



Call for Proposals, Climate Smart Agriculture, Nederlandse Organisatie voor Wetenschappelijk Onderzoek

Cooperation India-The Netherlands
2020

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1 Introduction

1.1 Background

There is a long history of scientific collaboration between India and the Netherlands. The Dutch Research Council (NWO), through the Merian Fund¹, and the Indian Department of Biotechnology (DBT) aim to further stimulate long term research collaboration between the two countries by funding joint research, to strengthen the international position and global impact of research.

Funding is provided for interdisciplinary and transdisciplinary consortia of Indian and Dutch research groups and stakeholders, for high quality research that has the potential for societal and scientific impact.

NWO and DBT have agreed on a strategic knowledge and innovation agenda. A Call for Proposals on a specific theme based on this agenda is planned to be published annually. Funded research should be aligned with national research agendas, as well as international initiatives such as the UN Sustainable Development Goals, and build bridges between different actors in the knowledge chain, fundamental and applied research, and scientific disciplines.

1.2 Available budget

The total budget for this call is M€ 1.4 on the Dutch side and Rs. 11.0 Crores on the Indian side. With the available total budget, NWO and DBT aim to fund two projects with a duration of five years each. Projects can apply for a maximum of k€ 700 at NWO, and for a maximum of Rs. 5.5 Crores from DBT. The NWO Grant Rules 2.017 are applicable to the part of the project's budget covered by NWO. The part of the budget covered by DBT must follow the DBT grant conditions. Please see section 3 for further detail.

¹ The Merian Fund is a NWO-fund for international cooperation with (emerging) science countries and developing countries. The common thread within the Merian Fund is international research to promote the achievement of the United Nations Sustainable Development Goals worldwide. For more information see <https://www.nwo.nl/merianfund>



1.3 Validity of the Call for Proposals

This Call for Proposals is valid until the closing date on **7 April 2020, 14:00 hours CEST / 17:30 IST**.
Please note: Applications must be submitted before the closing date to both NWO and DBT.

2 Aim

Many societal challenges are complex and interrelated. To achieve sustainable results for effective and impactful solutions requires sustainable collaboration, flexibility and creativity.

DBT and NWO aim to stimulate strong, sustainable research collaboration between their two countries, by funding projects that create scientific knowledge, aimed at sustainable, innovative solutions with high scientific and societal impact. Consortia will be funded in which researchers from knowledge institutions from both countries will work with partners from public, semi-public and private organisations (for-profit and not-for-profit), in order to increase the societal relevance and impact of their research.

This call focuses on research contributing to application-oriented solutions for mitigating the (expected) effects of climate change on agriculture. This topic is of great interest worldwide and of great importance to both India² and The Netherlands to be able to provide sufficient healthy food in a sustainable way, for a growing population and in a changing climate. The research projects should address several SDGs, in particular 2 (Zero hunger) and 13 (Climate action), but also 12 (responsible consumption and production). In The Netherlands this topic links to the Topsector Agro&Food, 'Horticulture and starting materials' and one of the four societal missions defined in the new mission driven Topsectors and innovation policy, 'Agriculture, water and food'.

2.1 Thematic focus

The world is facing a growing food crisis. Population growth and dietary shifts require an ever greater increase in agricultural production. At the same time a meta-analysis of future impacts of climate change predict (significant) declines in crop yields by the 2030s, varying from 10 to 50 per cent. There is an urgent and growing need for new knowledge, contributing to new insights, policies and practices to meet food and nutrition security challenges.

Since the effects of climate change will differ in different regions of the world, it is hard to generalise the effects of climate change or the measures to be taken to mitigate such effects. Climate smart agriculture research has to take into account the predictions for a specific region, the range of crops that can grow there, the environment and the economic and societal situation.

Until a few years ago agriculture and horticulture mainly focused on increasing production, i.e. how to produce more crops per area with higher efficiency and lower costs. Higher efficiency was driven by the use of chemicals (fertiliser/pesticides), increase of mechanisation and large-scale farming. Although these developments have been incredibly successful at producing more food at lower financial cost, they were accompanied by significant societal and environmental costs. Around the world soils are being depleted, even leading to decreasing yields. Emissions from agriculture contribute significantly to climate change and fertilisers and pesticides leaching from soils negatively affect our water resources. Highly adverse effects on biodiversity were illustrated earlier this year when worrying reductions in insect numbers in Europe were linked to agricultural practices, leading to fears for knock-on effects along the whole food chain. All these costs make it clear that agriculture cannot continue current practices and has to shift towards more sustainable and circular agricultural systems. These new or improved systems should reduce the hidden societal and environmental cost of agriculture, while, at the same time, securing a healthy livelihood for farmers and agriculture-related companies. Of particular concern are the effects of agriculture on the ecosystem services that humans and wildlife depend on and the effects on biodiversity. Nature-based solutions for mitigating and adapting to climate change would be of particular interest, combining improved agricultural practices with conservation or restoration of biodiversity in the region.

Taking the above into account, climate smart agriculture should aim at:

- Sustainable increase in productivity (more crops with less input) and increased resilience (adaptation);
- Reduction of greenhouse gases (mitigation);
- Enhanced food security and development;
- Mitigation of effects on ecosystems and biodiversity.

There are three areas highlighted as key to advancing research in this area:

² <http://www.indiaenvironmentportal.org.in/files/Defra-india-cc-agri.pdf>



- i) *Genetics and breeding of plants to increase resilience to climate change*
Molecular physiological research has made major strides at unravelling the complexity of the mechanisms that drive plant responses to stressors that can result from climate change, both abiotic (for example drought, flooding and high temperatures) and biotic (diseases and pests). Major challenges, however, still lie in scaling this knowledge to crop stands in the field. Under field conditions, plants are exposed to multiple stressors that may occur simultaneously or sequentially. Responses to these stressors interact and thus a response to one stressor affects the ability to respond to others. In real crop stands this interplay in turn is mediated by biotic factors, particularly plant-plant interactions.
- ii) *Pests and diseases linked to climate and posing significant risks*
Climate change may induce sudden outbreaks of diseases and pests, but the mechanisms by which this happens are often poorly understood. This hampers the ability to act preventively or deal with outbreaks. It is, for instance, unclear to which extent outbreaks are a result of direct or indirect effects of climate change. Climate change could, for instance, have a direct positive effect on disease or pest population dynamics or it could have an indirect effect, like by reducing plant resistance or by modifying the resistance at the ecosystem level (e.g., reduction in natural enemies).
Management plays an important role in mitigating these climate change effects. The heavy use of pesticides and fertilisers or poor soil management are examples of management that can make an ecosystem less stable and less capable of suppressing pest outbreaks. Sustainable solutions to mitigate climate change should look at new crops or combinations of crops more suited to the changing conditions as well as requiring less or no input of chemicals. Solutions that improve ecosystem resilience by increasing agro-ecosystem diversity or by using combinations of crops (e.g., intercropping) are of particular interest.
- iii) *Adaptive management of water and soil resources*
The role of Soil Organic Matter (SOM) is a key aspect of soil management. Proper management of SOM has several climate smart effects. Increasing SOM contributes significantly to climate mitigation by fixing more carbon in the soil. At the same time more SOM can improve agricultural water management by increasing the capacity of the soil to retain and release water. This results in better use of water resources (better rain infiltration, less irrigation required) and less loss of soil and nutrients through runoff.
Increased SOM also potentially improves soil microbial biodiversity. This has important implications for plant health by increasing disease and pest resistance and by improving nutrient availability. These positive effects are, however, strongly mediated by the local climatic conditions, the soil type and management practices. A much better understanding is needed of the mechanisms through which SOM drives these processes and how this links to improved, sustainable soil management.

