

## French governmental actions: Creating a positive climate for science and technology

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### A – Ministries

Ministries offer their support to many local initiatives (including associations) and coordinate certain events, organisations and museums. In addition, they also back various actions aimed at broadcasting scientific and technological knowledge. The latter will be the main focus of this chapter. For the sake of clarity, we propose to structure it around ministries and institutions involved in CST actions. Note, however, that these headings are arbitrary. Indeed, many projects are collaborative in nature and involve several institutions.

#### **1 – Ministry of Youth, Education and Research.**

Until 2000, the Ministries of Education and Research were together and formed one entity. The two ministries were subsequently separated and re-grouped in 2002. At present, the ministry representative in charge of research and new technologies is Claudie Haigneré. The current situation of CST is still influenced by the institutional proximity existing between these two ministries.

The Ministry of Research is responsible for the implementation of a general policy for broadcasting scientific and technological information and supervising the relevant institutions and museums. In July 1999, the Minister of Research, Claude Allègre, established a *Mission de la Culture et de l'Information Scientifique* (MCIS, Mission for Scientific Culture and Information) whose main functions are:

- to raise public awareness in matters of science and technology developments, in particular with the organisation of the yearly *Fête de la science* (Science Days);<sup>1</sup>
- to develop and promote the scientific and technology heritage;
- to assess and restructure the results of scientific research, their exploitation and their dissemination to various publics;
- finally, to supervise the museums under the authority of the Ministry of Research.

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<sup>1</sup> See final section of this report for details on Science Days.

The MCIS is given directives by the *Conseil scientifique pour la Culture et l'Information Scientifique et Technique et les Musées* (Scientific Council for Scientific and Technological Culture, Information and Museums). The first president of the Council was Jean-Marc Lévy Leblond, a physicist who played a major role in the science critics' movement of the 1970s and is now highly committed to CST actions. Based on directives, the MCIS is meant to assess and guide current actions, proceed with international comparisons, suggest new directions to explore, and provide impetus to the sector. The influence of this new organisation is still difficult to assess due to recent government reorganisation.

The Ministry of Research supervises the following CST institutions :

- La Cité des Sciences et de l'Industrie de la Villette (situated in Paris but with collections managed by La Direction Générale de l'Administration);
- Le Muséum National d'Histoire Naturelle (MNHN, Paris);
- Le Conservatoire National des Arts et Métiers (CNAM, Paris); and
- Le Palais de la Découverte (Paris).

In addition, it partly supports the various CCSTIs, nationwide and decentralised organisations that come under the control of the MNHN and CNAM.

## **2 – The Ministry of Culture and Communication (*Ministère de la Culture et de la Communication*)**

The Ministry of Culture, which is headed by Jean-Jacques Aillagon since 2002, is at the heart of CST policies. Although rarely at the origin of initiatives, it grants or sponsors a large number of CST actions. The recent project of an Internet portal dedicated to the scientific and technical heritage<sup>2</sup> enables the Ministry of Culture and Ministry of Research to renew collaboration in actions promoting scientific culture. In addition, and because the French media system depends on it, this Ministry can be directly involved in media actions. For instance, it plays a prominent role in science-related audio-visual events, like the yearly *Nuit des Étoiles* (Stars night<sup>3</sup>), or national charitable events covered by the media, like *Téléthon* or *Sidaction*, which respectively focus on genetic diseases and AIDS.

## **3 – The Ministry of Youth (*Ministère de la Jeunesse*)**

Headed from 1997 to 2002 by communist Marie-Georges Buffet, the *Ministère de la Jeunesse et des Sports* works in close collaboration with decentralised institutions dedicated to the youth.<sup>4</sup> Since 2002, the Ministry for Youth has been under the control

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<sup>3</sup> See the chapter dedicated to the media in this report.

