campesina*” (<https://viacampesina.org/en/index.php/actions-and-events-mainmenu-26/-climate-change-and-agrofuels-mainmenu-75/1918-la-via-campesina-key-documents-for-cop-21>):

*“We in La Via Campesina declare once again that Food Sovereignty – based on peasant agro-ecology, traditional knowledge, selecting, saving and sharing local adoptive seeds, and control over our lands, biodiversity, waters, and territories – is a true, viable, and just solution to a global climate crisis largely caused by multinational corporations. To implement Food Sovereignty, however, we need far-reaching change. Among other things, we need comprehensive agrarian reforms, public procurement of peasant production, and an end to destructive free trade agreements (FTA’s) promoted by multinational corporations. In short, we need justice – social, economic, political, and climate justice.*

*In the COP21 they promise a “universal, legally binding agreement”. We in La Via Campesina, representing about 200 million farmers in over 150 peasant organizations, call on governments to prioritize people’s needs over corporate interests and agree to real climate solutions – including peasant-based food systems that cool the planet – when they meet at COP21. Corporate solutions are*

*false solutions, and will not solve the climate crisis. Our solutions are real solutions, and should be prioritized by the UN. ”*

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