2.2 Specific project requirements

The main objective of this call is to support interdisciplinary research and innovative approaches in order to develop application-oriented solutions for adaptation of agriculture to incremental climate change and/or increased climatic variability. These solutions should aim at balancing trade-offs and amplifying synergies between economic development and social demands while simultaneously preserving the environment. Therefore, projects in the 'Climate Smart Agriculture' programme should:

- i) Use an integrated approach to find solutions for the adaptation of agriculture to climate change.
The research proposal should address at least two of the key research areas highlighted above. Since solutions can be very crop and/or location specific, the applicants must specify why that crop and location were chosen and what the research questions are in relation to climate smart agriculture. The chosen crops and locations should be suitable to work as showcase and provide transferable knowledge to other settings.
- ii) Translate research to inform policies in developing options for climate smart agriculture. This will require sustainable resource management, long-term planning and governance. The research will have to take into account institutional arrangements, governance issues and legal aspects. The proposal should clearly describe relevant stakeholders and how they are involved. It should aim at collaboration with different governmental departments, specialists, land owners and policymakers, in order to allow for translation of the results of this research into practice.

2.2.1 Integrated research approach and co-creation

The challenges addressed in this call are interrelated and multi-scalar, and to contribute to impact requires a holistic approach that spans the entire research and innovation chain. The consortia should be knowledge-chain wide, meaning they should crosscut scientific disciplinary boundaries (interdisciplinarity) and integrate scientific and practitioners' knowledge in joint research (transdisciplinarity). The research proposal should be characterised by integrated perspectives. They should evolve in a process of co-creation with different partners: researchers from both countries and societal partners

should be actively involved throughout the entire project, in (advising on) shaping and conducting the research as well as in communicating the progress and results, in order to jointly produce a mutually valued outcome. Added value may be achieved by integrating and synthesising various sources of knowledge to create new knowledge and by creating sustainability through the development of long-term knowledge relations.

Proposals should be based on a thorough review of existing knowledge and should preferably be complementary to existing research initiatives and reinforce these where possible. Project teams are encouraged to use a combination of quantitative and qualitative and quasi-experimental research methods, including operational research, and should include research-into-use approaches.

Projects are also expected to collaborate with the other project(s) awarded in this call, so as to enhance the impact of the call aim as a whole. As a part of this, projects will be expected to attend joint kick-off and midterm workshops, as well as a final conference. Projects should budget for this accordingly.

2.2.2 International collaboration

Proposals must furthermore be characterised by equal partnership and sustainable collaboration between the Indian and Dutch partners. This includes inter-institutional cooperation, a balanced contribution to the proposed research, and frequent exchange between the partners, including exchange visits by both senior and junior researchers.

Projects are expected to organise a maximum of four research visits (in total) of a minimum of three months each for PhD students and/or postdocs, and of minimum three weeks each for senior researchers.

2.2.3 Impact Strategy, including Theory of Change & Impact Pathway

The research conducted in this Call for Proposals should have relevance and potential for impact beyond the academic world, such as in societal, technical, economical or cultural realms. This is why, in addition to having a societal or industry partner within the consortium, consortia should consider how relevant stakeholders can be involved in, or benefit from, the design and realisation of the proposed research project.

To further enhance the potential for impact of the proposed research, the application should state how approaches for achieving impact are integrated in the research design and conducted by the consortium in engagement with end users, such as practitioners, policymakers, and industry.

An integrated approach to impact

Developing a vision on desired change in collaboration between partners and stakeholders is pivotal for developing realistic and feasible strategies to enhance the potential for impact. To this end an integrated approach is required, which consists of the following elements:

- Co-creation
- Theory of Change and Impact Pathway
- Impact Strategy

Co-creation: A form of cooperation in research where different parties (researchers and stakeholders) in the knowledge process (demand and supply) interact and engage in joint learning to define problems, formulate possible solutions, design the research, conduct the research, assess the results and to translate these into new practices and products.

A **Theory of Change** describes how the research process can contribute to impact, taking into account the context, actors involved and describing the sequence of logically-linked cause-effect relations. Developing a Theory of Change in joint effort with research partners as well as stakeholders allows for making explicit which (and whose) problem is being tackled, and how the desired change is perceived to happen through research efforts. Projections on expected change will be based on a myriad of assumptions; documenting these assumptions allows for reflection on whether and how expected pathways to impact remain adequate or need adjustment.

The **Impact Pathway**, which is part of the Theory of Change, is the visualisation of the change process following from research execution as described in the Theory of Change. It makes explicit how the research activities will lead to results (output) and how these will contribute to desired changes in behavior of partners and stakeholders that are considered essential to achieving the desired impact.

An **Impact Strategy** is the plan of the consortium that spells out how the activities contribute to outcomes. Outputs do not automatically lead to outcomes, thus strategies are needed of the research consortium to plan and monitor how their efforts will enhance the potential for outcomes. This strategy should spell out clearly:



- Stakeholder engagement: which are the relevant stakeholders to engage with, how is this engagement foreseen and whose responsibility is it
- Communication: which means of communication are foreseen from inception throughout and whose responsibility it is
- Capacity development: which capacities, of partners and stakeholders, need strengthening in order to achieve the outcomes, how is this organised and whose responsibility is it.
- Monitoring and Evaluation: how is monitoring of activities foreseen and how do lessons feed back into the research design, whose responsibility is it.

How to translate this approach in the proposal?

Co-creation: Specify how the different skills and expertise are complementary and how this is integrated in approaches. Co-creation within the consortium and with stakeholders is central to the development of the research proposal through the execution of the research. Describe how co-creation within the consortium and with stakeholders is organised and monitored.

The Theory of Change describes how the research process is expected to contribute to solutions for adaptation of agriculture to incremental climate change and/or increased climatic variability. Describe clearly the contribution of the proposed research from problem definition and the identification of knowledge gaps, to the research design and how this is expected to contribute to change, including accompanying assumptions. The Theory of Change takes into account the context and the key groups of actors required to achieve the desired change. The Theory of Change is the vision narrative that is the background to the Research Impact Pathway.

Explicate in the Impact Pathway the expected change process that the proposed project contributes to through the realisation of output and outcomes, and the desired contribution to impact (see Box 1).

Describe the sequence of expected logical cause-effect relations, including underlying assumptions.

By formulating and revising the Impact Pathways in a collaborative effort between research partners, and stakeholders, it serves both as thought process (joint reflection) as well as method (tool) for formulating activities and strategies and monitoring and progress.

Indicators, at output and outcome levels, facilitate monitoring progress and accordingly adjusting the research approach, where the assumptions proved insufficient or incorrect. Indicators should be formulated in SMART ways and be ambitious, yet realistic.

To this end, a clear impact strategy (including stakeholder engagement, capacity development, and communication, also with the aim to influence the enabling environment) needs to be provided. This impact strategy should contain descriptions of the actual knowledge transfer activities undertaken to encourage innovation and boost impact from inception to the end stages of the proposed research. To further increase the potential for impact of the proposed research, the application should state how productive interactions around knowledge from the consortium to end users, such as government ministries, societal stakeholders and companies, will be facilitated.

A Theory of Change and Impact Pathway is not fixed, but rather reflected on continuously throughout the research process. For this reason, these will also be used as part of the monitoring, evaluation and learning trajectory (see section 3.5 for details).

Box 1: Output, outcome and impact

Research outputs relate to the direct and immediate results obtained by a research project or programme;

Research outcomes relate to the changes in behaviour, relationships, actions, or activities of stakeholders as a result of sharing and uptake of research;

Research impact is defined as changes in economic, environmental and social conditions a project or programme is aiming at. Change is a complex process that depends on a variety of actors and factors of which research is only one. Where research outputs fall under the direct sphere of control of a research project or programme, outcomes belong to their sphere of influence, and impact to their sphere of interest.

3 Guidelines for applicants

3.1 Who can apply

Eligible consortia are composed of researchers based in the Kingdom of the Netherlands and in India, with active involvement in the project of a senior Principal Investigator (PI) on both the Dutch and the Indian side. The consortium must also include a partner from a public, semi-public or private practitioner organisation (for-profit or not-for-profit). The consortium may also include other co-applicants, as long as they are eligible according to the criteria in 3.1.2.

Specifically, the Dutch and Indian sides of the consortium must fulfil the following requirements:

Dutch side of the consortium:

- One Principal Investigator who fulfils the requirements of 3.1.1;
- At least one co-applicant who fulfils the requirements of 3.1.2; Indian side of the consortium:
- One Principal Investigator who fulfils the requirements of 3.1.1;
- At least one co-applicant who fulfils the requirements of 3.1.2;



In addition, the consortium should contain at least one partner from a public, semi-public or private practitioner organisation (for-profit or not-for-profit).

