



NWO-WOTRO Science for Global Development
NWO Earth and Life Sciences
NWO Social Sciences
Technology Foundation STW

Urbanising Deltas of the World

2nd Call for proposals

Full Proposals - Integrated Projects



**Ministry of Foreign Affairs of the
Netherlands**

The Hague, May 2015.

Netherlands Organisation for Scientific Research, in cooperation with The Ministry of Foreign Affairs of the Netherlands

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1 Introduction

1.1 Background

The research & innovation programme 'Urbanising Deltas of the World' (UDW) is a joint activity of the Netherlands Organisation for Scientific Research (NWO) and the Ministry of Foreign Affairs of the Netherlands that responds to development needs and economic opportunities in river delta regions across the world. The second call for proposals under this programme is aligned to the Topsector Water of the Dutch Government, and targets cooperation between research and businesses specifically. The call offers funding for integrated projects to be carried out in public-private partnerships with partners from the Netherlands and the water partner countries of Dutch development cooperation¹.

Delta regions are home to a large portion of the world population, living under increasing pressure of current and future global change – including climate change, population growth and increasing economic activities. In the developing world, these areas are often the poorest, most flood-prone and thus most vulnerable regions. In this context, it is of great importance to reduce vulnerability and to create a sustainable context for poverty reduction in which the resilience of communities and institutions is strengthened.

In many delta regions rapid urbanisation linked to economic growth brings new opportunities and challenges for sustainable and inclusive development. Urbanising deltas are poles of innovation. There are strong demands for innovative and integrated solutions to face major challenges related to issues such as drinking water, sanitation, rising sea levels, food security, and infrastructural connections. New alliances of stakeholders and concerted efforts of private and public parties can address these challenges and opportunities together, developing innovative solutions in which integrated processes are linked to sustainable delta development. Dutch expertise in these fields is recognised worldwide and ample opportunities occur to benefit from the interaction between professional experience and research to promote and strengthen The Netherlands' international position.

The UDW research programme challenges consortia of applicants to look for business driven research projects that address inclusive and sustainable delta development, and provide perspectives for addressing poverty. This call explicitly seeks to involve businesses (start-ups, Small and Medium Enterprises and established enterprises) into research projects with knowledge institutions, to unlock innovation potential. Facilitating trade and aid, the focal areas of this call combine themes from the research and innovation agendas of the Topsector Water and the water management policies of Dutch development cooperation. Where possible cross sector linkages are made to other Topsectors (Agri-food, Energy, High-tech, Logistics) and development policies (Food Security and Inclusive Development).

UDW is funded by the Ministry of Foreign Affairs of the Netherlands and the NWO divisions WOTRO Science for Global Development (fund manager), Earth and Life Sciences, Social Sciences, and the Technology Foundation STW. The programme receives strategic support of the Netherlands Water Partnership and the Delta Alliance.

¹ See section 2.3 for a list of the water partner countries and the geographical scope of this call.

1.2 Available budget

A maximum budget of **3,6 million euros** is available for the second call for proposals. Maximum project subsidies amount to **600,000 euros**. **Co-funding of at least ten per cent of the project budget** is required at project level. Provided that proposals submitted meet the requirements set, it is expected that five to six Integrated Projects will be funded.

1.3 Validity of the call for proposals

This call for proposals is valid until **3 August 2015, 14.00 CET**.

2 Aim

2.1 Aim and objectives

The aim of the programme 'Urbanising Deltas of the World' is to contribute to global water safety, water and food security and pro-poor sustainable economic and urban development in river deltas worldwide, by providing effective and efficient responses to increasing pressure and rapid changes related to climate change, population growth and increasing economic activities.

