



**Ministry of National  
Education and Vocational  
Training**

**Hassan II Academy of  
Science and Technology**

**Higher Council for Education,  
Training and Scientific  
Research**

## Seminar " Education and Climate "

Friday, November 11<sup>th</sup> 2016 - Training and National Meetings Center (CFRN) - Rabat

Seminar co-organized by:

- The Ministry of National Education and Vocational Training;
- The Hassan II Academy of Science and Technology;
- The Higher Council for Education, Training and Scientific Research;
- The Research and Development Association, Morocco

As part of the scientific, cultural and educational events that are part of the efforts of the international community to combat the effects of climate change on our planet, the aforementioned partners organized a seminar under the theme " Education and Climate ".

This seminar was awarded by the COP22 Label.

The program consisted of three sessions such as:

### **Session 1:**

**Presentation 1:** Vision and Actions for Science, Climate and Education, Hassan II Academy of Science and Technology. Mr. Abdeslam Hoummada.

**Presentation 2:** Vision and Actions for Science, Climate and Education, Ministry of National Education and Vocational Training. Mr. Fouad Chafiqi.

### **Session 2:**

**Presentation 1:** Climate change: new scientific challenges and new pedagogical challenges. Mr. Hervé Le Treut, Member of the Academy of Sciences, France.

**Presentation 2:** Climate Outlook & Hand in Hand. Mr. Pierre Léna, Member of the Academy of Sciences France.

### **Session 3:**

**Presentation 1:** Reading in UNESCO's education report: education for peoples, creating sustainable futures for all. Mr. Najib Zerouali, UNESCO.

**Presentation 2:** Climate and Education. . Ms. Valérie Masson-Delmotte. Co-chair of the IPCC

## **Recommendations:**

Following the interventions of prominent scientists, academics and experts, debates and discussions that took place during the three sessions of the seminar, a huge number of recommendations emerged that also fall within the international strategic level as well as the operational level within each education system.

### **1- Recommendations relevant to the international strategic level**

- 1.1- The Paris Agreement (COP21) and the United Nations Sustainable Development Goals (SDGs) require a wide-ranging membership of peoples, a global vision of the future, leading to a profound transformation of attitudes and behaviors in Decades to come. Changes of such depth, marked by urgency and the future of today's youth, cannot be achieved without substantial transformations in formal education, alongside informal education, other aspects of citizens' information.
- 1.2- This need is structurally recognized by the Article 12 of the Paris Agreement, following Art.83 of the UNFCCC Framework Convention. This legal framework implies action by the signatories, which can be applied at national, regional and global levels. With the exception of recommendations already included in the 5th Report of the IPCC and more specific actions initiated in particular by the United Nations or UNESCO, or in some countries, awareness of the major role of education appears in relation to scientific work. This period is undoubtedly inevitable, but is now filled by the texts cited above. The longtime of educational changes enters here in interaction with the urgency of climate actions.
- 1.3- In this context, three relevant objectives can be assigned to youth education: understanding the issues, structuring thought, preparing for action. These objectives impose changes in the content and methods of education. These relate primarily to the hard sciences, but the impacts on individuals and societies require that the human and social sciences and the ethics of the other be considered.
- 1.4- There are many elements of action, modalities and possible leverage to bring about these transformations. A list is proposed below (§2), whose diversity must not make us forget the key position of the teachers and the pedagogy they are implementing.
- 1.5- Just as the scientific community plays a primary role in the establishment of facts (global warming and its consequences) as in other aspects of sustainable development (biodiversity, health, energy), it is essential that it contribute significantly to the translation of scientific messages from the IPCC, for the teachers, the students and the public, reinforcing the accessibility of these messages with the same concern for rigor, robustness, completeness and transparency of the reports themselves. The hundred existing Academies in the world assembled within the Inter Academy Partnership (IAP), by the quality of their members, their openness to the diversity of disciplinary fields and their inclusion in various cultures must also be called upon to intervene.
- 1.6- Implementation of this curriculum development program around the world cannot wait. It cannot succeed without national efforts being supported by a structuring with an overall objective and ensuring the means of start-up and then of permanent regime in a sufficiently organized framework.

### **2- Recommendations under the national strategic level**

- 2.1- Education, which is a fundamental lever for the creation of wealth, must also be a lever for the construction of an environmental culture based on the sustainable preservation of our planet;
- 2.2- Work towards the establishment of a platform dedicated to raising awareness of climate change, its understanding and education for sustainable development within education systems;
- 2.3- Exploit new technologies and media to support and strengthen the role of the School;
- 2.4- Promote the implementation of new pedagogical approaches, in particular that of investigation in the teaching of scientific disciplines;
- 2.5- Provide education and training systems for the upgrading of teachers with regard to didactic skills in the field of sustainable development;
- 2.6- The curricula of the scientific courses must promote interdisciplinarity and be strengthened in terms of social and human sciences;
- 2.7- Promote networking and exchange between different education systems in a dialogue between developed and developing countries;
- 2.8- Conjugate local and regional approaches and target short and long term through specific programs;
- 2.9- To support the development of specific competences within the scientific disciplines of science through the teaching of the history of science and by the introduction to the ethical aspects;
- 2.10- Promoting the school's openness to its immediate environment, involving all actors in achieving its objectives in terms of climate education;
- 2.11- Promote early education to climate-related issues, taking advantage of new technological tools and games;
- 2.12- Conjugate rational and emotional, the latter being a motivating factor in a balanced and relevant education;
- 2.13- Allow learners to express themselves freely from their own experiences and become actors and agents of change.