Together, the consortium members will 1) formulate relevant research questions and approaches; 2) formulate and submit the proposal through the Principal Investigators; 3) conduct the project activities; 4) coordinate knowledge sharing and support the application, dissemination and communication of the project results to a broader group of possible knowledge users that are not a member of the consortium; and 5) take responsibility for the adequate and timely reporting conditions.

Each Principal Investigator and consortium can only submit one proposal.

This call aims at knowledge chain-wide collaboration, to enhance demand articulation, ownership, and the effective uptake of results. For this reason, all consortium partners, as well as relevant stakeholders, are expected to be engaged in all phases of the project execution, from its inception to sharing the (emerging) results. Evidence of such active engagement will be an important element in the assessment of project proposals and may be demonstrated through references to involvement in project preparation, active involvement as a project partner and links between the proposed research project and ongoing projects of NGOs, private or industry organisations, and/or policy implementation.

A Consortium Agreement to regulate consortium governance, task division, resource management and ownership of results between the collaborating consortium organisations is obligatory (see section 3.5 for details).

3.1.1 Principal Investigators

A proposal should have two Principal Investigators: one based in the Netherlands or at a university established in the Kingdom of the Netherlands, and one based in India. The two Principal Investigators will serve as the recipients of the grants from their respective countries. They will serve as the points of contact for their respective funding agencies and will submit the proposal to both organisations. The Principal Investigators' organisations will take responsibility for the project secretariat, the day-to-day management and all financial affairs of the research project, including the final financial accountability towards their respective funding agencies.

Netherlands-based Principal Investigator

For scientists based in The Netherlands, the NWO eligibility criteria apply. The Netherlands-based Principal Investigator should be affiliated to one of the following:

- Universities established in the Kingdom of the Netherlands;
- University medical centres;
- NWO and KNAW institutes;
- TO2 institutes;
- the Netherlands Cancer Institute;
- the Max Planck Institute for Psycholinguistics in Nijmegen;
- researchers from the DUBBLE Beamline at the ESRF in Grenoble;
- NCB Naturalis;
- Advanced Research Centre for NanoLithography (ARCNL);
- Prinses Máxima Center for pediatric oncology;

AND

have an employment contract for at least the duration of the application procedure and the duration of the research the grant is applied for;

AND

have at least a PhD or an equivalent qualification.

Researchers with a 0 hour contract at one of the institutions above cannot apply. An exemption can be made for Principal Investigators on a 'tenure track' contract at one of the institutions above.

India-based Principal Investigator

For Indian scientists, DBT requires the Principal Investigator to refer to the DBT guidelines for proposal submission:

Entities eligible to participate:

- Government of India supported or recognised (public or private) academia, research organisations;
- Government of India recognised not-for-profit, NGO's / voluntary organisations (VO's) / trusts / research foundations, having research as one of the imperative mandates.



3.1.2 Co-applicants

A co-applicant is a participant in the consortium and receives funding through the Principal Investigator. The consortium should include co-applicants from at least one other Dutch and Indian institution than the Principal Investigators.

Dutch co-applicants

NWO requires co-applicants to be:

- A researcher from one of the institutions listed in 3.1.1, who has an employment contract for at least the duration of the application procedure and the duration of the research the grant is applied for;
AND
has at least a PhD or an equivalent qualification.

Researchers with a 0 hour contract at one of the institutions above cannot be a co-applicant. An exemption can be made for researchers on a 'tenure track' contract at one of the institutions above.

- An experienced researcher (a professor, assistant professor, or a researcher with a similar appointment) with an appointment at a university of applied sciences funded by the Dutch Ministry of Education for the duration of the application process and the project (funded in accordance with Article 1.8 of the law on higher education and scientific research).
- If the applicant is affiliated to an organisation not listed in paragraph 3.1.1 and which is not a university of applied sciences as specified above, the organisation must meet the following cumulative criteria:
 - i. is based in The Netherlands;
 - ii. is a public institute and carries out its research independently;
 - iii. receives at least 50 per cent public funding;
 - iv. is not-for-profit other than for the purpose of carrying out further research;
 - v. its researchers enjoy freedom of publication in international scientific journals.

Please note: these conditions will be assessed by NWO **prior to** submission of the application. To this end, the co-applicant's organisation must submit the following documents by email to dbt-merian@nwo.nl later than **10 March 2020**:

- a recent extract from the Chamber of Commerce register;
- the deed of incorporation, articles of association or other formal document indicating the public task and the non-profit status;
- the latest available annual accounts accompanied by an auditor's statement.

Indian co-applicants

DBT requires co-applicants to be:

- A regular researcher from an academia/research institute/university, who has an employment contract for at least the duration of the application procedure and the duration of the research the grant is applied for;
AND
Has at least a PhD or an equivalent qualification.

Researchers with a 0 hour contract at one of the institutions above cannot be a co-applicant. An exemption can be made for researchers on a 'tenure track' contract at one of the institutions above.

- An experienced researcher (a professor, assistant professor, or a researcher with a similar appointment) with an appointment at a university/research institute/college/academia funded publically or privately.
- If the applicant is affiliated to an organisation which is not as specified above, the organisation must meet the following cumulative criteria:
 - i. is based in India
 - ii. is a public institute and carries out its research independently;
 - iii. receives at least 50 per cent public funding;
 - iv. is not-for-profit other than for the purpose of carrying out further research.

Please note: these conditions will be assessed by DBT **prior to** submission of the application. To this end, the co-applicant's organisation must submit the following documents by email to sangita.kasture@nic.in later than **10 March 2020**:

- Registration number under Darpan portal;
- Audited Statement of Accounts for the last three financial year.



3.1.3 Public and/ or Private practitioner collaboration partners

Consortia should contain a public and/or private practitioner collaboration partner. Public and/or private practitioner collaboration partners are partners from the public and/or semi-public sectors and/or industry. They are closely involved with the research and impact strategy. Please note that personnel of these organisations is excluded from payment of salaries and research costs from the NWO grant, unless they are hired through the module 2 – work by third parties (see Annex 6.1). Costs for for-profit partners cannot be charged to the project budget. From the Indian side of the consortium, private for profit practitioner collaboration partners cannot receive funding from DBT.

All organisations participating in a consortium must be registered as a legal persona.

Public, semi-public or private practitioner collaboration partners from India should be certified by DSIR.

3.2 What can be applied for

The Principal Investigators and consortia can apply for funds for a project with a maximum duration of five years. A maximum of k€ 700 can be requested from NWO, and a maximum of Rs. 5.5 Crores can be requested from DBT.

This call invites full proposals to be submitted. All consortium members have to be involved in the formulation of the research questions, in the development of the proposal and in the execution of the research project. Each Principal Investigator and consortium can apply for one project only.

Reimbursable costs

Different costs can be reimbursed from the DBT and NWO grants. The application form allows you to specify which organisation you would like to cover a certain cost. You should complete two budgets, one specifying the costs to be covered by the NWO grant and one specifying the costs to be covered by the DBT grant.

Reimbursable costs NWO budget:

The budget is built up using the NWO-wide standardised building blocks, the so-called budget modules. These budget modules are described in Annex 6.1. In the proposal budget, applicants choose which combination of budget modules are needed to answer the research question and how often each module will be deployed. Each module can be applied multiple times. The following budget modules are available for an application within this round:

1. **Personnel**
Salary and/or research leave costs can be requested within the limits of the module specification in Annex 6.1. Please note that, should you wish to use this module to cover the salary, living costs, or research leave of someone appointed in India, local tariffs apply, and may not be more than the equivalent in the Dutch agreement "Funding for Scientific Research"³. Costs of personnel from TO2 institutes or Public Knowledge Organisations (RKI's) may be requested, but this should be a cost-covering tariff conform the CAO and salary scale of the employee in question and may be no more than the Handleiding OverheidsTarieven (HOT).
2. **Material credit**
Only costs directly related to the project are eligible for reimbursement. These costs should be specified and substantiated in the proposal. Infrastructural expenses (housing, standard office computers), commuter traffic and other costs relating to overhead are not eligible for funding, nor are expenses covered by the bench fee. International travel related to international cooperation, or costs related to international workshops, may also be placed under module 5 (internationalisation). Please note that if the Principal Investigator on the Dutch side is not from a university or KNAW institute, the project will be required to submit an audit report at the end of its duration. If this is the case, please budget for this accordingly (see Annex 6.1).
3. **Impact**
Funding from this module can be requested for costs related to the proposal's impact strategy, such as workshops, policy briefs, and other activities to share the project's findings during and at the end of its duration. Please take into consideration the requirements regarding impact and an impact strategy as specified in section 2.2 of this Call for Proposals. Proposals should furthermore request funding for a kick-off, midterm and final workshop; and funding to attend the joint kick-off,

³ <https://www.nwo.nl/en/funding/funding+process+explained/salary+tables>



midterm and final workshop with the other project funded in this Call (between € 20,000 and € 25,000).

