

REIMAGINE
PLANET

RIE



TASK FORCE
SUSTAINABLE
AGRICULTURE
& INNOVATION

NARRATIVES, CLIMATE & THE FUTURE

REIMAGINE EUROPA

The content of this report reflects an overview of the aims of the Task Force and should not be interpreted as expressing an official position of Re-Imagine Europa or any of the people or organisations mentioned in the report.

The Task Force on "Sustainable Agriculture and Innovation" brings together over over fifty experts from different stakeholders and perspectives to reflect on how Europe can become a global standard-bearer for sustainability.

RE-IMAGINE EUROPA | Rue du Congrès 1 | 1000 Brussels | Belgium

Tel. +32 (0)2 203 75 37 | info@reimagine-europa.eu
www.reimagine-europa.eu | Numéro d'entreprise: 0680.783.711

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INTRODUCTION

President Ursula von der Leyen has placed climate change and innovation at the top of the European agenda, initiating a much-needed re-evaluation of how our economies and societies are set up. This systemic shift in thinking reflects a movement that started with the financial crisis of 2008 that fractured trust between citizens and the prevailing narratives and models. Spurred on by social movements and climate change protests around the world we are seeing the emergence of new narratives; narratives that are challenging existing value systems and increasing societal polarisation.

In light of the above, Re-Imagine Europa launched a priority area on “Narratives, Climate and the Future” in December 2019 and is setting-up its first task force on this topic on “Sustainable Agriculture and Innovation”.

With COVID-19 stressing the importance of a shift to more sustainable and resilient societal and economic models, the European Green Deal sets out how to make Europe the first climate-neutral continent by 2050. The Farm to Fork Strategy is at the heart of the Green Deal and recognises the inextricable link between healthy people, healthy societies and a healthy planet. It stresses the urgent need to reduce dependency on pesticides and antimicrobials, reduce the excessive use of fertilisers, increase organic farming and reverse biodiversity loss.



**"THE CLIMATE CANNOT BE
NEGOTIATED WITH, SO
BETTER WE MOVE QUICK"**

PRESIDENT URSULA VON DER LEYEN

ABOUT RE-IMAGINE EUROPA

Re-Imagine Europa was founded by President Valéry Giscard d'Estaing and is based in Brussels. It was created as an "incubator" for new political ideas. It works with members and partners to deliver world-class interdisciplinary and intersectoral research, and the facilitation of dialogue and engagement with national and international political processes.

RIE acts as a convener, a catalyst and a communicator. The aim is to be both innovative and strategic in its approach as well as pragmatic and concrete. For this reason, RIE focusses on only a few issues at a time that are considered of strategic importance for Europe. The current priority areas are: democracy in a digital society; a fair and competitive economic system; and narratives, climate, and the future.

Re-Imagine Europa works on the principles of evidence-based policy making, inclusive and collaborative approaches and working at an interdisciplinary and intersectoral level to build shared narratives and new ideas on topics of strategic importance. Re-Imagine Europa is nonpartisan and founded in honour of the friendship and partnership between President Giscard d'Estaing and Chancellor Helmut Schmidt and their efforts to

define a future that went beyond personal, national or partisan interests.

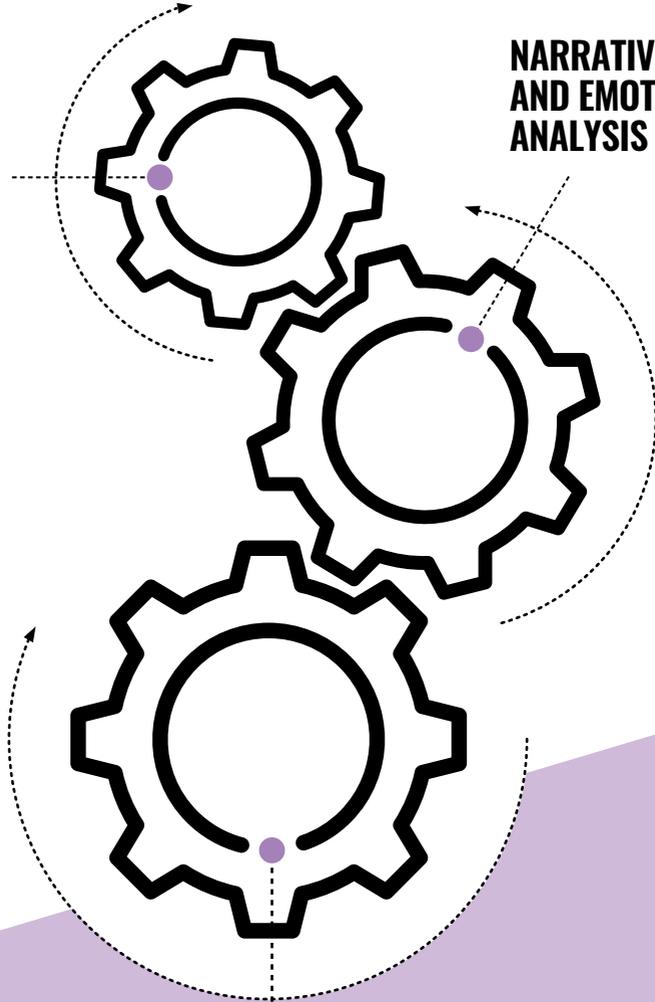
Re-Imagine Europa's methodology centres on developing a Task Force for each of the three strategic challenges and engaging therein an Expert Committee comprised of over 50 experts from academia, think tanks, industry, NGOs, CSOs, and other stakeholder groups. An Expert Committee is created through a thorough process of mapping and engagement to ensure that it is representative and inclusive, by including different areas of expertise as well as new thinking. Re-Imagine Europa is supported in each Task Force by a Chair and a Steering Committee.

