

Cleaning the Ganga and Agri-Water

Cooperation India – The Netherlands



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Call for proposals

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1 Introduction

1.1Background

There is a long history of scientific collaboration between India and the Netherlands. The Dutch Research Council (NWO), through the Merian Fund¹, and the Department of Science and Technology (DST) aim to further stimulate long term research collaboration between their two countries by funding joint research, to strengthen the international position and global impact of their research. Funding is provided for interdisciplinary and transdisciplinary consortia of Indian and Dutch research groups and stakeholder partners, for high quality research that has the potential for societal and scientific impact.

NWO and DST have agreed on strategic knowledge and innovation agendas. A call for proposals on a jointly agreed theme based on this agenda is planned to be published annually. Funded research should be in alignment 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.

1.2Available budget

The total budget for this call is $M \in 1.4$ on the Dutch, and Rs. 11 crores on the Indian side. With the available total budget, NWO and DST aim to fund up to two projects with a duration of five years each.

Projects can apply for a maximum of €700.000 at NWO and a maximum of Rs. 5.5 crores from DST.

The NWO Grant Rules 2017 are applicable to the part of the project's budget covered by NWO. The part of the budget covered by DST must follow the DST grant conditions. Please see section 3 for further details.

1.3 Deadline for submissions

The deadline for submissions if this call for proposals is **12 May 2020, 14:00:00 hours CEST/18:30:00 IST.**

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.

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Please note: Applications must be submitted before the closing date to both NWO and DST.

2 Aim

Many societal challenges are complex and interrelated. To address them requires collaboration, flexibility and creativity to achieve results for effective and impactful solutions. DST and NWO aim to stimulate strong, sustainable research collaboration between their two countries, in projects that work on scientific knowledge and sustainable, innovative solutions with high scientific and societal impact. They do this by inviting consortia in which researchers from knowledge institutions from both countries will work together with partners from public, semi-public and/or private organisations (for-profit and not-for-profit), in order to increase the societal relevance and impact of their research. Research consortia are expected to make optimal use of the Indian-Dutch research strengths in different disciplines and build on existing knowledge and ongoing relevant initiatives much as possible.

This joint DST-NWO research call aims to contribute to Cleaning the Ganga, which is defined as high priority field for the Indian and Dutch governments and water sector. The call will focus in particular on the impact of agriculture on the Ganga water system and the related scopes for interventions. The Hindon sub-basin is selected as case area. The call addresses several SDG's, in particular 2 (Zero Hunger), 6 (Clean Water and Sanitation) and 13 (Climate Action). In The Netherlands this topic links to the topsectors Water & Maritime, Horticulture & Starting Materials and Agro&Food and one of the 4 societal missions defined in the new Mission-Oriented Research and Innovation Policy, 'Agriculture, water and food'. This call in Indian context will be in line with the significant National Missions such as "Namami Ganga" and "Swatch Bharat".

2.1 Thematic focus

2.1.1 Cleaning the Ganga

The river Ganga stretches from the hills of Uttarakhand to its delta in West Bengal, where it covers the area between Gangotri and the Bay of Bengal. Along that route, the Ganga provides a life line for about 450 million people in high population density zones in India, including more than 50 major cities located in its basin. Its waters contain around 25% of all water resources of India. The river basin significantly contributes to food production with 50% of the area irrigated for agriculture and a high potential for fisheries. It is also the home of several unique and highly endangered species, like the Gangas river dolphin, Ganges shark, the gharial and several turtle species. For ages, the river Ganga has been an integral part of Indian spirituality, a symbol of faith, hope, culture and sanity and the centre of social and religious tradition in the Indian sub-continent.

The Ganga is a glacial river and therefore snow and glacier-melt hydrodynamics are of major importance for the water supply of the river. Rapid urbanisation, industrial and agricultural processes heavily affect the water quality and quantity of the Ganga River in its entire basin. India faces a huge challenge with regard to pollution of the water systems around Ganga as well as waste management in cities and river basins. On top of that, climate change, and specifically the changing monsoons, is severely affecting the water supply and quality of the river. These effects are projected to become even more pronounced in the near future.

The national government of India and affected states have a strong political commitment to contribute to a cleaner river Ganga. In 2016, the Indian government launched "Namami Ganga",

the National Mission Clean Ganga (NMCG), to ensure effective abatement of pollution and rejuvenation of the river Ganga using a river basin approach. The Dutch government together with the Dutch water sector, renowned for its expertise and experience in water management and treatment, have adhered to the Indian challenge and committed mutual collaboration in MoUs with the Ministry of Jal Shakti² and with the state of Uttar Pradesh. Both countries are now looking for joint initiatives to find ways to contribute to a cleaner Ganga, for example in public private partnerships and research & innovation projects.

2.1.2 Impact of agriculture on the Ganga water system

Pollution from domestic/urban sources, industries, agriculture and alterations in surface water hydrology and groundwater are considered key water management issues for the Ganga river basin. Existing research and public-private initiatives on cleaning the Ganga mainly focus on urban/domestic and industrial pressures. The impact of agriculture, however, on the water quality and quantity of the Ganga river system is significant yet inadequately understood. The effects of agri-chemicals, like pesticides and fertilizers, and over-extraction of groundwater, which prevents effective dilution of pollutants, need to be determined before effective interventions for improvement can be proposed.

Around 80-85% of water resources in the country are extracted for agriculture. The current low water price is not an incentive to reduce water use but rather overuse. Highly water intensive crops are being grown using sub-optimal water irrigation methods. Run offs from farms are a leading cause of water quality impairment through nutrient and organic pollutants. Conventional agricultural practices emphasize the application of inorganic chemicals for increased yields. This has produced adverse impacts on the agro-ecology, including widely prevalent nitrate toxicity and contamination in aquifers, surface water bodies and soils impacting soil micro-flora and decreased resilience of agro-ecosystems. The use of low-quality irrigation water has an important impact on agricultural production and food safety with health implications across the value chain. Poor water quality has severe implications for water and food security and is estimated to reduce economic growth by up to a third (Quality Unknown, World Bank 2019).

The negative impacts above are reinforced by the effects of climate change. Climate change is projected to have, and already has significant impact on the water cycle, by altering rainfall patterns and affecting the availability and quality of both surface and groundwater. Increasing variability of rainfall (e.g. during monsoon, some areas receive 75% of the yearly rainfall in 3 to 4 months) influences the flow in surface water systems and the recharge and discharge rates from aquifers.

2.1.3 Case area: Hindon sub-basin

The Hindon basin in the State of Uttar Pradesh is one of the most negatively affected sub-basins of the Ganga river basin, and therefore selected as case area in this call. Water quality does not meet standards, is unsafe for drinking and bathing, and degrades further downstream as 34 drains along the river path of Hindon discharge mostly untreated sewage effluents into the river. Upstream districts are relatively more rural, downstream districts more urbanised. Saharanpur, Muzaffarnagar, Shamli and Baghpat are the main agricultural districts. A total of 48% of the Hindon

basin area is under agricultural cultivation and 4% of the land use is forest/green covered area. Sugarcane and wheat are the most widely grown crops in the region, followed by rice. All of these are water intensive crops that require a lot of water extraction for irrigation. In addition, the average nitrogen usage in Hindon basin is 142 kg/Ha compared to 51 Kg/ha in Europe, and the average phosphorus usage in the Hindon basin is 39 kg/ha compared to 3 Kg/ha in Europe³. Muzaffarnagar and Ghaziabad, followed by Saharanpur have the highest fertilizer usage per area unit. As a result, agricultural run-off is a cause of pollution of water resources in the Hindon river basin, next to industrial and domestic waste water discharge.

