



# Alliance for a responsible and united world

A citizen's dynamics of reflection and action. Movements of people from 115 countries  
Preparation of the *Assembly of Citizen of the Earth* by 2001  
Local groups, colleges and thematic workshops.

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## Manifesto for a Responsible and United Citizens' Science

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At the crossroads of two thematic workshops of the Alliance:  
The workshop *Earth Charter*: rights and responsibilities of humanity towards next century's challenges  
(c/o : Foundation Charles Léopold Mayer 38 rue Saint-Sabin 75011 Paris Email [paris@fph.fr](mailto:paris@fph.fr))  
The workshop *Mastering knowledge*: the democratic orientation of scientific research and its uses (c/o  
Matthieu Calame Email : [a-science@funredes.org](mailto:a-science@funredes.org))

## ***Preamble***

Never before has humankind accumulated so much scientific and technical knowledge. However, the illusion that science and technical knowledge would automatically take care of progress for humankind has dissolved into thin air. It is true that science and technical know-how have afforded humankind many benefits yet *"the uneven distribution of all these benefits has contributed to the widening of the gap between industrialised and developing countries. The exploitation of this scientific knowledge has led to the degradation of the environment and has triggered off ecological catastrophes parallel to being a source of social imbalance and exclusion"*.<sup>1</sup>

Total freedom to carry out research is commonly presented as a direct consequence of human rights and science as a sheer pursuit of truth and an end in itself. But *"one cannot plead in favour of scientific progress solely by invoking the quest for knowledge"* all the more because the freedom to carry out research is very relative. Research is conditioned by the structures that produce it and the financing behind it. It depends very much on the professional and economical logic it is a part of. It is indeed pushed forwards by the pleasure entailed by research and discovery but it resolves above all the problems of those who finance it. It is largely determined by the balance of power between scientific disciplines, between countries and between different sectors of society. As a product of society it must be subjected to close inspection by society. However, society has new needs regarding science, in order to face up to a triple crisis: that of the relationship between human beings which finds expression in growing social exclusion; that of the relationship between societies which finds expression in a gap between rich societies and the others; that of the relationship between humankind and the biosphere which finds expression in various environmental crises.

Humankind has the power and the science to transform its environment irreversibly. If for reasons of improvidence, greed, selfishness, unconsciousness, pride, ignorance, or indifference we forget our responsibilities and our duties of solidarity to others and to the earth, we are bound for self-destruction. Urgent changes must be undertaken *"in particular, regarding the environment, only a rapid, thorough change of direction in current trends may prevent irreversible damage being caused to the planet earth and its ability to house us all"*.

After the Second World War, a genuine social pact was drawn up between scientific research and society. It justified the massive public support for research development. According to the terms of this pact, free research ensured the conditions of technical innovation, which, in turn, stimulated growth, thus ensuring social cohesion and peace. This pact has proved it worth it but has also revealed its limits. It is necessary to recast the relationship between science and society.

The scope and speed of the changes that Humankind has experienced in the past century, the rapid population growth, the blows to the diversity of cultures and living beings, the progressive depletion of resources and their inequitable distribution among human beings, the risks that entail biotechnology applications and the inequalities among and within societies

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<sup>1</sup> All passages in inverted commas have been taken from the declaration and programme of action drawn up by UNESCO.

urgently require a new pact among human beings, in which they recognize each other as partners in the survival and the development of humankind and for the safekeeping of the planet.