At the same time that RIE works with leading experts and stakeholders in developing new and innovative shared proposals, RIE aims to engage the public at large in building shared visions. An increasingly influential stream of research demonstrates the integration of cognition and emotion in political decision-making indicating the importance of narratives in building shared visions. Therefore, a key pillar of the work of Re-Imagine Europa is focussed on developing stories and images that can engage people and explore old problems in a new light.

Re-Imagine Europa is funded by leading foundations including: La Caixa Foundation, Fondazione Cariplo, Bill & Melinda Gates Foundation as well as project-based funding from the European Commission.

**CONTENT,
EVIDENCE
AND POLICY**

**NARRATIVES
AND EMOTIONAL
ANALYSIS**



**CHANGE
AND RESULTS**



**“WE NEED TO CHANGE THE WAY WE
REFLECT ON FUTURE PROOFING
REGULATION SO THAT OUR LAWS
CAN KEEP UP WITH OUR LABS.”**

**CARLOS MOEDAS,
FORMER EUROPEAN COMMISSIONER FOR RESEARCH,
SCIENCE AND INNOVATION**

BACKGROUND INFORMATION

Why Sustainable Agriculture and Innovation?

Re-Imagine Europa has decided to launch a Task Force on Sustainable Agriculture and Innovation to create a forum for real dialogue between different viewpoints on the topic. In particular, the aim is to better understand the emotions and values behind different perspectives and to see if, with ambitious climate goals as a clear priority, it is possible to find positive pathways forward to ensure that Europe can develop a robust and resilient food system that can become a global standard for sustainability while protecting biodiversity and reducing land-use.

With the Green Deal at the centre of European policy priorities, significant focus has been placed on rethinking our food systems, bearing in mind the inextricable links between healthy people, a healthy society and a healthy planet. Indeed, the Farm to Fork Strategy's very aim is to renew our thinking about agriculture. Therefore, the first mission for the Task Force is to better understand the values and priorities that should guide this rethink.

The second stage of the Task Force's work will look at how new technologies could help us achieve this vision for a new, more sustainable, agricultural system. The scale of innovation and ontological uncertainty heralded by the future of agriculture and research in Europe will redefine the boundaries between so-called industrial agriculture and organic production. The increasing use of highly performative digital tools in the Life Sciences allows a more sophisticated use of new biotechnologies than was possible only a decade ago,

and the rapid development of cultured meat and protein alternatives produced by new biotech methods is likely to have a significant impact on European agriculture in the next decade.

The EU is seen as one of the most sophisticated regulatory systems in the world and should be part of the conversation on how such novel technologies should be regulated. Technology has also created a shift in economic incentives, democratizing the research process and allowing smaller actors to engage in the development process.

In addition to the emergence of new technologies in the Life Sciences, powerful digital tools are also providing an abundance of new ways to better understand our use of resources and ability to create a more resilient and robust agricultural system in Europe. Here, work done by Re-Imagine Europa in the area of digitalisation, both in terms of public discourse and the use of big data as well as AI, can provide a useful basis to further explore these areas.

The implications for society of such technologies are still to be understood and a deeper conversation is needed as to how they might support the European priority of becoming the first climate-neutral continent by 2050. The complexity of the debate, the speed at which new technologies and scientific evidence are developing, and the inheritance of an emotionally charged public discourse from the 1990's will all add to the challenge of changing perspectives in Europe.

