

ABSTRACT

In this Introduction, UT-1 coordinators expose the general structure of the document, which is focused on the axis “New foundations for a sustainable global society”. This title is a commitment to convergence between areas and lines of research. Talking about “globalization” and “sustainability” implies a multidisciplinary approach, because both terms affect practically all dimensions of contemporary society. Therefore, they are appealing to cooperation between all disciplines of scientific research. For this foresight exercise, general coordinators have organized the UT-1 into TWELVE Thematic Challenges and they have entrusted the coordination of each Challenge to some researchers of the staff scientific staff of the CSIC who are considered the most suitable for this task.

CHAPTER 1

INTRODUCTION

Coordinators

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The objective of the CSIC White Paper is to place the Council before the challenge of responding to the profound changes taking place in the current Spanish society, assessing their effects with a 30-year perspective on the horizon of 2050.

To face this challenge, the VICYT has defined 14 Thematic Units (UT), with which it seeks to cover, from all areas of the CSIC and with a transversal and integrating vocation, the broad and complex panorama that makes up the current process of change.

For example, the management of natural resources; the spread of viral pandemics; the recurrence of natural disasters; new sources of energy production and use; road mobility and intra- and inter-territorial transport; the new forms of economic organization; the preservation of ecosystems; the advancement of robotics and artificial intelligence; genetic engineering; biomedicine; the preservation of rivers, seas, and oceans; the exploration of interstellar space; governance matters; mitigation of the effects of climate change; the sustainability of health and sanitary systems; changes in eating habits; international relations; demographic changes and increased life expectancy; social inequality and exclusion.

Therefore, cooperation between the various scientific disciplines of the CSIC is essential if we want to rigorously address these great issues, cumulating all the knowledge accumulated in an institution as rich and diverse as ours.

The White Book is also a document prepared by the CSIC, but to be read outside our institution and, especially, in the different areas of public administration. This forces us to use an informative style that, without falling into the trivialization of the topics discussed, is aimed at a public not specialized in scientific matters, and public powers on which the economic and financial sustainability of the CSIC depends.

It is a prospective document where we give our ideas and proposals on what the CSIC can contribute for a better understanding of the current process of change, thus contributing to fulfill our mission as an institution at the service of society.

This is the task that the presidency of the CSIC has transmitted to us to the different coordinators of the TUs, a task we have reflected through the structuring of each TU into Thematic Challenges (DT), each coordinated by scientific staff from our institution.

Of the 14 Thematic Units of the White Paper, UT-1 focuses on the axis “New foundations for a sustainable global society,” the title of which is a commitment to convergence between areas and lines of research. Talking about “globalization” and “sustainability” implies a multidisciplinary approach, because both terms affect practically all dimensions of contemporary society; therefore, appealing to cooperation between all disciplines of scientific research. For this foresight exercise, we have organized the UT-1 into TWELVE Thematic Challenges, entrusting the coordination of each Challenge to the scientific staff of the CSIC we have considered the most suitable for this task.

The result of the work conducted in UT-1 is the report presented in these pages, a report that, with the other UTs, will make up the CSIC White Book. The UT-1 report results from the effort to integrate the ideas transmitted by the different Challenges through their corresponding documents into a single text. These documents are incorporated as Annexes to this report as they have been sent by the coordinators and with no modification.

Under the instructions received from the VICYT and transmitted by the coordinators of the UT-1 to the Challenges, this report is divided into these three sections, besides this introductory section:

- *Framework*, where the relevance and social and scientific interest of the topics that have been the subject of the UT-1 are exposed, and the most relevant characteristics of the environment in which they are inserted.

- *Future challenges* (both scientific and social) of the different Challenges of the UT-1, where the possible answers that can be given from the CSIC are exposed and recommendations are made to enhance the existing strengths, neutralize the detected weaknesses, and take advantage of the possible opportunities.
- *Conclusions*, where a synthesis of the major results is made and proposals and recommendations are made for the whole of the UT, giving rise to an Executive report.