4. Internationalisation

Funding in this module can be requested to further facilitate international exchange and travel. This may be a maximum of 20% of the total requested budget from NWO.

NWO has provided a budget form (Excel) that should be uploaded with your application. While filling in the budget, you are expected to justify how the proposed cost will support the project.

This justification may be no more than 1 A4 page, and should be included in section 4b of the application form.

A specification of the costs that are covered per module can be found in Annex 6.1. The budget modules can be applied for as many times as necessary, up to the total budget maximum (€ 700,000). All requested costs must conform the module specification.

Reimbursable costs DBT budget

Proposals can apply for up to the maximum total budget Rs. 5.50 Crores. Recurring costs:

- Human resource
- Consumables
- Travel
- Contingency
- Overhead
- Other

Non-recurring costs

- Equipment/accessories
- Other

Please refer to DBT and the checklist for financial concurrence (Annex 6.3) for more information.

3.3 When can applications be submitted

The deadline for the submission of proposals is **7 April 2020, 14:00 hours CEST / 17:30 IST**.

Proposals must be submitted on time to both NWO (via ISAAC) and DBT (via email).

- The deadline for the submission of proposals to NWO is **7 April 2020, 14:00 hours CEST**.
- The deadline for the submission of proposals to DBT is **7 April 2020, 17:30 hours IS**.

3.3.1 For the submission of applications to NWO

When you submit your application to ISAAC you will also need to enter additional details online, such as the institutions or organisations of both principal investigators, and your co-applicants. You should therefore start submitting your application at least five working days before the deadline of this Call for Proposals.

Applications submitted after the deadline to either NWO or DBT will not be taken into consideration.

3.4 Preparing an application

3.4.1 Webinar

A webinar on the Theory of Change and Impact Pathway approach will be held in March 2020. In this webinar, you will be given more information regarding this approach, as well as have the opportunity to ask questions. It is not mandatory. More information, including the link to join the webinar, will be made available on the programme page.

3.4.2 Full proposal

For NWO

- Download the application form and budget Excel form from the electronic application system ISAAC or from NWO's website (on the grant page for this programme).
- Complete the application form and budget Excel form, using the guidelines in the application form and Call.
- Save the application form as a pdf file and upload it in ISAAC and email to DBT.
- Save the budget form as Excel and upload it as a separate document in ISAAC.



For DBT

- Complete the application form and budget and submit it to DBT (in pdf) prior to the deadline of the call. The application should be submitted electronically to: sangita.kasture@nic.in
- In addition, one hard copy needs to be submitted addressed to the Programme Officer as per the details below:
Dr. Sangita M. Kasture, Scientist E Room No. 812, 8th Floor Block-2, DBT, CGO Complex New Delhi-110003 E-mail address: sangita.kasture@nic.in
- If the proposal is not submitted by email to DBT in time, the proposal will not be considered for further processing.

Full proposals should include:

- The application form for full applications
- A completed budget, using the Excel budget format
- A letter of commitment from the organisations of the principal investigators, co-applicants, and public or private collaboration partners, in which the institution or organisation confirms that they agree to the conditions required for the execution of the project. The letter must be signed by the Dean of the faculty or the director of the organisation and be printed on the letterhead of the institution or organisation. See the format in Annex 6.2;
- A draft consortium agreement
- CVs of both Principal Investigators and all co-applicants and public or private collaboration partners (each max 1 page)
- A list of literature references
- Original Declaration Certificate from the Indian Institute(s)
- In case of co-financing: a letter from the co-financing institution confirming the numeric amount that will be provided as co-financing. In case the institution of a consortium member provides co-financing, this confirmation can be included in the letter of commitment. Letters of guarantee are unconditional and do not contain any opt-out clauses.

It is not permitted to include other documents than those requested above. Applicants will be asked to remove any additional documents.

3.5 Conditions on granting

The NWO Grant Rules 2017 and the Agreement on the Payment of Costs for Scientific Research apply to all grants provided by NWO. The General Financial Rules 2017 (GFR) apply to all grants provided by DBT.

3.5.1 Conditions start and duration of project

Start

The project should start within six months after the date of the grant letter. At least one researcher must be appointed to the project at the time of its start. If the project has not started within six months, the WOTRO Steering Committee, on behalf of NWO, and DBT can decide to revoke the granting decision.

Start documents

The Netherlands-based Principal Investigator and Indian Principal Investigator are responsible for ensuring the necessary documents for the start of the project are submitted to their respective funding organisations, so that the project in its entirety can start on time.

NWO

The project can start if the following documents have been approved by NWO:

- A project notification form with information of project staff;
- A data management plan;
- A consortium agreement, signed by all consortium organisations⁴;
- (If relevant) approval of relevant ethics committees;
- (If relevant) receipt by NWO of the first tranche of in-cash co-financing.

⁴ A format can be found here: <https://www.nwo.nl/en/documents/wotro/wotro-format-consortium-agreement>



DBT

The project can start if the following documents have been approved by DBT:

- Completed checklist and accompanying documents for financial concurrence (Annex 6.3)

Publications

When publishing the results of the subsidised research, the support by NWO and DBT should be mentioned.

3.5.2. Reporting to NWO and DBT

Annual and mid-term report

Annually, the project must submit a report to inform NWO and DBT on the overall project progress, experiences and output. The Dutch Principal Investigator will receive instructions and a format for this report in advance.

The projects will also be evaluated at about the mid-term of the projects' running time by self-assessment. This includes a workshop of the project team organised by the consortium and a discussion of the results with stakeholders from outside the project team. Consortia should include this workshop in their budget. The mid-term report will be based on the conclusions of the workshop, including a reflection on and (if applicable) revision of the Impact Pathway and impact strategy, the underlying assumptions and the indicators. The International Advisory Committee (IAC), composed by DBT and NWO, will evaluate the progress of the projects based on mid-term reports submitted by the consortia. Interviews or field visits may be organised to evaluate the progress and impact of the projects. The IAC will give recommendations to the projects based on their evaluations.

The mid-term report of all the projects of a call need to be submitted before the joint mid-term workshop and will be used as input for organising the mid-term workshop.

Final accountability to NWO

A substantive final report should be submitted within three months after the end of the project's runtime, detailing the research done and the achieved results, as well as a reflection on the project's Impact Pathway, the underlying assumptions and the indicators. As part of this, projects will be asked to again complete a self-assessment, and hold a final workshop, including interaction with stakeholders from outside the project team. The final substantive report will again be evaluated by the joined review committee, constituted by DBT and NWO. The final workshop should again be taken into account in the consortium's budget.

Simultaneously, the Dutch principal investigator and the controller/financial manager of the Principal Investigator's institution should submit a signed financial end report, organised according to the budget lines of the approved NWO budget. The realised in cash and in-kind co-financing should also be accounted for. If the Dutch Principal Investigator is not based at a Dutch university, an external audit report must also be submitted. NWO reserves the right to conduct an external financial audit.

NWO reserves the right to externally evaluate projects financed under this call. The project ends with the issuing of the grant settlement decision. This decision is taken after approval of the final document(s) by NWO.

Final accountability to DBT

Financial annual documents must be submitted to DBT in the prescribed format.

As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organisations shall be open to inspection by the sanctioning authority and audit, both by the Controller and Auditor General of India under the provision of CAG (DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organisation is called upon to do so.