Why start with genome editing?

Having established what we mean by "sustainable agriculture" the Task Force will explore the role of innovation in the coming transition toward a new food system. The first technology examined under this framework will be the potential applications of genome editing in agricul-

ture. With the European Commission set to deliver a major study on this topic to the European Council in April 2021, this is a pressing issue, the resolution of which stands to have significant implications for the future of European agriculture, and innovation's role therein. This also gives the Task Force an excellent opportunity to test and fine-tune its methodology, before applying it to debates about other emerging technologies.

How did Re-Imagine Europa come to work on this topic?

Alongside its partners EU-SAGE and ALLEA, Re-Imagine Europa has been conducting preparatory work on this topic for some time.

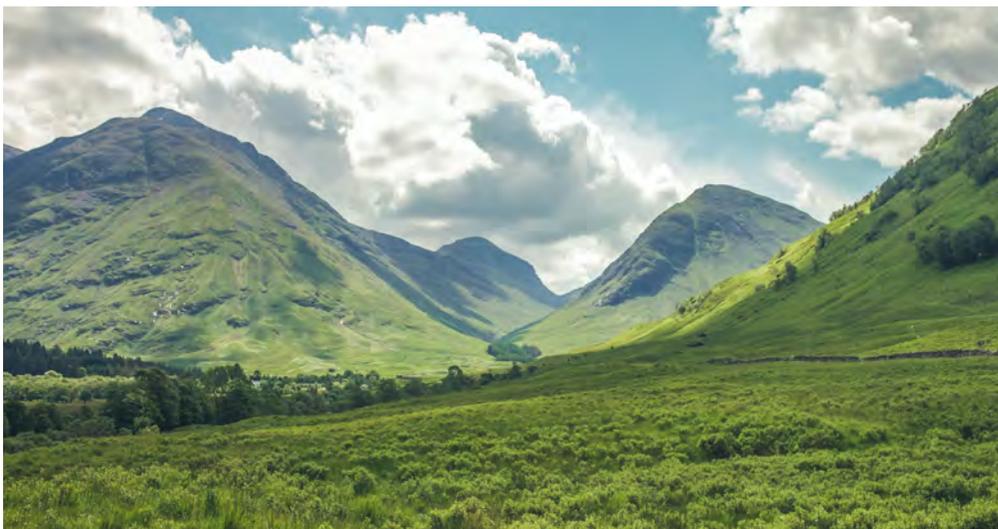
In November 2018, the Group of Chief Scientific Advisors published a statement providing 'a scientific perspective on the regulatory status of products derived from gene editing, and the implications for the GMO Directive'. The advisors concluded that the GMO Directive should be revised to reflect current knowledge and scientific evidence, within a broad dialogue involving relevant stakeholders and the public at large.

Subsequently in 2019, Re-Imagine Europa, together with SAM and the Group of Chief

Scientific Advisors, launched the Brussels Science-in-Society Salon. SAM proposed agricultural applications of genome editing as a first topic for discussion at this event supported by multiple other organisations and knowledge partners of Re-Imagine Europa including the European Parliament and the OECD.

In 2019, several events were held at the European Parliament and over one hundred key stakeholders were engaged in this debate. On the 8th of October 2019, the report Genome Editing in Agriculture – Implications for Society was presented to the European Parliament by then Commissioner Carlos Moedas.

In December 2019, Re-Imagine Europa, in cooperation with a number of prominent stakeholders, hosted a broader discussion around the theme of "Innovation, Climate and the Future" and launched the concept of a Priority Area on "Narratives, Climate and the Future". This decision was supported by the need to create stronger alignment in Europe on how to reach ambitious climate goals and an awareness of the newly emerging understanding of the relationship between "organic" and innovation as well as of alternative food/protein strategies as a solution to land-use and biodiversity.



PROJECT OVERVIEW

Agriculture occupies a unique position at the heart of the European Union's society, environment and economy. With the European Green Deal committing to climate neutrality by 2050, agriculture and the Common Agricultural Policy should play a key role in promoting social, environmental and economic sustainability.

Noting the current diversity of interpretations of "sustainable agriculture", the aim of the Task Force is two-fold:

- a)** To develop a shared understanding of what is meant by sustainable agriculture including what values and goals should be prioritised.
- b)** To assess how innovations can support the transition to a European agricultural model promoting social, environmental and economic sustainability, starting with genome editing.

This work will be developed in three "phases" and has clear deliverables and milestones set up in order to ensure effective and efficient project management.

