



Photo: ANP / Hollandse Hoogte / Robin Utrecht

# KIC main line Mission

## Integral approach to societal issues

**How do we keep healthcare affordable? What are our solutions to climate change? How do we retrieve valuable raw materials from our waste? How can we withstand threats to our security? How do we ensure a sustainable food supply? These are just a handful of the questions that the government asks knowledge institutions and innovative entrepreneurs to ensure a future-proof the Netherlands.**

NWO contributes to the Dutch innovation policy through part of its programming. Since 2020, this programming has been based on the Mission-Driven Top Sectors and Innovation Policy of the Dutch government that is aimed at solving major societal challenges. The underlying Knowledge and Innovation Agendas (KIAs) and the contributions of NWO and other parties are part of the Knowledge and Innovation Covenant (KIC) 2020-2023.

### Collaboration with impact

KIC aims to realise groundbreaking innovative solutions with societal and economic impact. Companies, knowledge institutions, and government bodies jointly invest in developing and applying knowledge so that major societal challenges can be solved with the help of smart technologies. This also secures jobs and income in the future. An integral approach is crucial in the mission-driven (“thematic”) research of the Knowledge and Innovation Covenant (KIC). That approach comes about when researchers from the humanities, natural sciences and social sciences join forces with public and private parties. They approach issues from the perspective of their different disciplines. In this way, technological and

social innovation go hand-in-hand, as a result of which successful innovations arise.

### Mission-Driven Top Sectors and Innovation Policy

Four societally important themes lie at the heart of the Mission-Driven Top Sectors and Innovation Policy (Energy Transition & Sustainability; Agriculture, Water & Food; Health & Care; Security), which are elaborated in 25 missions that encompass concrete ambitions. In addition, we focus on the themes key enabling technologies and societal earning capacity. Based on these ambitions, the top sectors jointly wrote Knowledge and Innovation Agendas (KIAs) for each of the six themes stated above. In consultation with relevant stakeholders from science and society, multiannual mission-driven innovation programmes (MMIPs) were developed as part of these KIAs. For the innovation areas, these MMIPs describe the intended objective, the (sub-)programme lines and the specific research and development questions to be answered. For the key enabling technologies, potential multiannual programmes (MAPs) have been identified and supplemented with knowledge and development questions.



Photo: Shutterstock.com

## Seaweed: source of biomass and proteins

'Seaweed is a highly promising but scarcely exploited source of biomass and proteins. Small-scale cultivation experiments demonstrated that seaweed often becomes detached from its substrate. That results in the inefficient and unpredictable cultivation of seaweed, with high economic risks and an unknown impact on marine ecology. As a result of this, the sector is not attracting investments, and that hinders the upscaling of operations to a profitable level. Our consortium will improve the attachment of seaweed to the substrate, quantify the consequences of large-scale seaweed cultivation on marine ecology and create business models for Dutch seaweed production. That is necessary for the **transition to a sustainable, blue economy**.'

**Dr Tijs Ketelaar, Wageningen University & Research**

*Consortium partners:* Brandfriend, Friedrich Schiller University of Jena, Ghent University, Wageningen Economic Research, Wageningen Marine Research, Hortimare, North Sea Farmers, ReShore, Touwfabriek Langman.

## NWO and KIC: research brings solutions closer

The input from scientific and practice-oriented research is indispensable for realising solutions for the challenges posed. Each year, NWO invests 55 million euros in the main line Mission for research in which public and private parties collaborate on societal problems. The NWO research and innovation programmes for the KIC 2020-2023 contribute to answering the research and development questions linked to societal issues.

The main line Mission has two public-private partnership (PPP) approaches per Call for proposals. These have different co-funding conditions: to increase "knowledge" (with 10% co-funding) and to increase "innovation" (with 30% co-funding). For each thematic call, a choice has to be made between the two approaches.

The approach *innovation* is the standard default and is aimed at economic and societal innovation.

- Co-funding: 30%, of which at least half must be private investment

The approach *knowledge* is specifically used for knowledge acquisition in the case of knowledge gaps.

- Co-funding: 10%, of which at least half must be private investment

The following applies to both approaches:

- the themes are determined by the priorities from the KIAs or are related to these
  - at least half of the co-funding is in cash
- Deviations per call are possible.

In the period 2020-2022, NWO has **so far developed 19 mission-driven calls** with a total budget of about **108 million euros**. The first projects were awarded funding at the start of 2022.

## Would you like to know more?

Please contact **Eelco van Dongen**

[kic-missie@NWO.nl](mailto:kic-missie@NWO.nl)

[www.nwo.nl/kic-mission](http://www.nwo.nl/kic-mission)



## Climate-robust production systems and water management

'Due to climate change, periods of extreme drought will occur more frequently in the Netherlands. That could lead to societal unrest and major economic damage. We will try to gain a better understanding of how soil and vegetation behave during prolonged drought periods. The consortium will actively collaborate with farmers, water managers and other decision-makers and **develop practical use cases** for the daily monitoring and prediction of drought.'

**Prof. Bob Su, University of Twente**

*Consortium partners:* TU Delft, Wageningen University, HAS University of Applied Sciences, Delta-res, Wageningen Environmental Research, VanderSat, HKV, Waterschapshuis, Rijkswaterstaat, Royal Netherlands Meteorological Institute, Stichting Voedselbosbouw Nederland, Netherlands Agricultural and Horticultural Association (Section North), Sencrop, Veenink Akkerbouw, Water Board Aa en Maas, Waterboard Valle en Veluwe, Herenboeren Wenumseveld.



Photo: Shutterstock.com