There are various ongoing initiatives in the Hindon sub-basin in which Indian and Dutch parties are joining forces in order to clean the Ganga. These initiatives provide important opportunities for research projects in this call, for example to gain access to potential field sites, access to available data(bases) and collect additional data, perform tests and use existing multi-stakeholder networks in the Hindon basin, which are essential to be able to deliver sustainable solutions and successful implementation. One of these initiatives, for instance, is the 2030 Water Resources Group (2030WRG)⁴. Linkages of research with local initiatives and agendas will help to develop better and more targeted programs of measures (river basin planning) to solve the water issues in the Hindon basin.

2.1.4 Research areas

This joint DST-NWO research call aims to contribute to Cleaning the Ganga, in particular related to the impact of agriculture on the Ganga water system in the Hindon sub-basin. This requires a better understanding of the impact of agriculture on the water quality and availability in the catchment area of the Hindon, taking into account the above-mentioned issues. Furthermore, the call aims for knowledge to develop effective interventions in the agricultural water management to reduce negative effects, including technical and non-technical application-oriented solutions as well as the governance and policy recommendations required for sustainable implementation.

Three areas of research are being distinguished that are all expected to be addressed in the research project to some extent. This should be reflected in an interdisciplinary consortium composition and integrated research approach (see section 2.2 Specific requirements). The weight of each research area depends on the chosen focus of the project.

³ State Water Resources Agency (SWaRa) Uttar Pradesh.

⁴ The 2030 Water Resources Group (2030WRG) is working with national and State level Indian government, private sector, international partners, academia and others on the development of partnerships on cleaning and rejuvenating tributaries in the Ganga river basin, with demonstration in the Hindon sub-basin. A formal Multi-Stakeholder Platform (MSP) for Hindon/Ganga Tributary Management has been established, chaired by the Government of Uttar Pradesh, with a secretariat hosted by the State Mission for Clean Ganga. A joint knowledge platform is being developed, including a database with information about the Hindon basin and its water situation (data collection and analyses) as well as a fact-based dashboard for decision making and monitoring.

1) River basin system understanding, data and monitoring

There is a need for comprehensive and holistic monitoring and mapping of the water resources across Hindon. An adequate level of understanding of the water resources within the river basin system and the impact of agriculture on this system is needed in order to suggest interventions to improve (agricultural) water management. This requires monitoring of the water resources and pollutants within the river basin through data collection, modelling and interpretation. Insights into the surface and groundwater hydrology of the basin are important, existing knowledge should be used as much as possible. How does the river water level fluctuate throughout the year? How does that link to the groundwater system? What influence does extraction of groundwater have? What are the expected effects of climate change? Similarly, an inventory of pollution sources in the basin is necessary to determine their relative contributions. A key challenge is how to monitor the impact of agriculture as 'nonpoint source pollution', also in relation to (point and nonpoint) sources from other sectors.

2) Interventions to improve agricultural water management

The research should focus on technical and nontechnical interventions needed to minimize the footprint of the agricultural sector on the water system in terms of quantity and quality. These interventions should take into account the pressures from other sectors and the effects of climate change. They should contribute to the improvement of surface and groundwater quality and availability in the catchment area of the Hindon. Improving matching between water allocation and water utilization for agriculture is a major challenge. Possible interventions to reduce agricultural water extraction include improving the water use efficiency, for example through improved irrigation technologies or other water conservation methods. The use of alternative water sources could also improve both quality and quantity of irrigation water. Examples are (rain)water storage measures within the catchment area and the reuse of (waste) water.

3) Recommendations for implementation

Research in this programme should contribute to increased awareness of the impact of agriculture on the Ganga water systems, on different levels from policymakers to individual farmers. Results should be translated to science-based recommendations for policies and regulations that promote effective interventions for sustainable agriculture water management. This could include incentive or disincentive mechanisms. The proposal should take into account risks for sustainable implementation of the results and describe measures to mitigate those risks. Socio- economic factors could, for instance, influence effectivity ofmonitoring systems or hinder the application of technological solutions . Technologies are often already available but successful implementation can be hampered by a lack of appropriate governance or institutions. To achieve the common goal of a healthy water system in the Ganga basin, coordination between government, industry and community-based organisations at the level of (sub)basins is essential. The proposal should clearly describe relevant stakeholders and how they are involved throughout the research process. It should aim at collaboration with different governmental departments, specialists, land owners and/or policymakers, in order to allow for translation of the results of this research into practice.

2.2 Specific project requirements

2.2.1 Integrated research approach and Cocreation

The challenges addressed in this Call are interrelated and multi-scalar, and to reach impact require 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 proposed research itself should be characterised by integrated perspectives. It 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) defining 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 dissemination of results through a final call conference. Projects should budget for this accordingly.

2.2.2 International collaboration

Proposals should 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. Equity and reciprocity of Indo-Dutch collaboration should be vividly brought out in the proposal and should be averdant through appropriate complementary.

Projects are expected to organise a maximum of four exchange research visits (in total) of a minimum of three months each for PhD students and/or post docs, and of minimum three weeks each for senior researchers from both Dutch and Indian site. A balanced reciprocity should be reflected from the exchange visits being proposed under the each project.

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.

A webinar will be organized on the Impact Strategy concepts, to support the applicants in this call in using these methodologies in their application (and beyond) in an effective way (see section 3.4 Preparing an application).

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 to 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 Cleaning the Ganga, in particular related to the impact of agriculture on the water system. Describe clearly the contribution of the proposed research from problem definition and the identification of knowledge gaps, through 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.

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. 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 through to the end stages of the proposed research.

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.

A Theory of Change is not fixed, but rather reflected on continuously throughout the research process. For this reason, it is also used as part of the monitoring, evaluation and learning trajectory.

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

3.1Who can apply

Applications can be submitted by consortia that include at least:

- Two different research organisations that are based in the Netherlands,
- Two different recognised academic institutions and/or public funded research & development organisations that are based in India, and
- A partner from a public, semi-public or private practitioner organisation (for-profit or notfor-profit).

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. Principal investigators should fulfil the requirements of 3.1.1. Co-applicants should be eligible according to the criteria in 3.1.2. The consortium must also include 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 from a recognized academic public funded R&D institution. 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 agency and will submit the proposal to both agencies. 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 agency.

Netherlands-based Principal Investigator For scientists based in The Netherlands, the NWO eligibility criteria apply. The

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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 zero 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, DST requires the Principal Investigator to be:

A researcher working in regular position in a recognized academic institution or public funded R&D institution/laboratory, based in India,

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.

3.1.2 Co-applicants

A co-applicant is participant in the consortium and receives funding through the Principal Investigator of the respective country (or from DST in case of the Indian co-applicants). 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-applicant 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, has at least a PhD or an equivalent qualification.

Researchers with a zero hour contract at one of the institutions listed in 3.1.1 cannot be a co-applicant. An exemption can be made for researchers on a 'tenure track' contract at one of the institutions listed in 3.1.1.

- 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% 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 <u>dst-merian@nwo.nl</u> no later than **21 April 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

DST requires co-applicants to be:

A researcher working in regular position in a recognized academic institution/public funded R&D institution/laboratories or S&T based voluntary organizations, based in India,

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

has at least a PhD or an equivalent qualification.

3.1.3 Public and/or Private practitioner collaboration partners

Consortia should contain at least one 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 NWO or DST grant.

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

3.2What can be applied for

The Principal Investigators and consortia can apply for funds for a project with a maximum duration of five years. Per project, a maximum of € 700.000 can be requested from NWO, and a maximum of Rs. 5.5 crores is available from DST.

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 DST 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 DST 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 call:

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"⁵. 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, 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 be conform the module specifications.

Reimbursable costs DST budget:

Details of admissible costs from the DST grant are attached as Annex 2 to this call, based on the updated latest norms of DST.