PHASE 1: MAPPING (JULY 2020 - NOVEMBER 2020)

a) Map of key stakeholders and experts that should be involved in the Task Force

Involving the right stakeholders and ensuring that no group is left out will be imperative for the success of the Task Force. For this reason, a detailed mapping exercise will be important to ensure a balanced and well-defined group of experts and stakeholders.

b) Map of key narratives

It is through narratives, shared interpretations of the world, that people unite. However, narratives can also fracture society and polarize debate. To better understand the values and priorities that should be at the basis for European model for sustainable agriculture, Prof. Nowak and his team will map current narratives and the values behind them.

c) Map of key policy alternatives with possible pros and cons

The aim is to produce a comprehensive overview of possibly viable policy options for regulation of genome editing in agriculture, outlining potential positive and negative aspects of each option and making it easier to understand the landscape and questions that need to be addressed.

WHY NARRATIVES

Two very interesting points that are relevant to the current discussions were highlighted around the need for a new narrative on sustainable agriculture and innovation:

- First, research shows that narratives can be very persistent and extremely adaptive at the same time. Narratives both adapt to describe new realities and are pivotal tools to understand the changes that are occurring. This past decade, following the financial, economic, social and political crisis that has ravaged Europe, the call for a paradigm shift has become mainstream, putting climate change and innovation on the top of the European agenda. The COVID-19 crisis has further destabilised the status quo and will have important implications for future narratives as food systems, the economy and healthcare are disrupted.
- Second, a change in narratives is intimately related to both societal and technological/commercial innovation and changes of narratives precede and cause change and innovation. According to Lane and Maxwell [2005] innovations are always associated with ontological uncertainty. No-one really knows what the effects of an innovation will be. The uncertainty concerning the outcomes of an innovation can effectively hinder the innovation process. Actors use narratives to infer the likely consequences of an innovation. Narratives thus reduce uncertainty and enable the introduction of innovations. Research in cognitive science suggests that narratives play a primary role in decision making under uncertainty [Tuckett & Nikolic, 2017]. Work by Lakoff and Kahneman further underlines that when it comes to complex decisions our brains often opt for answering a different, easier question and often use their “identity communities” to define their answers.

Professor Andrzej Nowak will be leading this work. Andrzej is a Polish psychologist and one of the founders of dynamical social psychology. He is a pioneer in applying computer simulations in social sciences. His work on “Narratives” developed together with David Lane has shaped this field of academic research and he is currently working on new models of social change and collective intelligence that will be relevant for Phases 2 and 3.

This will allow us to develop a clear view of the shadow narratives and values that guide behaviour within different countries, different groups and different stakeholders, effectively allowing us to better understand what the real “reasons” for certain opinions are and how we can use this knowledge to go beyond the current stalemate in the conversation.

PHASE 2: CONTENT

(JANUARY 2021 - MAY 2021)

The second stage of the work will focus on bringing together experts and key stakeholders to develop a shared vision and a concrete proposal as to what an ideal European model for sustainable agriculture might look like and how innovation could help reach this goal, including the regulatory system that would govern innovation.

a) Sustainable Narratives

The first part of this process to constructing a network of shared agreement about the European model for sustainable agriculture. The Expert Committee will be joined by leading psychologists, behavioural scientists and other experts to help build a shared vision and direction.

Deliverable: Report on the Task Force's vision for a sustainable model for European agriculture.

b) Policy proposals

Once a shared direction has been agreed upon, the Expert Committee will reflect on the role of innovation to enable this vision and the regulatory system needed to govern innovation, starting from a detailed assessment of genome editing in agriculture.

Deliverable: White Paper on Ideal Regulation for genome editing in Agriculture

PHASE 3: OUTREACH AND ENGAGEMENT

(MARCH 2021- APRIL 2022)

The third phase will reflect the outreach activities done to promote the work of the Task Force and ensure that policy makers and key stakeholders are informed and receive the material and perspectives developed. This work can be divided into 3 parts:

a) Preparatory work

Initial meetings will be set up with key Commissioners, MEPs and other key actors to be able to understand personal concerns and questions before starting the work.

b) Presentation of Results and Report

Several events will be organized to present the results of the Task Force and engage policy makers and key stakeholders from the start of the work.

All deliverables and reports developed by the Task Force will be published on Re-Imagine Europa's website.

c) Outreach and Engagement Effort

Based on the work developed in phase 1 and phase 2, a pilot outreach and engagement effort will be launched.