This second call seeks *business driven research projects that support innovation*, which are developed in public-private partnerships (PPPs). Projects should combine **knowledge co-production in an iterative process** with stakeholders being engaged from the beginning, and with the participating research and business partners directly interacting with each other. Projects may include the generation of fundamental knowledge (to solve knowledge gaps encountered in the practice of doing business), as well as the development of tools, techniques, products or services, and the valorisation of previous research (including proof of concept² trajectories). Developing business-relevant output (such as bankable proposals) is encouraged. For innovations to have meaningful impact, it is important that they are rooted in local and regional issues, socioeconomic conditions and capabilities.

Specific objectives of this call are to contribute to:

- **Research & Knowledge generation:** Generating new theory, knowledge and insights by making accessible and/or combining existing sources of knowledge, through high quality, original research;
- **Innovation & Business development:** Generating new knowledge and insights that add new value to processes, products, services, technologies, policies or ideas that become readily available to markets, governments and society, which enhance the future competitive position of businesses;
- **Sustainable & Inclusive development:** Adapting or providing new or improved processes, tools and technologies that address social, economic, and environmental challenges, and that provide perspectives for action to reduce poverty and inequality.

Co-production, also known as co-creation, is a form of cooperation in research where different parties (stakeholders, including end users) interact and learn together in a knowledge demand and supply process. Such interaction and joint learning takes place in many stages of this process: the problem definition, formulation of possible solutions, design of the research, conducting the research, the assessment of the results, and the translation of these in new practices and products. The diversity of perspectives and of the type and level of knowledge is seen as an asset that can support a constructive way of mutual learning and design.

Stakeholders are defined as natural or legal persons (at local, national or international level) who have an interest in the results of the research. This definition includes internal stakeholders (consortium partners) and external stakeholders (non-project partners), as well as primary stakeholders (those who are intended to benefit or may be affected by the intervention, also end users or target groups) and secondary stakeholders (those that have an intermediary role).

² A **proof of concept** is the phase in which a technology, model or approach is tested in practical circumstances to demonstrate its feasibility. It is a phase in between the development or laboratory phase and the (commercial) investment phase.

2.2 Focal areas

Given the general aim and objectives of this call, three focal areas have been defined:

- Resilient urban planning and management;
- Optimising water allocation and use in the delta;
- (Integrated) coastal zone management.

These focal areas link issues from the innovation contracts of the Topsector Water to other economic and development relevant themes such as energy, logistics, agri-food, and inclusive development. In all themes specific innovation opportunities are seen in the use of ICT and smart/remote sensor technology, e.g. techniques for monitoring, analysing large amounts of data, apps, visualization techniques, and gaming, and projects are encouraged to integrate these into their proposals.

1) Resilient urban planning and management

In 2050 more than 70 per cent of the world population will be concentrated in cities, most of which will be located in low-lying deltas. These urban centres face enormous challenges and opportunities in their transition towards pro-poor sustainable and inclusive development, as a result of increased competition between land uses and infrastructural requirements (i.e. spatial planning). Strengthening resilience to extreme events and adaptation to the impacts of climate change (i.e. sea-level rise, ground subsidence, peaks in water discharge from hinterlands, and to periods of water shortages) urgently requires new solutions. Challenges include:

- Developing innovative governance approaches for managing floods and droughts in deltas and cities;
- Designing adaptive capacity in rapidly and often spontaneously developing deltas to ensure water safety;
- Combining spatial planning and sound disaster management by optimizing land use, institutions and mechanisms for more efficient, inclusive and sustainable urbanisation;
- Exploring eco-dynamic design options to provide opportunities for nature as part of urban development processes;
- Reducing urban footprints and developing performance evaluation systems to mitigate environmental impacts.