3.5.3 Programmatic coherence

The projects awarded under this Call should contribute to application-oriented solutions for mitigating the (expected) effects of climate change on agriculture. To this end, Principal Investigators, researchers and other consortium members are expected to contribute to knowledge exchange and knowledge utilisation at call level, and to participate in and contribute to the meetings organised for that purpose.



This includes a joint kick-off and midterm workshop with all projects of the Call, as well as a final conference. This is in addition to the activities organised by the individual projects for this purpose. Consortia should budget for their participation in these meetings in their application (between 20,000 euro and 25,000 euro).

3.5.4 Co-financing

- It is possible for contributions to be partially in-kind and partially in-cash. The amounts of co-financing specified in the budget should correspond to the amount of co-financing specified in the letter of guarantee or, in case of co-financing by an organisation that is part of the consortium, in the letter of commitment. Letters of guarantee are unconditional and do not contain opt-out clauses;
- The private and/or public parties that are part of the consortium should be involved in the research for the duration of the project;
- Co-financing provided by an Indian institution or organisation should preferably be included in the Indian budget, and should be accounted for to DBT. Co-financing provided by other institutions or organisations should preferably be included in the NWO budget, and accounted for to NWO;
- After a research proposal has been awarded funding, NWO will invoice the private or public party that has pledged an in-cash contribution to the NWO budget if that in-cash contribution to the NWO budget is equal to or exceeds € 5,000. After the contribution has been received, the money will be awarded to the project. It is the responsibility of the Dutch Principal Investigator to invoice cash co-funding organisations who are contributing less than € 5,000.

3.5.5 Consortium agreement

For research partnerships to be effective, they have to be fair. A consortium agreement should be signed by all consortium partners prior to the start of the awarded project, detailing agreements regarding rights (such as copyright, publications, intellectual property etc. of products or other developments in the project), knowledge utilisation, as well as affairs such as payments, progress- and final reports, and confidentiality. The agreement furthermore details agreements on governance of the consortium (to the extent that it gives sufficient guarantee for effective collaboration), finances, and if applicable, basic knowledge to be contributed, liability, disputes, and information sharing within the consortium. The agreement has to be drafted in a spirit of equity.

The initiative for the concluding of these agreements lies with the principal investigators. The agreement will be tested for consistency with the NWO Grant Rules 2017. For Intellectual Property (IP) rights, the provisions as specified in Chapter 4 of the NWO Grant Rules 2017 are applicable, according to which the IP-rights to the results belong to the research institution, whose employee generated the results in question (ownership follows inventorship). For the IP rights of the results of possible co-financing institutions, the percentages shown are applicable, unless an appropriate reflection justifies the deviation from this.

3.5.6 Open Access

All scientific publications resulting from research that is funded by grants derived from this Call for Proposals are to be immediately (at the time of publication) freely accessible worldwide (Open Access). There are several ways for researchers to publish Open Access. A detailed explanation regarding Open Access can be found on www.nwo.nl/openscience-en.

3.5.7 Data management

The results of scientific research must be replicable, verifiable and falsifiable. In the digital age this means that, in addition to publications, research data must also be freely accessible. As much as possible, NWO expects that research data resulting from projects funded in this programme will be made publicly available for reuse by other researchers. "As open as possible, as closed as necessary" is the guiding principle in this respect. As a minimum, NWO requires that the data underpinning research papers should be made available at the time of the article's publication. The costs for doing so are eligible for funding and can be included in the project budget. In the data management section, and in the data management template if the project is awarded funding, researchers explain how they plan to manage the data expected to be generated by the project.

1. Data management section

The data management section is part of the research proposal. Researchers are asked to prospectively consider how they will manage the data the project will generate and plan for which data will be preserved and be made publicly available. Measures will often need to be taken during the production and analysis of the data to make their later storage and dissemination possible. If not all data from the project can be made publicly available, the reasons for not doing so must be



explained in the data management section. Due consideration is given to aspects such as privacy, public security, ethical limitations, property rights and commercial interests.

2. Data management plan

After a proposal has been awarded funding, the researcher should elaborate the data management section into a data management plan. In this plan, the researcher describes whether use will be made of existing data, whether new data will be collected or generated, and how the data will be made FAIR: Findable, Accessible, Interoperable, Reusable. The data management plan must be completed in consultation with a data steward or equivalent research data management support staff at the home institution of the project leader. The plan should be submitted to NWO via ISAAC within four months after the proposal has been awarded funding. NWO will approve the plan as quickly as possible. Approval of the data management plan by NWO is a condition for disbursement of the funding. The plan can be adjusted during the research. Further information on the NWO data management protocol can be found at www.nwo.nl/datamanagement-en.

3.5.8 Nagoya Protocol

The Nagoya Protocol became effective on 12 October 2014 and ensures an honest and reasonable distribution of benefits emerging from the use of genetic resources (Access and Benefit Sharing; ABS). Researchers who make use of genetic sources from the Netherlands or abroad for their research should familiarise themselves with the Nagoya Protocol (www.absfocalpoint.nl). NWO and DBT assume that researchers will take all necessary actions with respect to the Nagoya Protocol.

3.5.9 Ethical aspects

Any research proposal that raises ethical issues must be carefully considered in advance. The applicants need to assess what ethical challenges will be met in the proposed research, consider how these will be addressed, and how ethical clearance will be obtained. In the Netherlands, certain research projects require a statement of approval from a recognised (medical) ethics review committee or an animal experiments committee. In addition, some research proposals require a licence under the Population Screening Act (WBO). Similar laws and regulations in India must be adhered to if required and applicable. Applicants must subscribe to and comply with the prevailing codes. Applicants themselves are responsible for determining whether their research proposal raises possible ethical issues. If so, they are also responsible for obtaining any necessary statement of approval from the appropriate ethics review committees and/or license under the Population Screening Act or similar organisations. A research project can only start when NWO has received a copy of the necessary approving ethical statement and/or Population Screening Act license (if applicable). For complex questions related to ethical issues and in case applicants would question the need for ethical clearance, NWO and DBT reserve the right to consult an external adviser. If after consulting the applicant, NWO and DBT are of the opinion that an ethical assessment is needed for the application, then the applicant is obliged to take the necessary measures for such an assessment. If the applicant fails to obtain the necessary statement of approval from an ethics review committee then the grant shall be immediately withdrawn.

Once the project has started the research must be conducted in an ethically responsible way. The Global Code of Conduct for Research in Resource-Poor Settings can be complementary in this aspect to the Code of Conduct for Research Integrity. If the applicant fails to conduct the research in an ethically responsible way, NWO and DBT shall reserve the right to withdraw the grant immediately.

3.6 Submitting an application

Applications should be submitted to both NWO and DBT, by the Netherlands-based and India-based Principal Investigators respectively. Applications not submitted to both organisations will not be taken into consideration.

Applications submitted after the deadline, or that have not been submitted via the NWO application system and via email to DBT before the deadline, will not be included in the assessment procedure.

3.6.1 Submission to NWO

The Principal Investigator based in The Netherlands or at a university established in the Kingdom of the Netherlands must submit his/her application via his/her own ISAAC account. Applications not submitted via ISAAC will not be admitted to the assessment procedure.

If the Principal Investigator does not have an ISAAC account yet, then this should be created at least five working days before the application is submitted to ensure that any registration problems can be resolved on time. If the principal investigator already has an NWO-account, then he/she does not need to create a new account to submit an application.



Please note that you will be asked to submit additional information when submitting your application in ISAAC, such as the organisations of your consortium members. For this reason, we strongly advise that you start submitting your application at least five working days before the deadline. For technical questions please contact the ISAAC helpdesk, see Section 5.1.2.

3.6.2 Submission to DBT

The complete application package should be submitted to DBT (in pdf) prior to the closure of the call. The application should be submitted electronically to: sangita.kasture@nic.in. In addition, one hard copy must be submitted addressed to the Programme Officer as per the details below:

Dr. Sangita M. Kasture, Scientist E Room No. 812, 8th Floor Block-2, DBT, CGO Complex New Delhi-110003 E-mail address: sangita.kasture@nic.in

If the proposal is not submitted electronically to DBT before the mentioned deadline, it will not be considered for further processing.