3.3When can applications be submitted

The deadline for the submission of proposals is:

- 12 May 2020, 14:00:00 hours CEST (for submission of proposals to NWO)
- 12 May 2020, 17:30:00 IST (for submission of proposals to DST)

Proposals must be submitted on time to both NWO (via ISAAC) and DST (via e PMS (onlinedst.gov.in)). Applications submitted after the deadline to either NWO or DST, or both, will not be taken into consideration.

For submissions 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.

3.4 Preparing an application

3.4.1 Webinar

A webinar on the Theory of Change and Impact Pathway approach will be held on 8 April 2020. In this webinar, you will be given more information regarding this approach, as well as have the opportunity to ask questions. The webinar is not mandatory but highly recommended for applicants from both India and The Netherlands to join, because it will support the applicants to implement the required approach in their application in a meaningful way. The Theory of Change

and Impact Pathway approach will be used in the monitoring and evaluation during the running time of the projects to be funded as well. 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 DST.
- Save the budget form as Excel and upload it as separate document in ISAAC.

For DST:

- Download the application format from the electronic application system ePMS (onlinedst.gov.in) or from DST's website.
- Complete the application form and budget Excel form (Annexure-I of application form), using the guidelines in the Annexure-II and fill up the formats for endorsements and contribution letters (Annexure-III).
- Save the application form as a pdf file and upload it in ePMS (onlinedst.gov.in).
- Save the budget form as Excel and fill up the endorsement and contribution letters and email the scanned versions to DST at <u>dstwticall@gmail.com</u>.
- Two (2) hardcopies of the uploaded research proposal should be sent to Dr. Neelima Alam,
 Scientist E, Department of Science and Technology, Technology Bhavan, New Mehrauli Road,
 New Delhi-110016 by speed post.

Full proposals should include:

- The application form for full applications.
- A completed budget, using the Excel budgetform. Please note that the Indian and Dutch part of the consortium complete and submit a separate budget, using the budgetform provided by DST and NWO respectively.
- 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 6.3.
- 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.
- 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.

3.5Conditions on granting

The <u>NWO Grant Rules 2017</u> and the Agreement on the Payment of Costs for Scientific Research apply to all grants provided by NWO.

For the Indian applicants, applicable terms and conditions are as per DST's guidelines available on <u>www.dst.gov.in</u>.

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3.5.1 Conditions start and duration of project

Start

The project should start within six months after the date of the grant award 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 DST 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 organisations;
- (if relevant) approval of relevant ethics committees;
- (if relevant) receipt by NWO of the first tranche of in-cash co-financing.

DST

The project can start:

- DST consortium will start on the date of receipt of grant by the Indian Lead Institution;
- DST funds will be released only after the consortium agreement has been signed.

Publications

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

3.5.2 Reporting to NWO and DST

Annual and Midterm report

Annually, the project must submit a report to inform NWO and DST on the overall project progress, experiences and output. The Principal Investigators 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 selfassessment. 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, composed by DST and NWO, will evaluate the progress of the projects based on mid-term reports submitted by the consortia. Interviews or field visits may be organized 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 DST 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.

The same provisions will apply to DST grants as well.

3.5.3 Programmatic coherence

The projects awarded under this Call should contribute to Cleaning the Ganga, in particular related to the impact of agriculture on the water system, as described in 2.1. 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 and €25.000).

3.5.4 Co-financing

- It is possible for contributions to be partially in-kind and partially in-cash. The amounts of cofinancing 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 DST. 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, progressand 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 and applicable terms and conditions are as per DST's guidelines available on <u>www.dst.gov.in</u>. 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 and DST expect 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 and DST require 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 should answer four questions about data management within their intended research project. Therefore before the research starts the researcher will be asked to think about how the data collected must be ordered and categorised so that it can be made freely available. Measures will often need to be taken during the production and analysis of the data to make their later storage and dissemination possible. Researchers can state which research data they consider to be relevant for storage and reuse.

2. Data management plan

After a proposal has been awarded funding the researcher should elaborate the data management *section* into a data management *plan*. The data management plan is a concrete elaboration of the data management section. In the plan the researcher describes whether use will be made of existing data or a new data collection and how the data collection will be made FAIR: Findable, Accessible, Interoperable, Reusable. The plan must be submitted to as part of the starting documents. 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 <u>www.nwo.nl/datamanagement</u>.

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 assumes 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 DST reserve the right to consult an external adviser. If after consulting the applicant, NWO and DST 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 DST shall reserve the right to withdraw the grant immediately.

3.6Submitting an application

Applications should be submitted to both NWO and DST, by the Netherlands-based and Indiabased Principal Investigators respectively. Applications not submitted to both organisations will not be taken into consideration. The applications that are submitted to NWO and DST by each consortium should be identical (with exception of the budget annexes).

Applications submitted after the deadline, or that have not been submitted to both digital application systems of NWO and DST 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 DST

The Indian Principal Investigator must submit the application via e-PMS (onlinedst.gov.in) under Technology Mission Division. In addition, the budget sheet (Annexure-I of application form) and contribution letters (Annexure-III of application form) should submitted via email along with a copy of the full proposal to <u>dstwticall@gmail.com</u>.

Two (2) hardcopies of the uploaded research proposal should be sent to Dr. Neelima Alam, Scientist E, Department of Science and Technology, Technology Bhavan, New Mehrauli Road, New Delhi-110016 by speed post.

4 Assessment procedure

4.1 Procedure

The first step in the assessment procedure is the check if the application (both submitted to NWO and DST 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 DST 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 DST 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: <u>https://www.nwo.nl/en/common/subsidies/funding-process-explained/code-for-dealing-with-personal-interests</u>.

4.1.2 Eligibility

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

If correction of an application is possible and necessary, the Principal Investigators will be given the opportunity to adjust their application. If the application is not corrected within the given time frame, NWO and DST will not include the application in the assessment process. Corrected applications will, after approval of eligibility by both NWO and DST, be included in the assessment procedure.

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 and to the Indian Principal Investigator via e-mail, after which the consortium will have five working days to write a response to the reviewers' reports. The Principal Investigators 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. Simultaneously, the Indian Principal Investigator will submit the response on behalf of the consortium to DST via email.

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 4.2.2. The IAC will subsequently rank all applications. The IAC will subsequently present a substantiated advice to the WOTRO Steering Group and the board of DST regarding which applications are to be awarded.

4.1.5 Decision

The NWO-WOTRO Steering Committee, on behalf of NWO, and the board of DST 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 DST have come to the same provisional decision.

4.1.6 Qualification

Based on the IAC's final score, NWO and DST will award a qualification to all full proposals, and will make this known to the Netherlands and Indian 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 DST 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

February 2020	Call open
8 April 2020	Webinar on Impact Strategy
12 May 2020, 14:00:00 hours CEST/ 18:30:00 IST	Submission deadline full proposals
May - June 2020	Referees are consulted
July 2020	Applicants can submit a response (rebuttal). Consortia have 5 working days to submit a rebuttal
October 2020	IAC meeting
November 2020	Decision NWO-WOTRO Steering Group and Board of DST
November 2020	NWO and DST inform applicants about the decision

4.2Criteria

4.2.1 Eligibility criteria

The administrative eligibility will be checked at desk officer level by NWO and DST. 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 Investigators will be given the opportunity to correct their application and/or submit the necessary additional information within a given time frame. If the Principal Investigators are 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 DST's online submission system (www.dst.gov.in);
- Application has been submitted by the Dutch Principal Investigator and the Indian Principal Investigator, who meet 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.

The following annexes should be added:

 CVs of Principal Investigators, co-applicants and collaboration partners mentioned in questions 1b 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 and DST, uploaded as separate Excel files.