*"To start up a debate on science and ethics from all angles, resulting in a code of universal values, it is necessary to recognise the many ethical frameworks in the civilisations of the world"* and place the considerations on science in a wider context, **that of humankind's rights and responsibilities.**

There are five general principles governing these rights and responsibilities:

1. *To preserve humankind in its wealth and the planet in its integrity, diversity and unity must be conciliated at every level ;*
2. *Recognition of others is the foundation of all relationships and all peace ;*
3. *Acceptance of the constraints entailed by the preservation of the common good is indispensable to the exercise of freedom ;*
4. *Material development must be at the service of human development ;*
5. *Innovation is not an aim in itself, it is a means to serve human development and the safekeeping of the planet.*

Applied to scientific research, these principles define the foundations of responsible and united citizen's science:

- Scientific activity must reflect and respect the unity and diversity of humankind and the planet;
- scientific activity must form part of a social contract at the service of society;
- a balance must be achieved between the scientific community's rights and responsibilities;
- Scientific activity must be guided by the quest for wisdom rather than by a thirst for power;
- given the uncertainty and unpredictable nature of the effects of science, it must be wielded with appropriate caution.



# ***1. Scientific activity must reflect and respect world unity and the diversity of humankind and the planet***

## **1.1. The first objective of science is to allow to understand better unity and diversity of the living world, to preserve its integrity and find a place for every human being in the community and the biosphere.**

Science must contribute to understand at every levels the diversity of the communities and the ecosystems. It must focus on a systemic approach which emphasizes relationships among human beings and among the fields of knowledge.

Over the past few decades, the search for universal laws, as in physics, using an experimental laboratory approach, has prevailed over the approach based on the observation of societies and their relationship with the biosphere. The rules for validating knowledge, peculiar to the scientific world, have incited researchers to favour the study of simple artificial systems rather than the complex realities of the world. Counterbalancing this reductionism has now become a matter of urgency. Top priority for humankind is the need to understand the complexity of the world in order to avoid compromising its fragile balance through untimely action. It is now necessary to give priority to research in which precedence is given to the comprehension of real systems, characterised by the importance of relationships between the social, cultural, economical, technical and ecological dimensions of our societies. *"It is indispensable to step up interdisciplinary efforts associating specialists in the exact and natural sciences and those of the social sciences"*.

## **1.2. Humankind proves to be rich by the diversity of its sources in knowledge, situations and experiences. Science must accept to be one of the main sources without claiming for monopoly of them. Science must be careful and respectful to the diversity of representations of the world**

Science is not the only modality of knowledge. Scientific knowledge, such as we conceive it at the moment, is relatively recent. For millennia, humankind has accumulated knowledge and continues to accumulate it outside university and laboratory circuits. This knowledge, even if it has not been validated in compliance with the rules of experimental science is no less useful and pertinent.

*"It is necessary to underline the importance of indigenous knowledge systems and the necessity of preserving them and to make better use of them, since they form part of our cultural heritage". "The way in which the different forms of knowledge grant mutual recognition, connect with each other and feed off each other is a crucial issue". "It is necessary to increase awareness among scientists, youth workers, young people and the general public of cultural relations between the different knowledge systems ..., provide active support for co-operation between local groups to enable them to exchange their experiences and knowledge, linking up with other systems of knowledge, finalise eco-technologies founded on appropriate blends of traditional knowledge and modern science in order to contribute to filling certain serious gaps with which contemporary development is burdened".*

The diversity of veins of knowledge is coupled with the infinite diversity of contexts in which humankind must manage to resolve its essential problems. *"Food, water, accommodation, access to health care, social security and education form the cornerstone of human well-being. Developing countries need to reinforce their scientific and technical capacities in the corresponding fields. The diversity of ways in which these problems are presented must lead each country to assume the responsibility for defining its priorities and determining appropriate action. In defining their research projects, developing countries should take into consideration not only their needs and their weaknesses, but also their own strengths in the form of local savoir-faire and knowledge, local human and natural resources"*.

## ***2. Scientific activity must form part of a social contract at the service of society***

### **2.1 The research effort must be redirected according to humankind's current priorities**

The current challenges with which humankind is confronted lead to a thorough revision of the principles on which the contract between science and society has been founded up to now.