4 Assessment procedure

4.1 Procedure

The first step in the assessment procedure is the check if the application (both submitted to NWO and DBT) meets the eligibility criteria, specified in section 4.2.1. All applicants and their institutions must fulfil national eligibility rules for research proposals as set by the relevant organisation (see section 3.1, Who can apply).

NWO and DBT will jointly compose an International Advisory Committee (IAC), with international experts. All applications are assessed in competition by the IAC, according to the criteria specified in paragraph 4.2.2. The IAC will formulate a funding advice. The NWO-WOTRO Steering Committee and the board of DBT will take a provisional decision based on the advice of the IAC regarding the applications to be awarded. The decision is final when both boards have reached the same decision. Below is a further description of the assessment procedure.

4.1.1 Code for dealing with personal interests (Personal Interest Code)

The assessment and/or decision-taking process for this funding round will be carried out according to the Personal Interest Code. More information concerning the Personal Interest Code can be found on the NWO website. See: <https://www.nwo.nl/en/common/subsidies/funding-process-explained/code-for-dealing-with-personal-interests>.

4.1.2 Eligibility

After the deadline, the administrative eligibility of the applications is assessed by NWO and DBT, based on the eligibility criteria specified in paragraph 4.2.1.

If correction of an application is possible and necessary, the Principal Investigator will be given the opportunity to adjust his or her application. If the application is not corrected within the given time frame, NWO and DBT will not include the application in the assessment process. Corrected applications will, after approval of eligibility by both NWO and DBT, be included in the assessment procedure. The remainder of the assessment procedure will subsequently be conducted through the online system of NWO.

4.1.3 Substantive assessment

All eligible applications will be sent to independent, (inter)national reviewers, who will assess the application based on the criteria specified in 4.2.2. Each application will be assessed by a minimum of three reviewers. The reports by the external reviewers will be made available to the Netherlands-based Principal Investigator via ISAAC, after which the consortium will have five working days to write a response to the reviewers' reports. The Netherlands-based Principal Investigator is responsible for sharing the reviewer reports with the consortium. The response should be submitted by the Dutch Principal Investigator on behalf of the consortium, via his or her ISAAC account.

4.1.4 Assessment and Grant Advice

The IAC will make a final assessment of the application, based on the application, the reviewer reports, and the response, according to the criteria in section 4.2. The IAC will subsequently rank all applications. The IAC will subsequently present a substantiated advice to the WOTRO Steering Group and the board of DBT regarding which applications are to be awarded.

4.1.5 Decision

The NWO-WOTRO Steering Committee, on behalf of NWO, and DBT will check the assessment procedure has been carried out in accordance with the Call for Proposals, and will provisionally decide on the projects to be awarded, based on the advice of the IAC. The decision becomes definitive when the WOTRO Steering Committee and the board of DBT have come to the same provisional decision.

4.1.6 Qualification

Based on the IAC's final score, NWO will award a qualification to all full proposals, and will make this known to the Netherlands-based Principal Investigator with the decision about whether or not the application has been awarded funding.

Only applications that receive the qualification "excellent" or "very good" will be eligible for funding. For more information about the qualifications please see www.nwo.nl/en/funding/funding+process+explained/nwo+qualification+system.

4.1.7 Data management

The data management section in the application is not evaluated and therefore not included in the decision about whether to award funding. However, both the referees and the committee can issue advice with respect to the data management section. After a proposal has been awarded funding, the researcher should elaborate the data management section into a data management plan. Applicants can use the advice from the referees and the committee when writing the data management plan. A project awarded funding can only start after NWO and DBT have approved all starting documents as stated in section 3.5. It is the responsibility of the Principal Investigators to ensure that these documents are submitted on time to the respective funding agencies so that the project can start within the allowed time frame.

4.1.8 Timeline of the call

January 2020	Call open
March 2020	Webinar
7 April 2020	Submission deadline full proposals
April – May 2020	Referees are consulted
June 2020	Applicants can submit a response (rebuttal). Consortia have 5 working days to submit a rebuttal, via the ISAAC account of the Dutch-based principal investigator
September 2020	IAC meeting
October 2020	Decision WOTRO Steering Group and Board of DBT
October 2020	NWO and DBT inform applicant about the decision

4.2 Criteria

4.2.1 Eligibility criteria

The administrative eligibility will be checked at desk officer level by NWO and DBT. Applications that are not complete, have not been completed correctly, or have not been submitted on time to both organisations will not be admitted to the assessment procedure. This also applies if, after receiving the opportunity to correct the application, the principal investigators do not resubmit the application within the given time frame. If correction of an application, or the submission of necessary additional information, is possible, the principal investigator will be given the opportunity to correct their application and/or submit the necessary additional information within a given time frame. If the principal investigator is unable or unwilling to comply with this request, the application will not be admitted to the assessment procedure.

Eligibility concerns compliance with the conditions set in this call. Formal criteria include:

- Timely received application via NWO's electronic application system ISAAC and via email to DBT;
- Application has been submitted by the Dutch Principal Investigator and the Indian Principal Investigator, who meet the national eligibility criteria (section 3.1);
- Specific conditions (as outlined in Sections 3.1, 3.2, the annexes) have been applied;
- Completed and signed application form, signed by all principal investigators, co-applicants, and collaboration partners;
- Composition of consortium complies with the requirements;
- Format, length of text, language (English) is as required;
- Budget conditions are met;



- Completed annexes are added;
- Declaration Certificate from Partner Institute(s) from India is/are added.

The following annexes should be added:

- CVs of Principal Investigators, co-applicants and collaboration partners mentioned in questions 1b, 1c and 1d of the application form;
- Letters of commitment of all consortium organisations, outlining the availability and commitment of consortium members, signed by heads of the participating department or organisation;
- Draft Consortium Agreement;
- Letters of guarantee from parties providing co-financing (if applicable);
- The budget requested from NWO, uploaded as a separate Excel file.

No additional annexes are allowed. Please include the annexes in your application unless otherwise specified. Do not upload them as separate documents in ISAAC.

Applicants will receive written confirmation of receipt within two weeks after the deadline of this call, stating whether or not the application has been accepted into the selection procedure.

4.2.2 Assessment criteria

Applications will be assessed according to the following criteria:

- Quality of the research proposal
- Quality of the consortium
- Potential scientific and/or societal breakthrough

The criteria carry equal weight and each count for one-third of the final assessment. The assessment criteria are further operationalised below:

- Quality of the research proposal
 - Scientific importance of the proposed research;
 - Complementarity to other research programmes or (inter)national research agendas;
 - Innovativeness of the research question and approach;
 - Interdisciplinarity and transdisciplinarity; the proposal incorporates the scientific disciplines necessary for addressing the problem, as well as knowledge from outside the scientific community;
 - Clarity of problem statement and rigour of research;
 - Suitability and feasibility of the approach and methodology;
 - Appropriateness of the budget requested.
- Quality of the consortium
 - Quality of the involved research partners;
 - Quality of the Indian-Dutch collaboration, including equality in the partnership;
 - Potential for long-term knowledge relations;
 - Coherence and complementarity of the consortium, including organisation of the research;
 - Quality of knowledge co-creation, including attention to and involvement of the complete knowledge chain.
- Potential scientific and/or societal breakthroughs
 - Relevance for society, including the relevance of the proposed research for the focus of the Call;
 - Degree to which the proposal aims for scientific and societal breakthroughs;
 - Quality of (stakeholder analysis and) involvement of wider public/specific target groups;
 - Quality of (the Theory of Change and Impact Pathway, including indicators and) impact strategy;
 - Quality of communication plan for knowledge transfer, including outreach to industry, societal partners, and/or other stakeholders.

5 Contact details and other information

5.1 Contact

5.1.1 Specific questions

For specific questions about Cooperation India-The Netherlands (DBT) and this Call for Proposals please contact:

NWO:
Berry Bonenkamp
+31 70 349 44 16



Rachel Kelders
+31 70 349 40 85
Merian-dbt@nwo.nl

DBT:
Dr Sangita Kasture
+91 1124365438
sangita.kasture@nic.in

5.1.2 Technical questions about the electronic application system ISAAC

For technical questions about the use of ISAAC please contact the ISAAC helpdesk. Please read the manual first before consulting the helpdesk. The ISAAC helpdesk can be contacted from Monday to Friday between 10:00 and 17:00 hours CET on +31 (0)20 346 71 79. However, you can also submit your question by e-mail to isaac.helpdesk@nwo.nl. You will then receive an answer within two working days.