No additional annexes are allowed. Please include all annexes in your application except the budget form or otherwise specified.

Applicants will receive written confirmation of receipt within three 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:

- I. Quality of the research proposal
- II. Quality of the consortium
- III. 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:

- I. 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.
- II. 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.
- III. Potential scientific and 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

5.1Contact

5.1.1 Specific questions

For specific questions about Cooperation India-The Netherlands and this call for proposals please contact:

NWO: Berry Bonenkamp +31 70 349 44 16

Monika Brasser +31 70 349 45 03 dst-merian@nwo.nl

DST: Dr. Sanjay Bajpai +91 11 26590283 sbajpai@nic.in, headtmdew-dst@gov.in

Dr. Neelima Alam +91 11 26590467 dstwticall@gmail.com

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 CEST 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: DST budget sheet

Annex 2: DST funding specifications

Annex 3: Format for Letters of Commitment for Indian side.

Annex 4: Conflict of Interest policy (DST)

Annex 5: Format for Full Proposal

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Annexure-1

6.1DST Budget Sheet

(Indian applicants should fill up the budget on Excel sheet and submit to DST via email to <u>dstwticall@gmail.com</u>. Kindly mention the project reference No. project title and Indian and Dutch Lead PI name in the email).

Work Package -							year 1	year 2	year 3	year 4	year 5	total
												cost
							•					
A. General - Recurring												
I. Manpower costs												
Personnel from all other	Name	Emplo	Salary	HRA		total						
organisations universities (As per the	of emplo	ying organi	per month	per month	no s.							
As per DST OM. No. SR/S9/Z-08/2018 dated	ying	sation*	including HRA as	as per the tier	as per							
30.01.2019	organi sation		per the	of the								
http://dst.gov.in/sites/def ault/files/OM%20Fellows			Tier of the city	city (20%)								
hip%20Revision-			ine ony	(2070)								
2019.pdf and DST OM. No. SR/S9/Z-05/2019												
dated 31.08.2019												
https://dst.gov.in/sites/de fault/files/OM-												
Scientific_Technical%20												
Manpower- Guidelines%20and%20e												
moluments.pdf)												
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Sub total - Manpower												
2. Consumables (As per	2. Consumables (As per Annexure-II)											
Sub total -												
3. Travel (As per Annexi												
5. Travel (AS per Annexi			[1							
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4. Contingencies (As per	Annoxur	o-III)										
contingencies (As per	Annexu	C-II)			1							
Sub total												
5. Other Costs (As per A	nnexure-l	0										
		,										
Sub total												
6. Overheads (As per An	nexure-II))	l			I						

Sub total										
Grand total -										
* Please indicate type of organisation: A: research organisation, B: practitioner organisation; 1= public organisation, 2= non-for-profit organisation, 3= for-profit organisation. Each organisation thus can be typed with a combination of a letter and a number. For example: an NGO can be typed as B2.										

Annexure 2

(Break- up of cost)

6.2DST Funding specifications

Information about DST funding: maximum budget and what costs can be reimbursed (section 3.2)

(a) Maximum budget from DST for DST-NWO programme Cleaning the Ganga and Agri-Water: approximately

Rs. 5.5 crores per project: The projected budget by the Indian PI will be reviewed by Indian members of the Advisory Committee and will undergo financial due-diligence as per DST processes, which will take into account cost needed for the projected activities, matching efforts and conformity to DST guidelines.

(b) Heads wise break up of cost

Recurring costs MANPOWER: 1 Manpower Position S.no. Monthly Emoluments Essential qualifications and upper age limit As per DST OM. No. SR/S9/Z-08/2018 1 Research Associate - I Rs. 47,000/- + HRA dated 30.01.2019 or as per the norms of Research Associate - II Rs. 49,000/- + HRA the Institute undertaking such projects if Research Associate - III Rs. 54,000/- + HRA they have a different structure than that Junior Research Fellow (JRF) Rs. 31,000/- + HRA defined in the above mentioned OM Senior Research Fellow (SRF) Rs. 35,000/- + HRA 2 Scientific Administrative As per DST OM. No. As per DST OM. No. SR/S9/Z-05/2019 Assistant/Field worker, Project SR/S9/Z-05/2019 dated dated 31.08.2019 31.08.2019 Associate-I, Project Associate-II, Senior Project Associate, Principal Project Associate, Project Scientist-I, Project Scientist-II, Project Scientist-III, Project Scientist B, Project Scientist C, Project Scientist D, Project Coordinator-II, Project Coordinator-III, Project Manager OTHER COST 2 May include knowledge sharing and research uptake activities such as costs towards publishing of joint (only) research outputs, filing of patents, technology transfer, stakeholders meet or workshops and or awareness camps. 3 CONSUMABLES Amount as per project requirement (justification through DST processes)

4	TRAVEL	Amount as per project requirement (justification through DST processes), to be provided where the research work involves field work or/and project has many investigators/institutions and large manpower. Travel will include both national and international travel between the two collaborating countries. International travel of PI/Co-PIs and coordinators will be admissible only on the basis of reciprocity. One way travel is not encouraged. The maximum period of stay of faculty will be 3 months and for students it will not exceed 12 months. Travel cost should not exceed 20% of total budget (excluding overheads)
5	CONTINGENCIES	Contingency can be utilised for stationary, accessories, software etc. The contingency amount may also be used for paying Registration Fees for attending international conferences.
6	OVERHEADS CHARGES	As per DST norms and conditions: Towards meeting the cost of academic expenses including infrastructural facilities, an amount of:
		a) For project costing upto Rs.1 crore, 10% of the total cost for educational institutions and NGOs and 8% for laboratories and institutions under Central Government Departments/Agencies;
		b) for projects costing more than Rs.1.0 crore and upto Rs.5.0 crore, overheads of Rs.15.0 lakh or 10% of total cost whichever is less;
		c) for projects costing more than 5.0 crore and upto Rs.20.0 crore, Rs.20.0 lakh will be provided as overheads;
GRAN	ND TOTAL	Approx. Rs. 5.5 crores per project
		(The amount will be the maximum cost admissible under the call. Actual amount may vary depending on level of activities proposed in the programme.)

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Annexure 3

6.3 Format Letter of Commitment

(Indian applicants should fill up the letters of commitment and submit to DST via email to <u>dstwticall@gmail.com</u>. Kindly mention the project reference No. project title and Indian and Dutch Lead PI name in the email).

a). UNDERTAKING FROM THE INDIAN LEAD INVESTIGATOR(S)

Project Title:

- 1. I/We have carefully read the terms and conditions of the Water Technology Initiative Programme and I/We agree to abide by them.
- 2. I/We have not submitted this or a similar Project proposal elsewhere for financial support.
- 3. I/We have explored and ensured that the equipment and the basic facilities described in the Research Proposal, will actually be available as and when required for the purpose of the Project. I/We shall not request financial support under this project, for procurement of these items.
- 4. I/We undertake that spare or idle capacity of the permanent equipment procured under the Project will be made available to other legitimate users from parent and other organisations.
- 5. I/We have enclosed the following :

Endorsement from the Head of the Institution

а

(on letter head)

- b Undertaking from the Collaborator(s)
- c Complete Project Proposal (2 copies)

Name and signature of the Investigators

Date

Place

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b). ENDORSEMENT FROM THE HEAD OF THE INSTITUTIONS OF INDIAN MAIN APPLICANT

(To be typed on the letter-head of the organization)

Project Title

- Certified that the organization welcomes the participation of Dr/Mr/Mrsas the PI and Dr/Mr/Mrs....as the Co-PI for the project and that in the unforeseen and legitimate event of discontinuation by the PI, the Co-PI will assume full responsibility for completion of the project. Information to this effect, endorsed by me, will be promptly sent to the DST
- 2. Certified that the equipment, other basic facilities and other administrative facilities as per the terms and conditions of the award of the Project, will be extended to the investigator(s) throughout the duration of the project
- 3. The Organization shall ensure that financial and purchase procedures are followed as per the prevailing norms of the organization, within the allocated budget.
- 4. The Organisation shall provide timely the Statement of Expenditure and the Utilisation Certificate of the grant as required by the DST in the prescribed format.
- 5. The grant for the proposal, if approved may be made in favour of, Payment shall be made in favour of
 - i. Organisation Name as per Bank records:
 - ii. Bank Account No.:
 - ii. IFSC Code:
 - iii. MICR Code:
 - iv. Bank Name:
 - v. Bank Branch Address
 - vi. Unique Agency code of the Organisation and Institute:

As per the extant guidelines of Govt. of India, you are requested to register yourself on <u>Central Plan Scheme</u> <u>Monitoring System</u> (CPSMS) website and inform us unique agency code to facilitate the electronic fund transfer.