<sup>4</sup> Such as the *Conseils d'Éducation Populaire et de Jeunesse* (Councils for Popular Education and Youth) and the *Associations d'Éducation Populaire et de Jeunesse* (Associations for Popular Education and Youth).

of the Ministry of Education and Research is no longer headed by a minister or a secretary of state. The "ministry" is responsible for general public education and for all events or establishments – apart from schools – dedicated to young people and children. Hence, organising CST actions aimed at young people falls within its prerogatives and is the subject of constant initiatives. In 1999 for instance, the Ministry of Youth was instrumental in the preparation of different exhibitions and events related to the solar eclipse. The *Ministère de la Jeunesse et des Sports* has long privileged astronomy due, perhaps, to the large number of learned societies or groups of young enthusiasts. It is worth mentioning that CST is considered here as "social and cultural practices" in the broadest sense, a definition that deeply affects the nature of CST actions. Indeed, this makes initiatives intended for children quite different from those intended for adults (i.e. the "general public").<sup>5</sup> Unlike most CST actions – which generally aim at bridging gaps in scientific knowledge and passing information on in a linear fashion – initiatives intended for children rely mainly on interactivity, albeit in their different ways. We will come back to this point later.

#### **4 – Ministry of Ecology and Sustainable Development (formerly Ministry of Territorial planning and the Environment / Ministère de l'Aménagement du Territoire et de l'Environnement)**

From 1997 to 2002, it was headed by Dominique Voynet who has environmentalist leanings and was succeeded by Roselyne Bachelot. The ministry is involved in scientific information actions for the general public and covers themes relating to the environment (greenhouse effect, ozone layer, ...). Initiatives may be on an *ad hoc* basis (e.g. "Days for the Environment", "1,000 challenges for my planet", the citizens conference "Climatic changes and citizenship", etc) or of a more permanent nature (e.g. job creation with positions dedicated to environmental education in the scope of the "new services-youth employment" scheme (*nouveaux services-emplois jeunes*), organisation of an Internet portal with an area dedicated to environmental education<sup>6</sup>). These initiatives are often supported by the action of decentralised departments. Hence, the scientific and technological information inherent to these actions is meant to increase public awareness of social, environmental and cultural issues and to explain, or even justify, institutional actions.

Joint actions are developed with the Ministry of Education, such as environmental classes, operations like *L'École de la Forêt* (the School of the Forest) or the publication of teaching packs on risks prevention.

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<sup>5</sup> The same may be noted between popularisation magazines intended for the general public, such as *Science et Vie*, *Science et Avenir*, and those intended for children. See, in this report, the chapter dedicated to the media.

<sup>6</sup> [www.prim.net](http://www.prim.net)

### **5 – Ministry of Health, Family and the Disabled (formerly Ministry of Social Affairs / Ministère des affaires sociales)**

This ministry headed by Jean-François Mattéi, is also involved in CST actions. It coordinates several institutions broadcasting health-related information.

Among these institutions we must mention, first of all, the *Comité Français d'Éducation pour la Santé* (Committee for Health Education), created in 1955 and changed in March 2003 into the *Institut National de Prévention et d'Éducation à la Santé* (INPES – National Institute for Prevention and Health Education). It then became a public institution with enlarged competence to cover expertise and counselling functions in matters of prevention. The INPES is based on a network of committees dedicated to health education (21 regional committees and 90 local committees), which reach the public through the means of direct informative actions (conferences, etc). It publishes a journal geared to the general public, *La Santé de l'Homme* (Human Health) and a great number of booklets on health-related issues (AIDS, smoking, alcohol, ...) aimed at both the general public and professionals.

Apart from the INPES, several organisations under the authority of the Ministry of Health have started to play an important role over the last few years due to contextual events. Among these the *Agence Française de Sécurité Sanitaire des Aliments* (AFSSA, French Agency for the Medical Safety of Food), the *Établissement Français du Sang* (EFS, French Institute for Blood)<sup>7</sup>, and the *Agence Française de Sécurité des Produits de la Santé* (ASSPS, French Agency for the Safety of Health Products). These institutions are not primarily concerned with ensuring scientific information and even less with engaging in a communication with consumers. Nonetheless, due to the increase in the number of public controversies and, as a consequence, of institutional campaigns aiming at restoring public confidence, they are becoming both actors in CST and experts at delivering the "opinion of the institution".<sup>8</sup> At a later stage of this survey, further investigation on this evolution of CST will be required.