The field of research is unlimited. Economical and human capacity to create knowledge in the forthcoming decades is limited. It is thus the duty of societies to direct their research efforts. Taking into account the urgency of the issues with which humankind is confronted, the nature of scientific knowledge which will be produced and its pertinence with regard to society's real problems is a fundamental issue. For society, directing both the public and private research effort is not only a right, but a duty.

*"A new relationship between science and society is necessary in order to solve such urgent problems as poverty, the degradation of the environment, the lack of public health care, the security of food and water supplies ..."*

*"It is necessary to construct a new relationship between those who create and use scientific knowledge, those who back and finance it and those who are concerned with its applications and effects. Such is the essence and the spirit of the new commitment "*

The interests of science must be subordinate at all times to the respect of human dignity, to comprehension and compassion for all living beings, rather than making use of others and of the living world for the sole benefit of the material interests of people, firms or states.

### **2.2 The scientific world must be lucid and committed**

Scientists must apply their critical minds not only to the aim of their research but also and above all to their research activity itself, which is something that they do only too rarely through a lack of philosophical and epistemological training. *"Young scientists, in particular, should be aware of social problems. They should be offered the possibility of continuing training. Science students should devote themselves, independently of their learning environment and for a determined minimum period, to an activity of interest to or use for society"*.

Excessive overlapping of public and private research sectors leads to mission confusion. That of the public sector in particular is to supply expertise when requested by any sector of society. The priorities of public research must not be subordinate to those of the private sector but should on the contrary make it possible always to enlarge the range of responses to the society's problems.

### **2.3 Research must be developed within the framework of a democratically drawn-up social contract**

A contract implies the definition of a common aim; this aim is no longer knowledge for its own sake but a response to society's needs.

States may no longer aspire to define them alone. *“There is a very real need for a lively democratic debate on the ethical, cultural, environmental and socio-economical dimensions of production and the use of scientific knowledge”*. It is desirable for different sectors of society to be involved in drawing up the contract and for the scientists to give top priority to assisting these sectors in their thinking and their questions.

## ***3. A balance must be achieved between the scientific community's rights and responsibilities***

### **3.1 Freedom of scientific research stops when it threatens people's dignity or the necessity to safeguard humankind and the living world.**

Societies have the right, once a democratic debate has taken place, to ban certain forms of research deemed contrary to ethics and which, when applied, directly or indirectly, may undermine human integrity and dignity. This right prevails over the researcher's professional obligations, in particular those set out in work contracts or in government regulations.

Likewise, professional obligation cannot in any way stand in the way of the duty to alert public opinion should the common good be at stake: *“It is the responsibility of scientists to practice and apply science in compliance with appropriate ethical prescriptions but also to prevent the harmful applications of research”*. *“Scientific establishments must commit themselves in respecting scientists' freedom to express their opinions on the subject of ethical questions and to denounce the abuse or wrongful use of scientific and technological progress”*.

### **3.2 Every person and institution undertaking research have an irrevocable responsibility to the humankind as regards the use that will be done of it.**

Researchers assume collective responsibility with regard to the application of the knowledge that they create. All researchers, above and beyond belonging to an institution or a discipline must feel part of a universal scientific community.

The scientific community must feel itself to be responsible for possible applications of the knowledge that it produces. Taking into account the power that human societies confer on the developments of science, the scientific community's ignorance, whether voluntary or not, of

the logic of power and interest which governs the use of the knowledge that it produces is incompatible with a responsible citizen's attitude.

**3.3 Knowledge gained by humankind, specially those that are essential to the preservation of its integrity and to the fulfillment of its crucial needs, are part of the common good. Having said that, they shall not be privatized.**

*“Scientists should defend the principle of free and unlimited access to information and scientific research should be answerable to the public”.* Privatization of living world and furthermore of traditional knowledge through patents registration is opposite to this principle.