{website link- https://pfms.nic.in/Users/LoginDetails/Login.aspx }.

(Head of the Institute)

Seal/Stamp

Date

Place

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c). ENDORSEMENT FROM THE HEAD OF THE ORGANISATION OF INDIAN Co-APPLICANT (Co-PI)*

(To be typed on the letter-head of the organization)

Project Title

- Certified that the organization welcomes the participation of Dr/Mr/Mrsas the PI and Dr/Mr/Mrs.....as the Co-PI for the project and that in the unforeseen and legitimate event of discontinuation by the PI, the Co-PI will assume full responsibility for completion of the project. Information to this effect, endorsed by me, will be promptly sent to the DST
- 2. Certified that the equipment, other basic facilities and other administrative facilities as per the terms and conditions of the award of the Project, will be extended to the investigator(s) throughout the duration of the project
- 3. The Organization shall ensure that financial and purchase procedures are followed as per the prevailing norms of the organization, within the allocated budget.
- 4. The Organisation shall provide timely the Statement of Expenditure and the Utilisation Certificate of the grant as required by the DST in the prescribed format.
- 5. The grant for the proposal, if approved may be made in favour of, Payment shall be made in favour of
 - i. Organisation Name as per Bank records:
 - ii. Bank Account No.:
 - ii. IFSC Code:
 - iii. MICR Code:
 - vii. Bank Name:
 - viii. Bank Branch Address
 - ix. Unique Agency code of the Organisation and Institute:

As per the extant guidelines of Govt. of India, you are requested to register yourself on <u>Central Plan Scheme</u> <u>Monitoring System</u> (CPSMS) website and inform us unique agency code to facilitate the electronic fund transfer.

{website link- https://pfms.nic.in/Users/LoginDetails/Login.aspx }.

(Head of the Institute)

Seal/Stamp

Date

Place

* N.B. - THIS FORMAT HAS TO BE FILLED BY INSTITUTIONS OF ALL Co-PIS.

d). Endorsement from Indian Stakeholders/ Collaborating Industry/ Non-Academic Partners/Voluntary Organizations (*if any*)

(On the official letter head)

I have gone through the Project proposal entitled...... submitted by(*Name of PI*) ...of.....(*Name of the Institute*) for DST funding and noted the obligations and responsibilities indicated in our name which are as below :

(Tick, as applicable)

1. Contribution in financial terms (mention amount in Rs.)

2. Contribution in Kind (list activities) :

2.a Pre-implementation of the project :
2.a.1 Land approvals and acquisition
2.a.2 Commitment towards technical / human resources.
2.a.3 Legal clearances
2.a.4 Sharing of data – technical designs & drawings.
2.a.5 Undertaking to maintain the assets.
2.a.6 Providing data as required
2.a.7 Sharing preliminary work done so far on similar activities.

2.a.8 Any other, please specify.

2.b During implementation of the project :

2.b.1 Coordination and partership with the consortium.

2.b.2 Depute a dedicated manpower team for the project.

2.b.3 Community mobilization and engagement, group-creation, capacity building, training, orientation and awareness etc.

2.b.4 Any other, please specify.

2.c Post project :

2.c.1 Undertaking for taking over of the project & ensuring the sustainability of the intervention.

2.c.2 Generation and analysis of data from the intervention.

2.c.3 Any other, please specify.

I hereby affirm that my organization/industry is committed to participate in the Project to the full extent as indicated including financial liabilities accruing therefrom as detailed above. A brief profile of my organization is summarised below:

Name of Organisation : Line of Business/ Service : No. of employees : Annual Turn over (if industry) : The Annual Report for the last 3 financial years is enclosed.

> (Head of the Organisation) Seal/Stamp

Date Place

Annexure - 4

6.4 Conflict of Interest policy (DST)

(Indian applicants should sign on the conflict of Interest document and submit to DST via email to <u>dstwticall@gmail.com</u>. Kindly mention the project reference No. project title and Indian and Dutch Lead PI name in the email)

DEPARTMENT OF SCIENCE AND TECHNOLOGY

POLICY ON CONFLICT OF INTEREST

FOR REVIEWER & COMMITTEE MEMBER or APPLICANT or DST OFFICER ASSOCIATED/ DEALING <u>WITH</u> THE SCHEME/ PROGRAM OF DST

Issues of Conflicts of Interest and ethics in scientific research and research management have assumed greater prominence, given the larger share of Government funding in the country's R & D scenario. The following policy pertaining to general aspects of Conflicts of Interest and code of ethics, are objective measures that is intended to protect the integrity of the decision making processes and minimize biasness. The policy aims to sustain transparency, increase accountability in funding mechanisms and provide assurance to the general public that processes followed in award of grants are fair and non-discriminatory. The Policy aims to avoid all forms of bias by following a system that is fair, transparent and free from all influence/ unprejudiced dealings, prior to, during and subsequent to the currency of the programme to be entered into with a view to enable public to abstain from bribing or any corrupt practice in order to secure the award by providing assurance to them that their competitors will also refrain from bribing and other corrupt practice and the decision makers will commit to prevent corruption, in any form, by their officials by following transparent procedures. This will also ensure a global acceptance of the decision making process adopted by DST.

Definition of Conflict of Interest:

Conflict of Interest means "any interest which could significantly prejudice an individual's objectivity in the decision making process, thereby creating an unfair competitive advantage for the individual or to the organization which he/she represents". The Conflict of Interest also encompasses situations where an individual, in contravention to the accepted norms and ethics, could exploit his/her obligatory duties for personal benefits.

1. Coverage of the Policy:

- a) The provisions of the policy shall be followed by persons applying for and receiving funding from DST, Reviewers of the proposal and Members of Expert Committees and Programme Advisory Committees. The provisions of the policy will also be applicable on all individuals including Officers of DST connected directly or indirectly or through intermediaries and Committees involved in evaluation of proposals and subsequent decision making process.
- b) This policy aims to minimize aspects that may constitute actual Conflict of Interests, apparent Conflict of Interests and potential Conflict of Interests in the funding mechanisms that are presently being operated by DST. The policy also aims to cover, although not limited to, Conflict of interests that are Financial (gains from the outcomes of the proposal or award), Personal (association of relative / Family members) and Institutional (Colleagues, Collaborators, Employer, persons associated in a professional career of an individual such as Ph.D. supervisor etc.)

