



## Science and the Future 2 | Turin, November 2018

### Final statement

We met in Turin from November 12 to 16, 2018, to discuss the global change under way on planet Earth, its causes and consequences on the lives of human beings and the biosphere. Having heard viewpoints from experts of various disciplines and integrated them into a common view, we have agreed to draw up the present concluding statement.

- The impact of human activities on the environment manifests itself in various ways, but first of all, in the perturbation of the nine planetary boundaries identified by Steffen & al. (2015)<sup>1</sup>. Among them global climate is one of the most threatened, with an ongoing epochal change. The climatic system, due to the slowness in adopting effective reactions and despite repeated warnings issued by the scientific community during the past fifty years and even earlier, will shortly be approaching a point of no-return. No-return means serious irreversible consequences not recoverable over timescales acceptable for mankind. The global warming of the Earth is a well-established phenomenon, accepted by the entire scientific community. Its consequences are clearly visible, with a 1° C increase in the last century; if a further rise of the average temperature is not avoided, its impact will be dramatic with both global (sea level rise) and local effects (droughts, heat waves, floods, glacier retreat, hurricanes), which humankind will hardly be able to withstand, without dramatic consequences (diminishing food production, tropical diseases, mass migrations, extreme events).
  - In order to avoid trespassing the no-return threshold and to mitigate the by now unavoidable impacts, immediate and “unprecedented” actions are needed, aimed at reducing the emissions of greenhouse gases into the atmosphere, as established by the UN-IPCC report on the containment of the 1.5 °C rise within 2100.
  - The above task implies reducing the amount of material resources extracted, manipulated, moved around every year and the energy used for those purposes. In short, any increase in the use of matter and energy is globally unsustainable and consequently any economic process (growth) implying such an increase is in turn unsustainable. The purpose must be to reduce the quantity of material production and energy consumption, especially from fossil fuels.
- The present and future impacts of the climatic changes affect the whole humanity in negative and dramatic ways with details difficult to predict, but in any case they will be most heavily felt by the vast majority of poor people in the world.
- The unsustainable economy based on material growth is causing growing inequality between the rich and the poor everywhere, both among nations and within single countries. Inequality, the level of which has reached an unprecedented size since the end of world war II (as highlighted, among others, by the 2007 OECD report) is the source of contrast and conflict, and out of control in a complex and highly non-linear system as the human world is. The growing inequality trend is not a casual and transient phenomenon, but rather it is embodied and implicit in the structure of an economy based on competition and growth in a finite environment.

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<sup>1</sup> W. Steffen et al., *Science*, **347**, Issue 6223, 1259855

- It is urgent to start an evolution of the economy towards collaboration and complementarity rather than competition, which strengthens the strong and weakens the weak, leading to a global unsustainability condition affecting human life on Earth.
- Solidarity cannot be confined to the private and voluntary domain, but must become a guiding criterion for policies of governments both inside nations and in the international arena.

On the basis of the above points we wish now to make an appeal to all decision-making agencies, both institutional and economical,

- to abandon short term policies and business as usual attitudes and to look farther, building medium and long term policies;
- to help inform the general public about the global conditions and trends of our unique and common world, and lead by example, modelling sustainable, systemic decisions and actions;
- to undertake immediate and substantial actions to reduce the release of greenhouse gases into the atmosphere and to direct the economy of developed countries towards innovation, recovery of sustainable traditional practices and quality rather than the increase of mass production;
- to make economic systems inclusive, as they have never been so far.

### **Signatures<sup>2</sup>** *(list updated at Dec. 17<sup>th</sup> 2018)*

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<sup>2</sup> Subscriptions are personal and do not involve everyone's institution.

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