Contents

- What is RISE? .............................................................................................................. 3
- Foreword by RISE Chairman, Janez Potočnik ...................................................... 4
- The Future of Crop Protection in the EU – launch of the report ...... 5
- Soil ........................................................................................................................................ 9
- Advisory groups / working groups .............................................................. 10
- European Commission H2020 Projects .................................................. 10
  SYSTEMIC .................................................................................................................... 10
  CIRCULAR AGRONOMICS ...................................................................................... 10
  BESTMAP .................................................................................................................... 11
The RISE Foundation was established in 2006 as an independent public utility Foundation. Our vision is for a more sustainable agricultural system in Europe; one that engages fully with the circular economy and provides safe and healthy food whilst protecting and rebuilding our natural capital; creates jobs, encourages investment in rural areas, and conserves our traditions and cultural heritage.

RISE works as an impartial and independent think tank, bringing together experts to address key environmental/agricultural challenges in Europe and develops high quality accessible research reports with clear recommendations for policy makers. It draws on its extensive network of rural stakeholders to highlight innovative practices developed at the farm level and provides a platform for debate on issues that affect our rural areas.

Board of Directors

- **Thierry DE L’ESCAILLE**, Treasurer, Secretary General of the European Landowners’ Organisation and farmer
- **Corrado PIRZIO-BIROLI**, Former Chief of Staff of Dr Franz Fischler, European Commissioner for Agriculture and Rural Development: 1995-2004
- **Paolo DE CASTRO**, MEP
- **Christoph BÜREN**, President of VIVESCIA
- **Pieter DE POUS**, Senior Policy Advisor, E3G - Berlin
- **Pierre Olivier DREGE**, President of the European Landowners’ Organisation
- **Koen VAN KEER**, Sustainable Affairs and Stakeholder Relations Expert, Yara
- **Mella FREWEN**, Director General of Food Drink Europe
- **Ludwig FORREST**, Senior Programme Coordinator for Philanthropy, King Baudouin Foundation
- **Alexandre BRAND**, Chief Sustainability Officer of Syngenta
- **Gerard GOVERS**, Vice Rector of Science, Engineering and Technology and Vice Rector of Sustainability at KU Leuven, Belgium
2020 brought us the COVID-19 pandemic, and with it a refocus and re-evaluation of so many areas of our lives. This has been particularly true for food production and distribution.

Limited shortages in the early days of the pandemic, and threats of protectionist policies, resulted in images of empty shelves and panic buying. This led many Europeans to question, perhaps for the first time in at least two generations, the security of our food system. In addition, the rapid spread of this deadly virus has brought an important warning to all of us, that if we continue to destroy and encroach on biodiversity around the world, the likelihood of such pandemics will only increase.

And so, in this atmosphere the work of the RISE Foundation, to strive to create a framework to transition European agriculture to sustainable model, is more important than ever. We don’t have the time for progress to be delayed by those who cling to the status quo for the sake of security, because the status quo no longer provides us with security. What we need is an open, science-based dialogue between stakeholders from all corners of the food system, to listen to one another and find ways to collectively shift our current model of production and consumption. RISE is ready to play its part to support this move.

It was in this vein of open dialogue that the Foundation developed its latest piece of work on crop protection. The debates around pesticides and how we protect our crops from pests and diseases have created a situation in Europe where no one group is happy with the current situation. In its report, launched in May, RISE endeavoured to address the concerns of each of the stakeholder groups, before creating a vision for the future and suggested steps to get us onto a more sustainable path.

In the final quarter of 2020, RISE shifted its focus to soil. Soil, and its continuing loss and decline in Europe is at the very heart of the food security / resilience discussion. Without addressing the issue of soil loss and its decline, there can be no long-term food security. But equally, by addressing soil health, we have an amazing opportunity to simultaneously contribute to addressing so many of the challenges we struggle with today – reducing GHG emissions, strengthening resilience to future climatic events, improving biodiversity, reducing water and air emissions and so on.

This terrible pandemic has given us a heightened understanding of the fragility of how we produce and consume and live today, but it has also highlighted the ingenuity of the human race in tackling new challenges, in collaborating and pooling our knowledge, and in using science and behavioural change to rapidly address new threats. As more and more of us understand the urgent need to shift our patterns of production and consumption to safeguard our future on his planet, I grow increasingly optimistic that once again, we will come together to find solutions to transition our food system before it is too late.