2. Specifications as to what constitutes Conflict of Interest.

Any of the following specifications (non-exhaustive list) imply Conflict of Interest if,

- (i) Due to any reason by which the Reviewer/Committee Member cannot deliver fair and objective assessment of the proposal.
- (ii) The applicant is a directly relative# or family member (including but not limited to spouse, child, sibling, parent) or personal friend of the individual involved in the decision making process or alternatively, if any relative of an Officer directly involved in any decision making process / has influenced interest/ stake in the applicant's form etc.
- (iii) The applicant for the grant/award is an employee or employer of an individual involved in the process as a Reviewer or Committee Member; or if the applicant to the grant/award has had an employeremployee relationship in the past three years with that individual.
- (iv) The applicant to the grant/award belongs to the same Department as that of the Reviewer/Committee Member.
- (v) The Reviewer/Committee Member is a Head of an Organization from where the applicant is employed.
- (vi) The Reviewer /Committee Member is or was, associated in the professional career of the applicant (such as Ph.D. supervisor, Mentor, present Collaborator etc.)
- (vii) The Reviewer/Committee Member is involved in the preparation of the research proposal submitted by the applicant.
- (viii) The applicant has joint research publications with the Reviewer/Committee Member in the last three years.
- (ix) The applicant/Reviewer/Committee Member, in contravention to the accepted norms and ethics followed in scientific research has a direct/indirect financial interest in the outcomes of the proposal.
- (x) The Reviewer/Committee Member stands to gain personally should the submitted proposal be accepted or rejected.

The Term "Relative" for this purpose would be referred in section 6 of Companies Act , 1956.

3. <u>Regulation</u>:

The DST shall strive to avoid conflict of interest in its funding mechanisms to the maximum extent possible. Selfregulatory mode is however recommended for stake holders involved in scientific research and research management, on issues pertaining to Conflict of Interest and Scientific Ethics. Any disclosure pertaining to the same must be made voluntarily by the applicant/Reviewer/Committee Member.

4. Confidentiality:

The Reviewers and the Members of the Committee shall safeguard the confidentiality of all discussions and decisions taken during the process and shall refrain from discussing the same with any applicant or a third party, unless the Committee recommends otherwise and records for doing so.

5. Code of Conduct

5.1 To be followed by Reviewers/Committee Members:

- (a) All reviewers shall submit a conflict of interest statement, declaring the presence or absence of any form of conflict of interest.
- (b) The reviewers shall refrain from evaluating the proposals if the conflict of interest is established or if it is apparent.
- (c) All discussions and decisions pertaining to conflict of interest shall be recorded in the minutes of the meeting.
- (d) The Chairman of the Committee shall decide on all aspects pertaining to conflict of interests.
- (e) The Chairman of the Committee shall request that all members disclose if they have any conflict of interest in the items of the agenda scheduled for discussion.
- (f) The Committee Members shall refrain from participating in the decision making process and leave the room with respect to the specific item where the conflict of interest is established or is apparent.

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- (g) If the Chairman himself/herself has conflict of interest, the Committee may choose a Chairman from among the remaining members, and the decision shall be made in consultation with Member Secretary of the Committee.
- (h) It is expected that a Committee member including the Chair-person will not seek funding from a Committee in which he/she is a member. If any member applies for grant, such proposals will be evaluated separately outside the Committee in which he/she is a member.

5.2 To be followed by the Applicant to the Grant/Award:

- (a) The applicant must refrain from suggesting referees with potential Conflict of Interest that may arise due to the factors mentioned in the specifications described above in Point No. 2.
- (b) The applicant may mention the names of individuals to whom the submitted proposal should not be sent for refereeing, clearly indicating the reasons for the same.

5.3 To be followed by the Officers dealing with Programs in DST:

While it is mandatory for the program officers to maintain confidentiality as detailed in point no. 6 above, they should declare, in advance, if they are dealing with grant applications of a relative or family member (including but not limited to spouse, child, sibling, parent) or thesis/ post-doctoral mentor or stands to benefit financially if the applicant proposal is funded. In such cases, DST will allot the grant applications to the other program officer.

6. Sanction for violation

6.1 For a) Reviewers / Committee Members and b) Applicant

Any breach of the code of conduct will invite action as decided by the Committee.

6.2 For Officers dealing with Program in DST

Any breach of the code of conduct will invite action under present provision of CCS (conduct Rules), 1964.

7. Final Appellate authority:

Secretary, DST shall be the appellate authority in issues pertaining to conflict of interest and issues concerning the decision making process. The decision of Secretary, DST in these issues shall be final and binding.

8. Declaration

I have read the above "Policy on Conflict of Interest" of the DST applicable to the Reviewer/ Committee Member/ Applicant/ DST Scheme or Program Officer # and agree to abide by provisions thereof.

I hereby declare that I have no conflict of interest of any form pertaining to the proposed grant *

I hereby declare that I have conflict of interest of any form pertaining to the proposed grant *

* & # (Tick whichever is applicable)

Name of the Reviewer/ Committee Member or Applicant or DST Officer

(Strike out whichever is not applicable)

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(Signature with date)

Annexure 5

6.5 Format for Full Proposal

- ← Expand for Explanatory Notes on Application Form

How to fill out this application form

The instructions for filling in this form are indicated in the (i) icons or in the fold-out titles \leftarrow with explanatory notes.

This application form consists of six sections. Each section contains further clarification and notes on how to fill out the related questions. When writing your proposal, please be specific, and provide only information that applies to the proposal and its objectives and take into account that it will be assessed by both expert referees as well as the assessment committee with a broad range of expertise. Please adhere to the following guidelines when filling out this application form:

Remove the examples and comments (in italic and blue) before converting the application to PDF and submitting it; Use the Calibri font at font size 9.5 and do not change the margins (2,5 cm, all directions); You may use subheadings;

Instructions regarding attachments

The following compulsory attachments (budget form, CV's and letters of support) should be included as annex in the proposal. Appendices with supplementary information is not allowed, nor are annexes other than the ones specified here:

- CV's: For each Principal Investigator, co-applicant, and collaboration partner, a CV of max. 1 A4 should be provided. Only the CVs of the Principal Investigators, co-applicants and collaboration partners (i.e. those mentioned in sections 1b, 1d and 1e of the application form) should be included. CVs of project staff who are not a Principal Investigator, or official co-applicant or collaboration partner should not be included.
- Letter(s) of commitment: each consortium institution (i.e. the institutions of the Principal Investigators and of the coapplicants and collaboration partners) should provide a letter 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 director of the organisation and be printed on the letterhead of the institution or organisation. A format can be found in Annex 6.3 of the Call for Proposals. If the institution or organisation is providing co-funding as well, the numeric amount should be specified in the Letter of Commitment.
- Draft consortium agreement: 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. If the proposal is awarded, the consortium will be asked for a final, signed version prior to the start of the project. A format can be found here:

https://www.nwo.nl/en/documents/wotro/wotro---format-consortium-agreement

Letter(s) of guarantee: For each co-financing partner a letter of guarantee regarding the co-funding should be submitted. In a letter of guarantee, the co-financing partner expresses their support for the project and confirms the co-funding pledge and the agreements with respect to intellectual property and publications as stated in the proposal.

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Submission

To NWO: Please submit the full proposal including the compulsory annexes to NWO (PDF format is required!) via the online application system ISAAC which can be accessed via the NWO website. For submission via ISAAC, the proposal must be submitted from the account of the Dutch Principal Investigator. For any technical questions regarding submission, please contact the ISAAC helpdesk (isaac.helpdesk@nwo.nl).

To DST: Please submit the full proposal including the compulsory annexes to DST via e-PMS (onlinedst.gov.in). Annexure-I (budget sheet) & Annexure-III should be filled up & submitted via email along with a copy of full proposal to <u>dstwticall@gmail.com</u>.

Two (2) hardcopies of the uploaded research proposal should be sent to Dr. Neelima Alam, Scientist E, Department of Science and Technology, Technology Bhavan, New Mehrauli Road, New Delhi-110016 by speed post.

