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Hellenic Foundation for  
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**Description of the funded research project**  
**1st Call for H.F.R.I. Research Projects to Support Faculty**  
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**Research Equipment**



CONFIGURING ENVIRONMENT AND FOOD:  
CRITICAL TECHNO-SCIENTIFIC NETWORKS AND  
THE AGRI-FOOD SECTOR IN GREECE, 1950-2017

Title of the research project: **Configuring Environment and Food: Critical Techno-scientific Networks and the Agri-food sector in Greece, 1950-2017**

Principal Investigator: **Efstathios Arapostathis**

Reader-friendly title: **CON-EF**

Scientific Area: **Social Sciences**

Institution and Country: **NKUA/Greece**

Host Institution: **Department of History and Philosophy of Science, National and Kapodistrian University of Athens**

Collaborating Institution(s): -

Project webpage: **[www.conef.gr](http://www.conef.gr)**

### Research Team

Stathis Arapostathis

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Alexandros Vakoulas

**Budget: 163.011,00 €**

**Duration: 36 months**

## Research Project Synopsis

CON-EF will be introducing a historically informed policy analysis of the Greek agri-food industry while unravelling path dependencies, sociotechnical dynamics and pathways that can inform contemporary challenges of the Greek agri-food sector.

Our research will provide decision makers in agriculture, fisheries, aquaculture and food sectors with a deep understanding of sociotechnical interdependencies, the material interconnectivity of the agri-food and energy regimes, as well as a deep understanding of different steps, resources and networks of actors along the innovation pathways leading to impacts.

The project also aims to raise the awareness about the sustainability of a Mediterranean diet mode of consumption by giving a deeper and material perspective of its mode of production.

We will be providing a policy-relevant history of the food chain in Greece as an exemplar case of the Mediterranean food chain by focusing on the techno-scientific networks, their articulation and agency in configuring the food chain from 1950 to the present. Exemplary cases of specific agrifoods are approached.

The techno-scientific networks are conceptualized both as networks of infrastructures (technological and research) that altered the material conditions of technological change and b. networks of experts that functioned as entanglers in shaping socio-technical transitions.

Our historiography focuses these networks, emphasising their co-production with agri-food, knowledge politics, the character of energy and water regimes within the agri-food regime, their environmental impact.

“Environment” and its redefinition are central to our analysis, while the research moves into two interconnected and complementary directions: a) the co-production of the energy and water-management regimes with practices (use of fertilizers and herbicides/pesticides) and policies which reproduce intensified agriculture, aquaculture and animal husbandry models, b) the legitimization of scientific practices and the use of technological networks which configured the meaning of environment and reproduced practices that furthered the use of pollutant toxic preservatives and antibiotics.

## Project originality

The project is innovative in four distinctive dimensions:

1. By studying the whole food-chain through the analytical tools of STS, the study will introduce new historiographical insights. The study will provide insights about the co-production of the formation of environmental research policies, the regimes of expertise, and the emergence of development models. It combines the history of science and technology with environmental history and sociology of knowledge and technology. In this context, it introduces a new way of research for the agri-food sector through the analytical perspectives of the techno-sciences and environmental studies. The study reveals the role of historical actors who have not been previously studied, while at the same time it represents the dynamic formation of the food regime in Greece. Conditions, contexts, and relations are represented dynamically and not in a cognitively passive manner as the existing historiography has represented the food sector.
2. The approach of the research leads to the historicization of the term “environment”. While existing studies attempt to identify “environment” with certain cultural, social and geographical characteristics, in this proposed research, “environment” is defined based on its construction with the use of science and technology of the food-chain over a period of almost seventy years.
3. The research provides a case study of a country in the European periphery with unique political, social, scientific and technological characteristics. The study informs and contributes to the theoretical approaches of “co-production” and “deep socio-technical transitions” literature, since it introduces a case beyond the well-studied Northern European and North American settings.
4. Existing studies in STS, while important and informative, have neglected the nested character of the sociotechnical regimes and thus they have not focused on regime interactions and lack development of the sociotechnical relations in the comprehensive way that our study aims to provide with the case of the food-chain.



## Expected results & Research Project Impact

The project will contribute to addressing scientific, economic and societal concerns in the following distinctive ways:

- Science i) The synthesis of the co-production idiom with the Deep socio-technical transitions approaches. ii) The introduction of a new approach into Greek historiography beyond the economic, institutional and professional histories. iii) The introduction of the study of techno-scientific networks into the field of environmental studies in Greece. iv) The introduction of novel historical accounts to inform sustainability policies and governance of science and technology within the agri-food sector.
- Economy v) The shaping of an approach that is historically informed for monitoring and evaluating existing public policies in a context of strategic intelligence. vi) By focusing on techno-scientific networks and their historical path-dependencies as well as their role and agency in shaping and entangling transition pathways, the research will provide an understanding of the dynamics of techno-scientific networks not as institutions but as knowledge networks that shape the character of the food-chain. vii) Unraveling the environmental impact of the Mediterranean diet, the starting point may be to rethink not the diet per se but the components, the materials, the products that comprised dietary patterns.
- Society viii) The implementation of a novel methodology that enables the output of the research to inform citizens' awareness not only of the content of their nutrition, but also of the environment they live in, and how this environment acquired meanings and material embodiments during long-term transitions through the agency of institutions, authorities and scientific actors. ix) The introduction of science and technology in the making of the food-chain as an analytical category for the first time. By revealing the role of scientific communities, socio-technical imaginaries and development politics, our research will be instrumental and support the causes of the Civil Society.

## The importance of this funding

The funding secures the resources and network capabilities for:

1. Extensive archival research in a thematic area previously unexplored in the Greek Historiography.
2. Extensive historical reconstructions that bring together the history of science and technology, history of agri-food industry and environmental history.
3. Historical research on a critical industry and a sector of economic development for Greece, covering the critical period of seventy years marked by the integration of Greece in the EU as well as by several political, economic and environmental crises.
4. Linking history with current social and economic challenges and policy issues.
5. Studying and promoting Sustainability Transitions as a multidisciplinary issue and a problem of governance.
6. Creating a research ecology in the multidisciplinary field of Sustainable Sociotechnical Transitions in Greece by linking history with analysis of current ecological crises and challenges.
7. Developing historically informed policy pathways through experimental practices of stakeholder meetings and engagement.
8. Promoting value driven policy analysis, responsible research and innovation and stakeholder engagement and empowerment.



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