## **B – Public research institutions**

Along with the universities, the Ministry of Research supervises several research institutions. While these are quite often involved in CST actions supported by other institutions or associations, they also initiate their own actions with increased frequency. All have set up their own press office, which sets up and controls relations with the media.

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<sup>7</sup> The AFSSA is placed under the authority of the Ministries of Health, Agriculture and Consumers Affairs. The *Établissement Français du Sang* comes under the sole authority of the Ministry of Health.

<sup>8</sup> There are other expert committees which come under the Ministry of Research or the Ministry of Agriculture: let us only mention the *Commission de Génie Biomoléculaire* (CGB – Commission for Biomolecular Engineering), in charge of the GMO issue and the *Dormont Committee* in charge of ESB.

### **1 – The National Centre for Scientific Research (CNRS, Centre National de la Recherche Scientifique)**

Established in 1939, the CNRS is the largest research institution in France and it is highly involved in CST actions.<sup>9</sup> It organises and supports a large number of initiatives and cooperates with other institutions, as with *Oser le savoir* (Daring knowledge), a series of exhibitions presented last year at the *Cité des Sciences et de l'Industrie de la Villette*. On the occasion, the CNRS delegated members to act both as consulting experts and communicators, delivering public lectures during specific exhibitions such as the one dedicated to GMOs.

In addition, the CNRS organises its own scientific communication initiatives. Headed *Science pour tous* (Science for all) they are available on the CNRS website. These initiatives aim at establishing a contact between the public (generally the younger generations) and science with the organisation of debates on current issues. Although the idea underlying such actions is described as "debating as to the whys and wherefores of scientific achievements", they aim to satisfy what is presumed to be the public's thirst for scientific responses to its questions.

Among these activities, let us mention for instance the yearly *Science et Société* conferences held since 1990, at which young people are given an opportunity to discuss current issues with researchers.<sup>10</sup> They involve the organisation of debates on current affairs during which researchers are face to face with young people. Similarly, the objective of the operation headed *Recherche et Passion* (Research and Passion) is to organise events for young people, teachers and researchers to meet and talk. At these meetings, teachers and young people may present scientific projects and receive guidance and information from researchers. The aim is to answer the teachers' queries, with the involvement of researchers and engineers, and to enhance the curiosity and scientific reflection of young people by offering them an authentic approach to research.<sup>11</sup> Thus science is able to find its place within the world of culture and this context contributes to highlighting its social utility. Finally, the *sciences-citoyens* clubs (sciences-citizens clubs) aim at establishing links between research and young citizens and include the visit of laboratories, conference-debates on current subjects or local issues.

In summary, two a-priori assumptions are strongly underlying these actions where the citizen is confronted with science: (i) the public is asking for scientific information and (ii) science is a legitimate authority when it comes to addressing current issues. Moreover, let us insist on the fact that these actions are also intended to inform young people and make them aware of scientific career possibilities. As a result, they also contribute in the renewal of the scientific community.

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<sup>9</sup> Details on the history of the CNRS may be obtained in the bi-annual journal *Histoire du CNRS*, (CNRS edition), published since 1988 by the *Committee for the history of the CNRS*.

<sup>10</sup> In 2000, it was organised at the Futuroscope in Poitiers.

<sup>11</sup> Source: CNRS web site.