***4. Scientific activity must be guided by wisdom rather than by a thirst for power***

*“The main challenge for the forthcoming century is the margin which separates the power that humankind has at its disposal and the wisdom it is capable of applying in the use of this power”.*

The very first objective of science is to allow every individual to live a life in dignity and fulfillment, and to develop harmony of relationships among people, among communities and between humankind and the living world.

Science and techniques shall allow forms of development that equitably distribute the limited renewable resources of the planet and not waste them.

***5. Given the uncertainty and unpredictable nature of the effects of science, it must be wielded with appropriate caution***

**5.1. Science must remain modest**

Its vocation is to help towards our understanding of the world, it cannot answer questions of meaning.

It would be illusory to think that all the problems created at the moment by the use of science and technical knowledge will be resolved by a headlong rush towards yet more science and technical knowledge.

In order to take itself in hand, Society needs science to be modest.

**5.2. The effects of scientific research are often unpredictable**

Given the complexity of the world and the unpredictable nature of the effects of new knowledge, prudence must be the watchword for all research. *“Vigilance is indispensable*

*when backing fundamental research. The results of this activity are unpredictable and must always be envisaged in the long-term”.*

### **5.3. The needs of preservation must always balance the desire for innovation**

Every researcher shall keep in mind that every harm he would do to the animal would be done to him one day.

*“The pursuit and the use of scientific knowledge must respect and preserve all forms of life in all their diversity, as well as those systems which are indispensable to the survival of our planet”.*



## First signatories

Larbi Bouguerra (Former Scientific Researcher from Tunisia, co-ordinator of the « Program on Water » of the *Alliance for a responsible and united world*, author of « La pollution invisible » ; « La recherche contre le Tiers-Monde » ; « Interdépendances »

Matthieu Calame (Agronomist, co-ordinator of the INO program at the Foundation Charles Léopold Mayer, co-manager of the Farm of the Bergerie, *Alliance for a responsible and united world*),

Pierre Calame (former student in Polytechnics, *Alliance for a responsible and united world*, Director of the Foundation Charles Léopold Mayer, Author of « Mission possible »)

Maurice Cosandey (former President of the Swiss Polytechnic Institutes, *Alliance for a responsible and united world*)

Edouard Dommen (Professor at the University of Sunderland)

Abigail Fallot (Researcher in Economy)

Dominique Foray (Research Director at the CNRS)

Ghislaine Jacquier (Geographer)

Marc Ollivier (Member of INES – International Network of Engineers and Scientists for Global Responsibility),

Cathy Macia (Political analyst)

Jacques Poulet-Mathis (former student in Polytechnics, former co-ordinator of the French Network of Regional Agencies in the field of scientific and technical information (1986-1990) – ARIST - *Alliance for a responsible and united world*)

Alain Ruellan (Professor of agronomics in Higher Education, *Alliance for a responsible and united world*)

Patrick Viveret (Philosopher, Public auditor, Editor in chief of the review *Transversale Science/Culture*, *Alliance for a responsible and united world*)

Jacques Testart (Research Director at the INSERM)

Jean-Claude Badoux (President of the Federal Polytechnics School of Lausanne EPFL - Switzerland)

Jacques Perrin (National Institute of Applied Sciences of Lyon)

Adrian Mac Liman (Writer and Journalist - International Business Consultant in Barcelona - *Alliance pour un monde responsable et solidaire*)

Pierre Papon (Professor at the School of Physics and Chemistry of the CNRS and former President of IFREMER)

Jean-Louis Lemoigne (Emeritus Professor of the University of Aix-Marseille, Programme Européen Modélisation de la CompleXité (MCX).

Ladislav Tondl (Professor of the Academy of Sciences in Czech Republic.