And so, I end this preface with a call to join our forces for a healthy and transformative 2021!
Crop protection and the EU food system: Where are they going?

Pesticides have become a totemic issue of our whole food production system today. As pressure grows to remove plant protection products from the market, certain questions become more pressing. What is our current crop protection strategy, is it working? What is happening to plant protection product use across Europe, is it decreasing or increasing? Is the current system for approval of plant protection products (PPPs) adequate? What is happening where products have already been banned? What is the alternative strategy for crop protection, can it work? Will it affect land use? How do we get there?

With all parties disillusioned with the current plant protection strategy in Europe, and a lack of clarity on so many of the questions concerning crop protection, RISE chose to focus its work for 2019/2020 on trying to create greater clarity on our situation in Europe in order to better define what direction European crop protection strategy should take. In short, RISE wanted to answer the following: how farmers can protect their crops from disease, insects and weeds while remaining productive, maintaining their livelihoods, protecting our health, natural resources, biodiversity and the crucial environmental services they provide?

Early work on the report quickly unearthed a surprising lack of clear comparable data on many important aspects of the European crop protection strategy – on the use and sales of PPPs, on the uptake of Integrated Pest Management (and how that should be measured) and on the delayed reapproval process for current active ingredients at the European level (and PPPs at the member state level). But it also become quickly evident that it made no sense for the report to focus narrowly and solely on the specific list of chemicals permitted as PPPs. The use of PPPs by farmers, and their impact, is tightly knitted into a complex and highly precise combination of seed type, machinery, fertilizer use etc. To consider reducing just part (PPPs) of a highly complex, high input system, would be non-sensical. The only way to reduce PPP use in agriculture would be to address the wider farming practices, all of which would need to adapt to ensure a system of agriculture that could sustain itself with lower or no PPPs.
There are a limited number of reports that identify a clear causal link between certain PPPs and negative environmental and health outcomes of their use. But there is a far greater wealth of reports which outline the highly concerning direct impacts of the agricultural system as a whole (of which PPPs are an integral part) on our health, on biodiversity, on water quality and on emissions. And whilst PPP use clearly plays its part in these detrimental results, it is hard to break off the direct impact from other aspects of agricultural practice, such as fertilizer use and the loss of habitat.

This led RISE to move away from a goal of reduced use and risk of pesticides, as outlined in the Sustainable Use of Pesticides Directive (SUD), but to identify a wider goal:

“To re-establish ecosystem functions on agricultural land to provide nature-based solutions for pest, disease and weed threats, and to utilize all means to enable a substantial fall in the harms caused to health and environment by use of PPPs”.

In the report RISE concluded that the transition cannot be disassociated from the wider food system and land use changes which will have to embrace food consumption and waste, food pricing - which internalises the true cost of production- and welfare and trade policy.
Two events were organised during the course of the project:

**Forum for the Future of Agriculture event**

**APRIL 2019**

An initial stakeholder debate was held in Brussels in April 2019. The event brought together around 150 stakeholders from academics and policy makers to industry, farmers and NGOs. Speakers included RISE Chairman Janez POТОČNIK, RISE Report Director Allan BUCKWELL, Adjunct Professor Michael HAMELL, University College of Dublin, Professor Per KUDSK, Head of the Crop Health Section of the Department of Agroecology, Aarhus University, Denmark and Dr Klaus KUNZ, Head of Sustainability and Business Stewardship, Bayer Crop Science. The event was part of the programme of the Forum for the Future of Agriculture 2019.

**Launch event**

**MAY 2020**

On May 19th 2020 RISE held a webinar to present the report. Speakers included RISE Chairman Janez POTOČNIK, RISE Report Director Allan BUCKWELL and a feedback intervention from Sir Charles GODFRAY.

*Further debates and events on the final report have been postponed until physical meetings can resume.*
Due to the complexity of the subject, and high degree of stakeholder engagement, RISE invested in an intense review process for the development of its work. Alongside a list of experts from all stakeholder groups who kindly gave up their time to answer the team’s questions and provide ideas and advice, RISE also engaged two voluntary advisory groups. The first was an official expert group, the second, an NGO review committee. Both groups provided in depth comments throughout the development of the report.