6 Annexes

Annex 1: Budget modules NWO grant
Annex 2: Format Letter of Commitment
Annex 3: Checklist for financial concurrence (DBT)

6.1 Budget Modules NWO grant

The following budget modules can be applied for from the NWO grant. Please use the Excel budget format while completing your budget. If you are asked to provide justification, please do so in section 4b. of your proposal.

1. Module Personnel: a) PhD/PDEng/MD PhD; b) Postdoc; c) Non Scientific Personnel; d) Personnel at universities of applied sciences (HBO); e) Research leave; f) Other scientific personnel;

NB: Remunerations for PhD scholarship students at a Dutch university are not eligible for funding from NWO.

- **Module 1a) PhD/PDEng/MD PhD**
The guideline is that 1 fte PhD for 48 months or 0.8 fte for 60 months can be applied for. If a different duration of appointment is desired for the realisation of the proposed research, then the guidelines may be deviated from as long as this is well justified (e.g. PDEng 2 years or MD PhD longer than 4 years).
The salary costs will be remunerated according to the agreements in the 'Agreement for Funding Scientific Research' made with the Association of Universities in the Netherlands and are based on the collective labour agreement of the Dutch universities (for researchers employed by University Medical Centres, the costs are based on the collective labour agreement of the Netherlands Federation of University Medical Centres).
In addition to salary costs, the project employee funded by NWO will receive a one-off individual bench fee (€ 5.000) to encourage his or her scientific career. The agreement and the maximum amounts for personnel costs can be found at <https://www.nwo.nl/approval-of-funding-for-scientific-research-2008> and <https://www.nwo.nl/salarytables>.
- **Module 1b) Postdoc**
The appointment of a postdoc must be at least 6 months at 1 fte, and maximum 48 months at 1 fte. The amount of months and fte can be budgeted for as necessary, but must always be at least 0.5 fte or for a duration of at least 12 months. The product of fte x duration of the appointment must always be equal to at least six months at 1 fte.
If the applicants wish to deploy expertise for a shorter period of time, then the material credit can be used for this.
The salary costs will be remunerated according to the 'Agreement for Funding Scientific Research' made with the Association of Universities in the Netherlands (for researchers employed by University Medical Centres, the costs are based on the collective labour agreement of the Netherlands Federation of University Medical Centres).
- **Module 1c) Non-scientific personnel**
For the appointment of non-scientific personnel, specifically needed for the research project which funding is applied for, a maximum of € 100,000 can be requested with this module. This can concern personnel such as student assistants, programmers, technical assistants, analysts, et cetera. This module can only be applied for in combination with budget modules 1a and/or 1b. The amount of months and fte can be budgeted for as necessary, but must always be at least 0.5

fte or for a duration of at least 12 months. The product of fte x duration of the appointment must always be equal to at least six months at 1 fte. If the applicants wish to deploy expertise for a shorter period of time, then the material credit can be used for this.

Salary costs are dependent on the level and are remunerated in accordance with the agreements in the most recent 'Agreement for Funding Scientific Research' made with the Association of Universities in the Netherlands and are based on the collective labour agreement of the Dutch universities. The agreement and the maximum amounts for personnel costs can be found at <https://www.nwo.nl/approval-of-funding-for-scientific-research-2008> and <https://www.nwo.nl/salarytables>.

- **Module 1d) Personnel at universities of applied sciences**
For the appointment of personnel at universities of applied sciences the system of the Handleiding Overheids Tarieven (HOT) has been applicable since 1 January 2018, in particular the column 'cost covering rates per hour' (table 2.2, Integrale loonkosten). This cost covering rate per hour is based on the collective labour agreement for universities of applied sciences, and with respect to the salary scale of the employee concerned. The rates in the HOT are maximum values. For students, only the actual amounts paid to students can be entered as costs within the project. A maximum hourly rate of € 25.00 always applies to students.
- **Module 1e) Research leave**
In this module, the replacement costs for the main applicant and/or co-applicants can be applied for, so that they can be released from educational, administrative and management tasks. The research leave grant can only be used in combination with and for the purposes of the projects or programmes applied for. For the research leave grant, a maximum size of 5 months per project applies based on 1 fte at the level of the postdoc employee as described in module 1b, with the hourly rates according to the agreement with the Association of Universities in the Netherlands. This budget is intended for the release of the applicants from educational and supervisory tasks so that they can work on the research for which funding has been requested. The employer can use the research leave grant to cover the costs of the replacement for the non-research tasks of the applicant(s) such as education, administrative and management tasks. These tasks must be specified in the proposal.
- **Module 1f) Other scientific personnel**
Budget for other scientific personnel such as university graduates, graduate physicians and graduate physicians training to be specialists that are needed for the research project that funding is requested for. This module can only be applied for in combination with module 1a and/or 1b. A maximum of € 100,000 can be requested for this. The size of the appointment must be a minimum of 6 months at 1 fte and a maximum of 48 months at 1 fte. The size of the appointment can be adjusted as necessary, but should always be at least 0.5 fte or for a duration of at least 12 months. The product of fte x duration of the appointment should always be equivalent to at least 6 months at 1 fte.

2. Module Material credit

A maximum of € 15,000 per year per full-time scientific position (budget modules 1a, 1b and/or 1d) can be applied for, specified according to the three categories stated below:

Project-related goods/services

- consumables (glassware, chemicals, cryogenic fluids, etc.);
 - equipment and/or software (e.g. lasers, specialist computers or computer programs, etc.);
- For these small items of equipment and/or software, the amount may not amount to more than € 160,000 per application.
- measurement and calculation time (e.g. supercomputer access, etc.);
 - costs for acquiring or using data collections (e.g. from Statistics Netherlands);
 - access to large national and international facilities (e.g. cleanrooms, synchrotrons, datasets, etc.);
 - work by third parties (e.g. laboratory analyses, data collection, etc.);
 - personnel costs smaller in size than those offered in module 1.

Travel and accommodation costs (for the employees for which a personnel grant was requested in budget modules 1a and 1b)

- travel and accommodation costs (national and international);
- congress visits (max. 2 per year);
- fieldwork;
- work visits.

Implementation costs

- national symposium/conference/workshop organised by the project;
- costs of open access publishing;
- data management costs;



- recruitment costs (incl. advertisement costs);
- costs involved in applying for licences (e.g. for animal experiments);
- audit costs (only for institutes not subject to the Education Auditor's Protocol (onderwijsaccountantsprotocol)) of the Ministry for Education, Culture and Science of the Netherlands, maximum € 5,000 per project; for projects with a duration of up to and including three years, maximum € 2,500.

Costs that cannot be applied for are:

- basic facilities within the institution (e.g. laptops, desks, et cetera);
- maintenance and insurance costs.

If the maximum amount of € 15,000 per year per full-time scientific position is not sufficient for realising the research, then it may be deviated from if a clear justification is provided in the proposal. The only exception to this is the amount for small equipment (€ 160,000).

4. Module Valorisation/Impact: a) Knowledge Utilisation

Module 4a) The aim of this module is to facilitate the use of the knowledge that emerges from the research. The contribution requested may be no more than 20% of the total grant requested from NWO and must be specified.

As knowledge utilisation can assume very different forms in the various scientific disciplines, it is up to the applicant to specify which costs are needed, for example for producing an educational package or realising a feasibility study into application possibilities, or the costs of submitting a patent application.

For further information about knowledge utilisation, please see <https://www.nwo.nl/en/about-nwo/organisation/nwo-domains/wotro/Impact+toolkit/Impact+toolkit+Research+Uptake>.

NB: please take into account the requirements stated elsewhere in the Call for Proposals, such as regarding costs for the project's and the joint kick-off, midterm, and final workshops.

5. Module Internationalisation: a) Internationalisation; b) Money follows Cooperation

- Module 5a) Internationalisation
The aim of this module is to encourage international collaboration. The contribution requested may be no more than 20% of the total requested budget from NWO. The amount requested must be specified. If the maximum amount is not sufficient for realising the research, then it may be deviated from if a clear justification is provided in the proposal.