2) Optimising water allocation and use in the delta

Increasing population growth and economic activities, as well as impacts of climate change (i.e. high precipitation levels and droughts), cause deltaic areas to face growing problems due to scarcity and competing claims on resources. Growing demand and contamination puts pressure on fresh water supply, nutrients for food, as well as existing energy production sources. New solutions are needed in allocating water resources in relation to land-use and spatial planning. In this theme special attention goes out to projects that contribute to the realisation of a circular economy, developing sustainable technologies that help close cycles in ways that contribute to environmental or health safety and that are economically profitable. Challenges include:

- Developing innovative technologies for reusing water to ensure the availability of high quality drinking water, and water allocation for production purposes (e.g. industry, energy, food);
- Managing available fresh water through new concepts for discharge, treatment, collection and storage, and by countering salinisation;
- Developing integrated dynamic models from the entire local/regional water cycle to better understand the relation between water quantity and water quality;
- Renewing legislation in the area of water, soils and resources.

The focus of this theme is not on developing new food production technologies (more crop per drop). Water quality in relation to health and sanitation, may be studied as long as it concerns the broader issue of water allocation in the delta.

3) (Integrated) coastal zone management

Urbanisation processes in delta areas pose challenges and opportunities for the sustainable development of coastal zones, in particular for port areas, infrastructure, transport and fisheries. Transport related trade may boost economic development, but may also bring negative impacts for people (rising inequality, land use conflicts) and environment (i.e. pollution). Marine environments also offer opportunities for energy and food production for a delta. The vulnerability of marine ecosystems deserves special attention in this regard. Challenges relate to:

- Sustainable development of port areas and adaptive transport and logistic systems;
- Exploring commercial exploitation of natural resources in the marine environments of deltas (energy production, fisheries).

2.3 Geographical scope

The geographical scope of this call is defined by delta regions (and transboundary river basins) in the water partner countries of Dutch development cooperation as listed in the table below. Other countries can be included to foster learning from comparative analysis, but only if a partner country is involved as well.

Proposals may focus on the broader river basin, but always in relation to the delta region, that is where the river meets the sea or inland lake/reservoir. Within delta regions and river basins, proposals must take into account the effects of urbanisation processes - spatially concentrated population growth and economic activities - in relation to land use.

Partner delta countries and deltas	Focus transboundary river basins
<ul style="list-style-type: none"> - Bangladesh: incl. Ganges-Brahmaputra-Meghna - Benin: incl. Ouémé, Mono - Egypt: Nile - Ghana: incl. Volta - Indonesia: incl. Ciliwung - Kenya: incl. Tana - Mali: Niger - Mozambique: incl. Incomati, Zambezi - Vietnam: incl. Mekong - Myanmar: incl. Irrawaddi - Colombia: incl. Cauca Magdalena - South-Africa: incl. Incomati 	<ul style="list-style-type: none"> - Brahmaputra - Incomati - Mekong - Senegal* - Niger** - Zambezi <p>*May focus on Senegal, and include partners from this country in the consortium.</p> <p>**May focus on Nigeria, and include partners from this country in the consortium.</p>

3 Guidelines for applicants

3.1 Who can apply

A consortium applying for this call should consist of representatives from at least the following three partner institutes:

- a Dutch academic institute;³
- a Dutch company;
- an organisation based in a water partner country.⁴

Other partners are welcomed to join a consortium as co-applicants. Consortia are encouraged to include small innovative companies either as co-applicant or as sub-contractor to their project. The latter can be arranged via the budget line “research & innovation cost”, providing an opportunity to include special expertise on innovative processes and products within the project.

A senior researcher of the Dutch-based academic institute will act as the main applicant; other partners will act as co-applicants.

Within this programme, a researcher may associate his/her name with a maximum of two research proposals as an applicant or co-applicant.

Research proposals that were rejected in a previous NWO evaluation procedure cannot be resubmitted without a statement in the proposal. This also counts for proposals that are very similar. For the duration of the assessment procedure of the relevant calls, the submission of identical or very similar proposals (this is at NWO-WOTROs judgement) to the following calls is not permitted: WATER2015 (STW), The New Delta (NWO-ALW) or License to Operate (NWO-ALW).