Advisory Committee
- Professor Tim BENTON, Research Director – Emerging Risks. The Royal Institute of International Affairs Chatham House and Professor University of Leeds;
- Emile FRISON, Expert member of the Panel of Experts on Sustainable Food Systems IP-ES-Food;
- Michael HAMELL, Adjunct Professor of Agriculture, University College Dublin;
- Professor Per KUDSK, Head of Section of the Department of Agroecology, Aarhus University;
- Professor Erik MATHIJS, Director of SFERE (Sustainable Food Economies Research Group) and Professor of Agricultural and Resource Economics, Department of Earth and Environmental Sciences, KU Leuven;
- Professor Pieter SPANOGE, Head of the Research Group on Crop Protection Chemistry, Department of Plants and Crops – Ghent University.

NGO Review Committee
- Ariel BRUNNER and Harriet BRADLEY, Birdlife
- Stephanie MORREN, Royal Society for the Protection of Birds RSPB
- Verena RIEDL, Nature and Biodiversity Conservation Union NABU
- Jabier RUIZ, WWF – European Policy Office

Sponsors
This project received financial support from the European Landowners’ Organization, The Friends of the Countryside, The European Crop Protection Association, John Deere, CropLife, Fediol, LAPAR, CMSZP, Familienbetriebe Land Und Forst and Acqua e Sole.

Download the report
The report was launched online in May 2020 this year and is available to download here.
Having completed the report on crop protection, RISE turned to its next project in the second half of 2020 – soil. Although the project will officially be launched in January 2021, RISE started the process of fundraising and developing the concept note through meetings and research in 2020.

Why soil? Soil is the underlying finite resource upon which all other environmental and climate indicators depend and is key to our long-term food security. Indeed, soil is at the heart of many of the important challenges we face today. It has a crucial role to play in climate mitigation, climate resilience, future food security, water and nutrient management, and biodiversity, to name but a few.

The importance of addressing the deterioration of our soils has long been understood, and as a result, has been targeted in a range of policy initiatives. Indeed, over a decade ago, the Commission tried to negotiate a soil directive to tackle the very problem we still face today – notably the loss of soil and the deterioration in soil health. Yet, despite knowing, and understanding, how crucial it is ‘to get soil right’, the state of EU soils continues to worsen. This is made even more astonishing when we consider that whilst there maybe large gaps in our understanding of certain aspects of soil, there is already a well-established body of evidence which shows how farm practices can be changed to make a real impact on the worrying soil data.

RISE has decided to focus on soil both as a recognition of its central importance in ALL the work of the Foundation (one can’t talk about the impact of climate change on production, on land use competition, on nutrient use efficiency or indeed crop protection without first addressing soil) and also because the issue of soil management in Europe clearly needs a fresh impetus to start the momentum of change.

RISE will pose the following questions: what is the way forward to reverse the continuing decline of our European soils? Do we need to better apply current regulations or as some have said, is the New Green Deal and Farm to Fork Strategy time to reconsider a Soil Directive? Should further measures to protect soil be made mandatory and implemented into cross compliance? Would this even work? And how can we better engage the private sector in investing in our soils and so by relieve the growing pressure on our public funds? How can this be better enabled?

The report will delve into the policy, most notably the Common Agricultural Policy, and what this powerful policy can do to change how we farm, but it will look wider. But agricultural policy, whilst imperative to change, will always have its limitations. Therefore this report will have a strong focus how the private sector play its part. RISE will look at private investment initiatives for improving soil and analyse how the food chain can take its responsibility for this primary resource and collectively support, incentivize and persuade farmers to adapt.

The final report will be released in March/April 2022 and will be started with a webinar on soil at the Forum for the Future of Agriculture 2021.
Advisory groups / working groups

RISE has become an Advisory Committee member of TAPP - Coalition: True prices for animal proteins.

European Commission H2020 Projects

SYSTEMIC stands for ‘Systemic large-scale eco-innovation to advance Circular Economy and mineral recovery from organic waste in Europe’. RISE is the Work Package leader for Synthesis and Dissemination.