Funding can be requested for:

- travel and accommodation costs insofar as these are direct research costs that emerge from the international collaboration and for additional costs that are not covered in a different manner, for example from the bench fee. For an overview of the fixed maximum prices per country, see the listings of the Dutch government (<https://www.rijksoverheid.nl/documenten/besluiten/2018/09/26/tarieflijst-dienstreizen-buitenland-per-1-oktober-2018>).
- travel and accommodation costs for foreign guest researchers
- costs for the organisation of international workshops/symposia/scientific meetings.

- Module 5b) Money follows Cooperation (MfC)
The module Money follows Cooperation offers the possibility to conduct part of the research project at a knowledge institute with a public task outside of the Netherlands.

The applicant must convincingly justify that the researcher from the foreign knowledge institute contributes specific expertise to the project which is not available in the Netherlands at the level required for the project.

This condition is not applicable if NWO has concluded a bilateral agreement regarding Money follows Cooperation with the national research funding agency of the country in which the foreign knowledge institute is located.

The requested budget within this module must be less than 50% of the total budget requested from NWO.

A researcher at a foreign knowledge institute must meet the requirements for co-applicants in paragraph 3.1, with the exception the requirement that he or she must be located within the Kingdom of the Netherlands.



The applicant receives the grant from NWO, and is responsible for transferring the MfC part of the grant to the foreign knowledge institute, as well as for accounting for this part of the grant towards NWO. The risks associated with the exchange rate are the responsibility of the applicant. Therefore, costs and benefits that result from exchange rates cannot be subsidised. The applicant is responsible for:

- the financial accounting of all costs in both euros and the local currency, in which the utilised exchanged rate should be visible;
- a reasonable fixing of the exchange rate. The applicant must be able to give a description of this reasonable fixing at any time if so requested by NWO.

NWO does not award subsidy to co-applicants abroad who fall under (inter)national sanction laws. The EU Sanctions map (<https://www.sanctionsmap.eu>) serves as a guideline in this matter.

6.2 Format Letter of Commitment

[The letter should be printed on the stationery of the consortium organisation concerned]

[address main applicant]

Concerns: Letter of Commitment

[Location], [date]

Dear [name principal investigator],

Through this letter, I confirm that [name consortium organisation] is available and committed to participate in the proposed project, entitled '[proposal title]', which was submitted to the '[Title of Call]'.
[outline the availability and commitment of the consortium organisation]
[if applicable, indicate the consortium organisation's total contribution in cash, or quantify the in kind contribution This amount should be the same as indicated in the application form.]

Yours sincerely,

[signed by the head of the organisation/department]
Location: [Location] [signature]
Date: [Date] [NAME+POSITION]

6.3 Checklist for financial concurrence (DBT)

1. Name of Principal Investigator (s):
2. Name of Co-Principal Investigator(s)/ Co-Investigator(s):
3. Status of Institute:
 - (i) Public (Government or Government autonomous body, State, Aided etc.):
 - (ii) Private/ NGO(s): (In case of private/ NGO(s) copies of registration certificate, Articles and Memorandum of Association and Audited Statement of Accounts of last three years have to be enclosed)
4. (a) Details of ongoing projects with the all PI/ Co-PI/ Co-I as per the following format (Funded by any funding agency):

S. No.	Title of project	Funding agency	Sanctioned budget	Project duration (Dates)		Working as PI/Co-PI/Co-I	% of time devoted to each project
				From	to		
Principal Investigator:							
1.							
2.							
3.							
Co-Principal Investigator:							
1.							
2.							



S. No.	Title of project	Funding agency	Sanctioned budget	Project duration (Dates)		Working as PI/Co-PI/Co-I	% of time devoted to each project
				From	to		
3.							

(b) In case of having more than one ongoing project in hand please also provide the details of time sharing with the ongoing projects, proposed project under consideration, other scientific/ academic and other responsibilities assigned to you.

(c) Please provide the role of each Project Co-ordinator/ Principal Investigators/ Co-Principal Investigators/ Co- Investigators to be involved in this project.

5. Information for completed projects of Principal Investigator(s)/ Co-Principal Investigators (s)/ Co-Investigator(s) as per the following format (DBT funded projects only):

S. No.	Title of project	Sanctioned budget	Duration (Dates)	Date of actual completion	Whether the project completed & completion report accepted by DBT	Whether project accounts settled or not? If not, whether money lying with Pls institute is to be refunded to DBT, or whether funds not yet completely released by DBT?
			From /To			
Principal Investigator:						
1.						
2.						
3.						
Co-Principal Investigator:						
1.						
2.						
3.						

6. Details of Institute wise year wise final budget requested: (Rs. In lakhs)

Heads	Year I	Year II	Year III	Total
Equipment				
Manpower				
Consumables				
Travel				
Contingency				
Overhead				
Total				

7. (a) Details of equipment proposed

S. No.	Name of the requested equipment	Justification of the requested equipment	Budgeted cost			
			Quotation details (Please compulsorily enclose copies of quotation(s))	Cost in foreign currency (if applicable)	Cost in Indian currency	Requested Cost

(b) Please enclose a certificate duly forwarded by your head of institution(s)/ University that requested equipment is/ are not available in the institute. If requested equipment are already available in the institute then adequate justification is to be submitted for requesting another set of the equipment.

8. **Manpower details:** Please provide the desired qualification, experience and proposed emoluments of the manpower requested in the project. Justification for the need of each requested project position must also be given.

9. In case of desired qualification, experience and emoluments of the manpower requested in the project is not as per DST guidelines, then please provides the details of the same and compulsorily



enclosed the copies of relevant approved guidelines (e.g. ICAR/ ICMR/ Institutional guidelines/ Wage norms of State Govt. Labour Department etc).

10. **Detailed justification for the consumables budget requested:**
11. **Justification for the contingency budget requested:**
12. **Justification for the travel budget requested.** (*Domestic travel should be limited for project purposes only. In case of field visit etc. which are required for collection of samples and/or visit of patients etc, it should be separately mentioned and justified. International travel will not be allowed in R&D projects*).
13. **Is any outsourcing of work (like genome sequencing, bioinformatics analysis etc.) is involved in the project?** (If yes Please provide the details of the same and submit the indicative quotations).
14. In case of private institutions/ NGO(s) execution of Memorandum of Agreement (MoA) is compulsory before release of 1st year grant.
15. Please provide following bank account details of institution. **(Please also note that for any kind of grant release by DBT your institution and the bank accounts details being provided here must also be registered with Public Finance Management System (PFMS) of O/o Controller General of Accounts, Ministry of Finance, Govt. of India (earlier known as CPSMS). (Please refer website: <https://pfms.nic.in/>).**
 - i. Accounts No.:
 - ii. Name of Bank:
 - iii. Designation of the Account Holder:
 - iv. IFSC Code of the branch:
 - v. MICR Code of the branch:
 - vi. E-mail address of the Account Holder.
 - vii. Type of Account. Saving/Current:
 - viii. Phone Number of Bank and address of the bank:
16. **Please submit an undertaking from Competent Authority of your organization that as per the terms and conditions of the grant, grant received in DBT supported R&D project will be kept in the saving bank account and interest earned will be reported in the Utilization Certificates (UC) and Statement of Expenditures (SE).** (*Please note this is a mandatory requirement. If interest earned details will not be provided then further grant release will not be considered by DBT*).
17. **Please submit an undertaking from Competent Authority of your organization that there is no pending Utilization Certificate (UC) from your organization for any DBT grant. Also details of all UCs have been uploaded in Public Finance Management System (PFMS) of O/o Controller General of Accounts, Ministry of Finance, Govt. of India and NO UC is pending against the organization as per details of PFMS also** (*For details please refer website: <https://pfms.nic.in/>*).
18. **Details of statutory clearances:** Whether any statutory clearances (such as Ethical Committee Clearances/ Institutional bioSafety Committee (IBSC), Biodiversity Authority (NBA) Clearances/ Forest Department Permission etc. are applicable in this project? **If yes, please enclose a copy of such clearance/ permission.**

[Signature and Stamp of Project Investigator(s)]

Forwarded by,

[Signature & Stamp of Executive Head of Institution/ Organization/ University]