GOVERNANCE

The Task Force will bring together roughly one hundred experts from key stakeholder groups within the **EXPERT COMMITTEE**. As such, the Expert Committee is the main constituent body of the Task Force, and a list of all its members will be published once finalised.

Both the Expert Committee and the Steering Committee will be overseen by the Task Force Chair. The Chair and each of the members of the Steering Committee are also fully engaged in the Expert Committee.

STEERING COMMITTEE

Prof. Anne CAMBON-THOMSEN

Emeritus Research Director in CNRS and Member of the European Group on Ethics in Science and New Technologies (EGE)

Prof. Maria da Graça CARVALHO

Member of the European Parliament (EPP – ITRE), former Minister of Science, Innovation and Higher Education

Prof. Paolo DE CASTRO

Member of the European Parliament (S&D –AGRI), former Minister of Agriculture of Italy

Mr Garlich von ESSEN

Secretary General of Euroseeds

Prof. Dirk INZÉ

Full Professor at Ghent University and Scientific Director of the VIB, Department of Plant Systems Biology, member of KVAB

Dr. Peter KEARNS

Former Principal Administrator at the OECD

Prof. Urs NIGGLI

President of agroecology.science - Institute of Sustainable Food and Farming Systems

Mr Pekka PESONEN

Secretary General of Copa-Cogeca

Prof. Pere PUIGDOMENECH

ALLEA Board Member | Institute of Catalan Studies and Royal Academy of Sciences and Arts

Mr Nils TORVALDS

Member of the European Parliament (RENEW – ENVI)

PARTNERS

For the Task Force focussing on genome editing in the 21st century RIE will be engaging its Strategic and Knowledge Partners as well a network of Experts to ensure that the work can build on leading expertise from organisations and individuals already active in the debate. A full list of knowledge partners will be published in September 2020.

Special mention should go to two partners that would be involved in the project as sub-awardees:

ALL European Academies:

ALLEA is the European Federation of Academies of Sciences and Humanities, representing more than 50 academies from over 40 EU and non-EU countries. Since its foundation in 1994, ALLEA speaks out on behalf of its members on the European and international stages, promotes science as a global public good, and facilitates scientific collaboration across borders and disciplines.

Academies are self-governing bodies of distinguished scientists drawn from all fields of scholarly inquiry. They contain a unique human resource of intellectual excellence, experience and multidisciplinary knowledge dedicated to the advancement of science and scholarship in Europe and the world.

Jointly with its members, ALLEA seeks to improve the conditions for research, to provide the best independent and interdisciplinary science advice available, and to strengthen the role of science in society. In doing so, ALLEA channels the expertise of European academies for the benefit of the research community, decision-makers and the public. Outputs include science-based advice in response

to societally relevant topics, as well as activities to encourage scientific cooperation, scientific reasoning and values through public engagement.

ALLEA is constituted as a non-for-profit association and remains fully independent from political, religious, commercial or ideological interests.

ALLEA's activities of particular relevance to this project are the PERiTia project, building on the work of the Working Group on Truth, Trust and Expertise, the work done on Genome Editing in Crop Improvement, as well as a new project examining the proliferation of scientific misinformation and responses to it. Further, ALLEA core initiatives focus on intellectual property rights, including patenting of CRISPR-Cas and on ethics in science, where ALLEA maintains standing working groups.

European Sustainable Agriculture through Genome Editing network (EU-SAGE):

EU-SAGE is a network representing 133 European plant science institutes and societies that have joined forces to provide information about genome editing and promote the development of European and EU member state policies that enable the use of genome editing for sustainable agriculture and food production.

Created following the EUCJ decision, leading scientists representing more than 85 plant and life sciences research centres and institutes endorsed a first position paper, initiated by the VIB-UGent Center for Plant Systems Biology, that called upon European policy makers to safeguard innovation in plant science and agriculture. During 2019 this evolved into a network of 133 European plant science institutes and

societies, which amongst other things, wrote a letter to the European Commission and published an Open Letter on 25 July 2019 to once more call upon European policy makers and politicians to take appropriate action to safeguard genome editing for sustainable agriculture.

EU-SAGE is one of the EU-level stakeholder organizations invited to the targeted consultation of the European Commission (see below for more information).

THANK YOU

Re-Imagine Europa sincerely thanks its partners for their precious support and cooperation. We are deeply grateful that they have chosen to be a part of our community to re-imagine *Europa* with us!

STRATEGIC PARTNERS



KNOWLEDGE PARTNERS



allea | All European
Academies

euSage
European Sustainable Agriculture
Through Genome Editing