The SYSTEMIC project is working with 5 demonstration plants to show how recovering nutrients from waste can be economically viable and how European bio-waste, animal manure and sewage sludge treatment can be taken to the next level by applying novel technologies to produce energy and recover nutrients. Using the experience gained at these plants, the coalition is developing business case studies and supporting their take up by additional plants, thereby contributing to the expansion of nutrient recovery across the European Union and so facilitating the move to a more circular economy.

In 2020 all nutrient recovery technology was operational at the demonstration biogas plants and pot and field trials of the resulting products were ongoing. Business case scenarios were completed and the living labs – bringing together biogas plant for learning – continued online.

In terms of policy work, the project consulted on the RENURE report (the result of the SAFE MANURE study which consided if certain products recovered from manure can be exempt from the limitation placed on manure fertilisers in Nitrate Vulnerable Zones). Due to the pandemic, the policy workshop was delayed until 2021 and dissemination materials (such as videos) were developed to ensure greater online access to the tools.

The project was extended for 6 months due to field trial delays because of the pandemic and will now end in November 2021.

www.systemicproject.eu
@Systemic_eu

SYSTEMIC receives funding from the European Union’s Horizon 2020 Framework Programme for Research and Innovation under grant agreement No 730400.

CIRCULAR AGRONOMICS is a H2020 project which started in September 2018 and will run for 4 years. RISE is engaged as the Work Package leader for WP6: Dissemination and Exploitation.

It is estimated that around 13.6 Mt of nitrogen (N) and 1.8 Mt of phosphorus (P) enter the EU agricultural system annually in the form of...
mineral fertilisers and feed. However, N use throughout the whole European agri-food chain is inefficient: for every five tons of N entering the EU agri-food chain, only one ton is converted to finished products for human consumption. The case is similar for P and potassium (K). These low nutrient use efficiencies, together with poor soil management practices is leading to a loss of organic carbon in soils. This is in turn leading to large losses of nutrients and carbon into the environment with significant negative impacts on soils, water and air resulting in unacceptable health and environmental costs.

The project aims to address these issues by investigating and testing a wide range of measures to improve nutrient and carbon use in the EU, including:

- The production of novel organic soil amendments from agricultural and industrial by-products
- The investigation of cropland and grassland management practices to reduce GHG emissions and optimize manure characteristics.
- The testing of multiple manure, digestate and food waste valorisation techniques for fertiliser recovery
- The investigation of food industry wastewater treatment for the recovery of carbon-rich compounds.

In 2020 the work of the project was ongoing with innovative solutions to improve the N P C cycle being carried out at sites across Europe. This included extensive baseline soil sampling, farmer workshops, field trials, the establishment of a pilot nitrogen recovery plant. RISE developed a new series of dissemination materials for the project and guided the policy work.

**BESTMAP**: Behavioural, Ecological and Socio-economic Tools for Modelling Agricultural Policy

**BESTMAP** is a H2020 Project which will design and develop a new Policy Impact Assessment Model (PIAM) framework which will integrate modern socio-economic, behavioural and biophysical approaches that will capture the environmental, social and economic variability of individual farms and EU regions. The model will eventually be used by European policy makers in the European Commission and at the Member State level to model the outcomes of possible policy measures. It is envisioned as a tool to complement, extend and integrate with existing models used by the Commission and Joint Research Centre (JRC). The project will implement the newly developed framework in five regions across Europe, representing diverse agricultural, socio-economic and political backgrounds:

- Humber Catchment (UK)
- Mulde River Basin (DE)
- South Moravia (CZ)
- Baćka Region (RS)
- Catalonia (ES)

The project started in September 2019. The RISE Foundation is working to support the consortium members to develop the possible policy scenarios to feed into the model development and design the policy recommendations from the project. In 2020 RISE carried a series of interviews with key stakeholders in the agri-food sector across Europe to identify key trends in agriculture in the short – medium and long term. The final report was submitted to Bestmap and will be used to ensure the developing models are relevant to the changing agricultural landscape.

**www.circularagronomics.eu**  
**@CircularAgro**  

Circular Agronomics receives funding from the European Union’s Horizon 2020 Framework Programme for Research and Innovation under grant agreement No 773649.

**www.bestmap.eu**  
**@Bestmap_eu**

BESTMAP receives funding from the European Union’s Horizon 2020 research and innovation programme under Grant Agreement No. 817501.