Edgar Morin (President of the Centre d'Etudes Transdisciplinaires)

Bertrand Hériard Dubreuil (Catholic University of Lille – Centre d'Ethique Contemporaine)

## **Context of the Development of the *Manifesto for a Responsible and United Citizens' Science of the Alliance for a Responsible and United World***

### **The Alliance for a Responsible and United World**

Humankind, on the eve of the twenty-first century, is facing the challenge of having to undertake deep mutations because of the crises of relations of human beings among themselves, of societies among themselves and of humankind with the biosphere, resulting among others from our present forms of development. These mutations will be a long-term task because they involve all the dimensions of human activity and the way societies work. Because these mutations will be deep and slow, undertaking them is an emergency. Otherwise, they will be imposed upon us by social, political, and environmental disasters with incalculable consequences. The difficulty lies in knowing how to undertake them and who can take the initiative. A twofold difficulty arises: most our approaches, practices and institutions have been designed to manage yesterday's, rather than tomorrow's situations; political power, mainly organized at the scale of Nation-States, is focused on the medium term and is badly prepared to take on worldwide, long-term challenges while, on their side, the economic actors and financiers who have been quick to measure the importance of globalization, often have neither the vocation nor the desire to undertake transformations that are in contradiction with their own interests. It is therefore up to the citizens to take initiatives while respecting the immense diversity of situations, contexts, and cultures, from China to India, to the Arab countries, to Africa, to America, to Europe and the Pacific. For this, people who are individually in a situation of helplessness must unite around common perspectives. This finding and this conviction are the keystone of the *Alliance for a Responsible and United World*. The Alliance was born in 1994 with the support of an independent Swiss foundation, the Charles Léopold Mayer Foundation, on the basis of a common platform drawn up in 1993 by distinguished persons from different continents. It includes, in 1999, Allies from more than 100 countries and various backgrounds. It is preparing for the year 2001 an Earth Citizens' Assembly which will open the discussion and present its proposals.

### **Topical Workshops of the Alliance for a Responsible and United World**

The collective work of the Alliance is organized according to 3 «paths»:

- the «geocultural path» highlights the diversity of contexts in the framework of local groups;
- the «collegial path» gathers people in an analogous professional and social situation to build their own

point of view on the world: young people, women, scientists, business leaders, union leaders, farmers, artists, political leaders, religious leaders, etc.;

- the «sectoral path» organizes international Topical Workshops under 4 work themes: (1) Values and Culture, (2) Socioeconomy, (3) Governance, (4) Humankind / Biosphere Relations. Specific Topical Workshops gather Allies and sympathizing experts to draw up proposals.

The present *Manifesto for a Responsible and United Citizens' Science* is at the crossroads of two Topical Workshops within the first work theme «Values and Culture.»

### **The «*Earth Charter*» Workshop: Rights and Responsibilities of Humankind Facing the Challenges of the Next Century**

Humankind's obligation to manage the planet peacefully while respecting the many-faceted forms of interdependence among societies and with the biosphere imposes a search for common values that are acceptable to the different civilizations. To state these common values, the two present pillars of the international community, the United Nations Charter and the Universal Declaration of Human Rights, need to be completed by a third pillar formulating the rights and responsibilities of humankind. The development of this third pillar through an intercultural working process and the translation of rights and responsibilities into the different fields of human activity is otherwise conducted in connection with the various initiatives taken on this topic throughout the world.

### **The «*Control of knowledge*» Workshop: A Democratic Guidance of Scientific Research and its Use.**

Scientific research and the applications of science transform our societies. Democracy is defined as human society's capacity to orient its future. Present scientific activity depends mainly on public financing or financing by private business. It is heavily influenced by political, social and economic rationales. Scientific research and technological innovation therefore have a vocation for entering the social-contract field. The objective of the «*Control of knowledge*» Workshop is to define the outlines and methods of such a social contract. «The Group of Villarceaux» is drawing up, in the framework of this Workshop, a concrete proposal that will contribute to the implementation of the present manifesto.

For further information, contact:

*The Alliance for a Responsible and United World*

Web : <http://www.echo.org>

Email : [alliance@echo.org](mailto:alliance@echo.org)