Deadline for submitting the full proposal: 12 May 2020, 14:00 hours CEST / 17.30 IST

1. Registration Form (basic details)

1a. Title of research proposal

Insert project title here

1b. Details of the two Principal Investigators:

Dutch PI	
Title:	
First name:	
Initials:	
Prefix:	
Surname:	
Male / female:	
institution:	
Address for correspondence:	
Telephone:	
E-mail:	
Website (optional):	

Indian PI	
Title:	
First name:	
Initials:	
Prefix:	
Surname:	
Male / female:	
institution:	
Address for correspondence:	
Telephone:	
E-mail:	
Website (optional):	

Expand for Explanatory Notes on Type of organisation (1c – 1d)

Type of organisation

Please specify: (A) Practitioners organisation or (B) Research organisation & (1) private for profit, (2) private non-profit or (3) public organisation, for example: a university is a public (3) research organisation (B) therefore it has code B3. A NGO is a private non-profit (2) practitioners (A) organisation, therefore the code is A2. A ministry is a public (3) practitioners organisation (A) therefore an A3.

1c. Co-applicants ()

Co-applicant		Co-ap	plicant
Family name:		Family name:	
First name:		First name:	
Male / female:		Male / female:	
Title(s):		Title(s):	
Profession:		Profession:	
E-mail:		E-mail:	
Organisation:		Organisation:	

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Type of organisation ():	Choose an item	Type of organisation ():	Choose an item
Address (incl. country):		Address (incl. country):	
Tel.:		Tel.:	
Website organisation:		Website organisation:	

Collaboration partner		Collaborat	ion partner
Family name:		Family name:	
First name:		First name:	
Male / female:		Male / female:	
Title(s):		Title(s):	
Profession:		Profession:	
E-mail:		E-mail:	
Organisation:		Organisation:	
Type of organisation ():	Choose an item	Type of organisation ():	Choose an item
Address (incl. country):		Address (incl. country):	
Tel.:		Tel.:	
Website organisation:		Website organisation:	

1d. Project staff 🛈

Name 🛈	Name of organisation	Type of organisation ()	Time involvement		Engagement in the project ⁶	Role in the project ⁷
			Months	FTE		
		Choose an item				
		Choose an item				
		Choose an item				
		Choose an item				
		Choose an item				
		Choose an item				

⁶ Eg senior, junior, postdoc, PhD, MA/MSc student etc.

⁷ Eg project coördinator, researcher, financial management, etc.

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1e. Summary of research proposal ()

(Maximum 300 words, plus maximum five keywords. Please ensure this is identical to the summary in ISAAC.)

Expand for Explanatory Notes on Fields of Research (1h)

Field of Research

Please indicate the relevant scientific research fields, following the list on the NWO website (<u>https://www.nwo.nl/en/funding/funding+process+explained/research+fields</u>). Please include both the name and the code (so for example 22.80.00 Biotechnology), and ensure the research fields are the same as have been entered in ISAAC.

1f. Relevant research fields ()

	Code:	Field of research:
Main field of research:		
Other field(s) of research		
(if applicable):		

1g. Public summary ()

(Max 100 words. Please provide a layperson's summary. NWO and DST will publish this public summary on the programme website if your proposal is awarded.)

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2. Research Proposal

 \leftarrow Expand for Explanatory Notes (2a – 2c)

2a. Relevance of the proposed research

Maximum 500 words

Please describe the scientific importance, including relevance to the focus of the Call and complementarity to other research programmes or agendas such as the NWA and SDGs, of the proposed research. Please take into account the criteria specified under 'Quality of the Research Proposal' and 'Potential for scientific and/or societal breakthroughs' in § 4.2 of the Call text.

2b. Research Project

Maximum 3,000 words Please take into account the criteria, especially those specified under 'Quality of the research proposal' in § 4.2. of the Call text

Description of the research programme should include the following elements: Overall aim, key objectives, scientific background, including original and/or innovative elements of the topic; Objectives, research questions and methods; Research plan including practical timetable over the grant period; Experimental techniques and/or methodology; Originality and/or innovative elements of the approach;

Sustainability after the project.

2c. Indian-Dutch co-operation

Maximum 500 words

Please take into account the criteria specified under 'quality of the consortium' in § 4.2.2 of the Call text, such as 'quality of Indian-Dutch collaboration, including equality in partnership; and organisation of the research.

2a. Relevance of the proposed research ()

(Maximum 500 words)

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2b. Research Project ()

(Maximum 3,000 words)

2c. Indian-Dutch co-operation ()

(Maximum 500 words)

2d. Number of words used

section 2a: _____ (Maximum 500 words)

section 2b: _____ (Maximum 3,000 words)

section 2c: _____ (Maximum 500 words)

2e. Literature references

•••••

•••••

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3. Impact Strategy, Theory of Change & Impact Pathway

Expand for Explanatory Notes (3a – 3b)

3a. Impact statement, knowledge co-creation and impact strategy

(Max. 750 words).

Impact statement

Please describe the relevance of the research for society, including the challenge it aims to address, its vision of success (what will the issue addressed be like if the project succeeds) as well as key actors in the context that have crucial roles in achieving the vision of the research.

Knowledge co-creation

Please state the consortium partners as well as key stakeholders and their role(s) in project execution. Describe the complementarities in the (disciplinary) expertise, types of (academic, practitioner's, etc) knowledge and experiences of the various consortium partners as well as key stakeholders and how these will be strategically applied in research execution, and how learning across types of knowledge is facilitated.

Impact Strategy

Please also provide an Impact Strategy, which contains descriptions of the actual knowledge transfer activities undertaken to encourage innovation and boost impact from inception through to the end stages of the proposed research. Include the following sections:

i. Stakeholder engagement

Provide the objective of the stakeholder engagement strategy. Describe how stakeholder engagement is strategically organised from inception onwards and how stakeholder approaches will be adjusted throughout project execution. Clarify how engagement with relevant stakeholders within and/or beyond the consortium is planned. This should include the research process from joint identification of the problem to be tackled and joint formulation of the research questions up until the uptake of acquired knowledge, insights and innovations. Please note that the stakeholders listed here should be reflected in the Impact Pathway (section 3b).

ii. Communication

Provide the objective of the communication strategy. Describe how communication between consortium partners, with stakeholders and with wider audiences is embedded throughout the research process, which means of communication are used and how a reflective approach is embedded.

iii. Capacity development

Provide the objective of the capacity development strategy. Describe how capacities to be developed to enhance the potential for outcomes throughout research execution will be identified strategically, which capacity development strategies are foreseen and how a reflective approach is embedded.

iv. Monitoring & Evaluation

Provide the objective of the Monitoring & Evaluation strategy. Describe how activities will be monitored throughout programme execution, how learning is documented and embedded and how

feedback loops will be facilitated by adjusting the Impact Pathway throughout project execution. Elaborate on how this reflective approach is integrated activities.

A toolbox of potential ways to create an Impact Strategy can be found here: https://www.nwo.nl/en/aboutnwo/organisation/nwo-domains/wotro/Impact+toolkit/Impact+toolkit+-+Research+Uptake)

3b. Theory of Change and Impact Pathway

Max. 500 words for the Theory of Change (ToC), & max. 1 page for the related Impact Pathway (IP), using format A. In addition, an approach for conducting a baseline study (starting conditions based on which change will be recorded) should be provided in max. 300 words.

ii. Theory of Change including assumptions

Please describe in narrative the relationship, logical flow and/or causalities and contingencies between the problem as identified jointly with stakeholders, planned activities, expected results (output), desired changes in behaviour with identified partners and stakeholders (outcome) and contribution to the vision of success as described in section 3a (impact) of the proposed research. The assumptions underlying the presented problem, context and Impact statement should be part of the Theory of Change. State which assumptions are made by the various consortium partners, as well as risks associated to these assumptions being tested. Elaborate on how false assumptions and resulting risks could stand in the way of the programme's success and provide a brief description of an alternative plan in case such unforeseen events occur. Include a schematic overview of the narrative setting out the Theory of Change.

iii. Impact Pathway

Please present schematically the expected Impact Pathway of the programme by completing the Impact Pathway diagram in Format A (max 1 page). Specify user groups / stakeholders and required changes in behaviour at the level of outcome. Please note the lay-out of the diagram is indicative and that variations to this diagram are allowed, as long as all boxes of the diagram remain included.