## **2 – The National Institute for Health and Medical Research (INSERM – Institut National de la Santé et de la Recherche Médicale)**

Like the CNRS and the INRA, the INSERM is involved in a great number of CST actions, most of them related to health and medicine. It organises conferences, exhibitions (such as, for instance, the itinerant exhibition "When science meets art"), and has established a European network "INSERM-Young people" and INSERM youth clubs mainly developed in secondary schools. It broadcast information to teachers and funds several journals, such as *Medicine-Sciences*, a Franco-Canadian (Quebec) journal aimed at the general public which creates a link between medicine and citizenship, or the more specialised journal *Dialogue – Recherche – Clinique – Santé*, published by the committee *Inserm/Société*. Reference should also be made of the collection of scientific files *Repères* (reference marks), established in 2001. "*This collection will be directed such as to provide each of us with "reference marks", not only in scientific fields but also in history, sociology and economy, enabling us to be in a better position to define scientific challenges and interactions between research and society to open, ultimately, to public questions*". For the moment, three issues have been published, on prion diseases, stem cells and life patentability. This collection is therefore intended to be topical, tackling problems raised by scientific and technological developments.<sup>12</sup> Finally, it has recently established a committee for ethical issues, which has launched an action on deontology and medical information.

## **3 – The National Institute of Agronomic Research (INRA, Institut National de Recherche Agronomique).**

We will limit our description of the CST actions organised by the INRA to a recent and major initiative launched in 2000 (in collaboration with the Ministry of Health, the Ministry of Agriculture and the State Secretary of Consumer Affairs) in response to the current questions related to food: *Les Etats Généraux de l'Alimentation* (EGA – general conferences on food). According to the Institute, up to now, consumers were seldom consulted on their perception of risks, on their eating practices or aspirations, on what they consider to be the role of State institutions and more generally on their perception of food quality and safety. Last year local and regional forums were organised to restore a dialogue. The conclusions were addressed during a general meeting held in December 2000, namely *les Etats Généraux de l'Alimentation*.

This action is symbolic of a new tendency shaping the current CST actions. The area that was up to now clearly located on the production map and the "dissemination" of knowledge, open more and more, under the pressure of current events and public resistance, on decisions involving techno sciences (such as GMOs). In this context, the strategy followed by the INRA is to open a new area, situated outside the institution but

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<sup>12</sup> Source: INSERM web site.

that may be instrumentalised by the institution. Indeed, the objective of the EGA is clearly stated: "to facilitate the government's decision-making process on these subjects, to take into account the real needs and worries of the population, and to clarify the situation related to the public's expectations regarding the security and the quality of food, particularly as regards information."<sup>13</sup> Hence, the philosophy of the EGA is still based on an information gap: public acceptance of scientific and technological choices jeopardised by their lack of information on these matters. However, this model and its actions have been hijacked – especially at local forums – by interest groups (ecologists, farmers, consumers...) and the newly created areas also allow for the expression of opinions different from the scientific and "legitimate" ones. In brief, this action has allowed activists to argue against the promotion of science and technology. At present, a study is organised on the EGA experience, highlighting one of the main difficulties encountered by this type of participation exercise in France: "[...] the difficulty which exists in "transmitting" the contents of pre-forums to the decision-makers our hypothesis is that these weaknesses are neither marginal nor accidental. Indeed, we suggest that they reflect the specific manner of participation adopted by organisers towards citizens and the way they can contribute to public decision, out of synch with the very basis of "participative democracy". Furthermore, we declare that they have a significant negative influence on the perception of the legitimacy of such procedures".<sup>14</sup>

In the continuation of the program, we will take into account this transformation of the CST areas and the way in which they can be colonised by non-institutional actors.

Within the framework of CST actions run by public institutions, let us mention those of the *Commissariat à l'Energie Atomique* (CEA, Atomic Energy Authority), which aims, in collaboration with others involved in this field, "to improve public information on research in physical sciences and on its applications."<sup>15</sup> The information disseminated is formal and the aim is clearly to transform, by making it more transparent, the public's perception of an institution whose main objective – i.e. to develop nuclear energy – is being less accepted by French people.

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<sup>13</sup> Source: Ministry of Agriculture web site: <http://www.agriculture.gouv.fr>

<sup>14</sup> Study: "Etats généraux de l'alimentation : retour critique sur une expérience de participation citoyenne" (General Conference on Food: critical thoughts on an experience of citizens participation) , Source: INRA web site.

<sup>15</sup> Source: CEA web site: <http://www.cea.fr/html/decouvrirlecea.htm>