Include a narrative description (max 300 words) of the causal flows in the Impact Pathway, including how cocreation (3a) and the efforts described in the Impact Strategy (3a) are foreseen to support relevance of output, the flow from output to outcome and how this is expected to contribute to the desired impact. State which assumptions are made by the various consortium partners underlying the presented causal flows, as well as risks associated to these assumptions being tested. Elaborate on how false assumptions and resulting risks could stand in the way of the programme's success and provide a brief description of an alternative plan in case such unforeseen events occur.

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3a. Impact statement, knowledge co-creation and impact strategy ()

(Maximum 750 words)

3b. Theory of Change and Impact Pathway ()

i. Baseline study (300 words):

(Maximum 300 words)

ii. Theory of Change including assumptions (500 words) ():

(Maximum 500 words)

iii. Impact Pathway (format A) 🛈

(Maximum 300 words)

Research outputs:	Indicator s:	Research outputs:	Indicators:		Impact	
					1.	
					2.	
				_		
				_		
					3.	

Format A: Complete Impact Pathway diagram with indicators at output and outcome level (max. 1 page)

4. Cost Estimates

Expand for Explanatory Notes (4a – 4b)

4a. Budget

Please consider § 3.2 and Annex 1 and 2 of the Call for Proposals when preparing your budget, including any restrictions in the modules for the budget requested from the NWO grant, and DST budget specifications. Please only fill in the budget lines in the NWO budget, and specify your costs in the budget in the Excel budget format. If relevant, please insert any co-financing and what the co-financing will be used for. Please note that the co-financing party should provide a letter confirming the co-financing, and specifying the exact amount that will be co-financed. This letter should be included as an Annex to this application.

4b. Explanation of budget

Please give a brief explanation of the costs in your budget (max 1 page). Please provide here only a justification of the project costs and how the proposed expenditures in the various categories relate to the planned activities, as well as any justifications required by the NWO modules. The NWO budget form itself should be uploaded as attachment in ISAAC.

4a. Budget 🛈

Budget applied for from the NWO grant. Specified costs per module should be placed in the NWO Excel budget:

Module	Amount from	% of budget	Call	Amount of co-financing		
	grant	(see next column)	requirements:	In kind	In cash	
Module 1: Personnel						
Module 2: Material credit						
(if applicable) Audit costs			€5,000 if Dutch Principal Investigator is not from a university or KNAW institute			
Module 4: Impact			Approx. 15-20% NWO grant total 4			

		categories	
-Stakeholder engagement			
-Capacity development			
-Communication costs			
-Monitoring & Evaluation		Budget between €20,000- €25,000 for joint kick-off, midterm and final workshop	
Module 5: Internationalisation			
Total budget requested from NWO			

Funding requested from DST. Specified costs per item should be placed in the separate DST budget form.

Project costs (specified in INR and Euros):	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
A. Capital - Non Recurring:						
Equipments						
B. General – Recurring:						
1. Manpower costs						
2. Consumables						
3. Travel						
4. Contingencies						
5. Other Costs						
6. Overheads						
Total budget requested from DST						

4b. Explanation of budget ()

(Max. 1 page)

4c. Intended starting date

Click here to select a starting date

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4d. Additional grants

Have you requested any additional grants for this project either from NWO, DST or from any other funding agency?



If yes, please specify

5. Consortium

Expand for Explanatory Notes (5a – 5c)

5a. Consortium roles and added value

Please describe the role and added value of each of the consortium partners in terms of experience, skills, know-how and expertise. Include all aspects related to the criterion 'quality of the consortium' mentioned in section 4.2 of the call for proposals. Address any new alliances, involvement of junior researchers, and interdisciplinary character specifically. If applicable, describe the consortium partners' past experience with joint activities. Max 750 words.

5b. List of key publications

Please list five key publications per consortium member (Principal Investigators, co-applicants and collaboration partners) related to the proposed research. The publications should give evidence of the qualifications of the consortium in this field.

5c. CVs of principal investigators and co-applicants (in annex)

Please include as an Annex to this application the CVs of the Principal Investigators, co-applicants and collaboration partners. Each CV should be a maximum of one page. Please do not include the CVs of the other project staff.

5a. Consortium roles and added value ()

(Maximum 750 words)

5b. List of key publications ()

consortium member 1

- 1.
- 2.
- 3.

4.

5c. CVs of principal investigators and co-applicants (in annex) ()

(Please include as an Annex to this application the CVs of the Principal Investigators, co-applicants, and collaboration partners. Each CV should be a maximum of one page. Please do not include the CVs of the other project staff)

Datamanagement and ethics

6. Data management

- 1. Will data be collected or generated that are suitable for reuse?
- YES: Then answer questions 2 to 4.
- □ NO: Then explain why the research will not result in reusable data or in data that cannot be stored or data that for other reasons are not relevant for reuse.

If no, please explain here

2. Where will the data be stored during the research?

Answer

3. After the project has been completed, how will the data be stored for the long-term and made available for the use by third parties? To whom will the data be accessible?

Answer

4. Which facilities (ICT, (secure) archive, refrigerators or legal expertise) do you expect will be needed for the storage of data during the research and after the research? Are these available?⁸

Answer

⁸ ICT facilities for data storage are considered to be resources such as data storage capacity, bandwidth for data transport and calculating power for data processing.

7. Ethics

Expand for Explanatory Notes

Please describe the ethical challenges in your research and how you will address these. Indicate where you will apply for ethical approval, including any recognised (medical) ethics review committees, animal experiments committees, or permission for research with the population screening Act. NWO and DST will require proof that the indicated ethical approval or permission has been obtained before the start of the project. Max. 400 words, please add word count.

7a. Description of ethical issues ()

Description

7b. Please indicate which ethics committee(s) will be approached for ethical approval ①:

Ethic committee(s)

Signatures

- By submitting this document I declare that I satisfy the nationally and internationally accepted standards for scientific conduct as stated in the Netherlands Code of Conduct for Scientific Practice (Association of Universities in the Netherlands).
- I endorse and follow the Code Openness Animal Experiments (if applicable)
- I endorse and follow the Code Biosecurity (if applicable)
- I have completed this form truthfully

Please ensure all principal investigators, co-applicants and collaboration partners sign the application. Add more rows if necessary.

Dutch	Principal	Investigator
Name:		

Signature:

Indian	Principal	Investigator
Name:		

Signature:

Co-applicant

Name:

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Name:Signature:Co-applicant
Name:Signature:Collaboration Partner
Name:Signature:Collaboration PartnerSignature:

Submit this application through ISAAC, in PDF format. Please note that the electronic application must be submitted through the ISAAC account of the Dutch Principal Investigator. Please note that the application must also be submitted to DST via e-PMS (onlinedst.gov.in) by the Indian Principal Investigator.

Signature:

Annex A: CVs of Principal Investigators, co-applicants and collaboration partners

Annex B: Letters of Commitment of consortium organisations

Annex C: Letters of guarantee for co-financing (if applicable)

Published by: Dutch Research Council

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February 2020



🏹 विज्ञान एवं प्रौद्योगिकी विभाग DEPARTMENT OF SCIENCE & TECHNOLOGY