3.2 What can be applied for

Subsidies amount to **600,000 euros**, for projects with a maximum duration of **five years**. **Co-funding of at least 10 per cent** (in cash or in kind or a combination of both) of the total project budget is required at project level (see also section 3.3).

From the total project budget, the following reimbursable cost categories are distinguished:

Personnel

- Temporary scientific and non-scientific staff in the Netherlands (including PhDs, student assistants, technicians, postdocs) employed by a Dutch academic institute, according to the rates agreed upon in the NWO-VSNU contract⁵;
- Researchers from Low and Middle Income Countries (LMICs)⁶ can be provided with a net monthly living allowance. The living allowance is expected to cover all personal costs, including housing, medical costs, insurances and travel to and from work. The regulations of the main applicant's institute should be guiding for determining the amount of the living allowances;

³ An NWO-recognised grant recipient or an international centre for scientific education based in the Netherlands (IHS, ISS, ITC, MSM, UNESCO-IHE).

⁴ This may also include Senegal or Nigeria (see section 2.3).

⁵ [NWO-VSNU contract](#)

⁶ [Least and Middle Income Countries as defined by the OECD DAC.](#)

- Bench fees of 5,000 euros for each PhD or post-doc researcher⁷;
- Replacement grants for permanent academic staff up to 50,000 euros for the total project duration.

Research and innovation

- Travel expenses & accommodation costs; .
- Durables & consumables (such as costs of consumer goods, small instruments and tools, investments in equipment, data storage);
- Knowledge products or expertise necessary for the conduct of the study, and not present among the consortium members (e.g. start-ups or small companies as sub-contractors delivering clear innovative input);
- Overhead of partner organisations in the water partner countries and other LMICs.⁸

Knowledge sharing and research uptake activities (mandatory)

- Proposal development grant for a workshop or other activities of maximum 15,000 euros;
- Knowledge sharing and research uptake, at least 3 per cent of the subsidy;
- Monitoring & Evaluation, at least 20,000 euros for the mid-term self-assessment, travel costs to the joint mid-term review workshop, and the final self-assessment workshop.

3.3 Matching of funding and contributions

Co-funding of at least 10 per cent of the total project budget is required at project level. This amount may be provided **in cash, in kind, or in combination of in cash and in kind. At least one private for profit / business partner⁹ should contribute to the co-funding**, other partners (excluding Dutch academic institutions) may also contribute.

Final applications need to provide a clear explanation how these co-funding contributions are embedded/integrated in the project, in the project description as well as in the budget specification. In kind co-funding contributions may include materials, licenses, knowledge or personnel time and should be accounted for after the project. Co-funding contributions need to be confirmed and specified in the form of support letters. NWO reserves the right to determine whether these co-funding letters provide sufficient detail to ensure that the co-funding contributions are indeed made to the project. In case of doubt with regards to eligibility, you are advised to contact NWO before sending the final application (see Annex 6.2 for further guidelines on co-funding and Chapter 5 for the NWO contact details).

3.4 Joint proposal development

Development and execution of the application must be a collaborative effort of the consortium members and relevant stakeholders. Therefore a grant of maximum 15,000 euros will be provided for the organisation of a workshop or other activities to involve all consortium members and (other) stakeholders in the development of the final application. A summary of the joint project elaboration workshop and/or activities,

⁷ This is a contribution to the personal costs in support of the research conducted by the PhD or post-doc researcher, for example tuition, courses, a computer or laptop, conference attendance, books, the publication of a thesis, etc.

⁸ Overhead costs may include office space, basic facilities, administrative and technical assistance, consumables and depreciation costs.

⁹ Water boards may be included in this category.

which shows how the project design has been influenced by stakeholders, must be part of the final application.

3.5 Knowledge sharing and research uptake

Final applications need to include a detailed knowledge sharing and research uptake plan which makes clear how knowledge is co-produced and shared, in an iterative process which includes stakeholders. In this plan activities should be presented how knowledge is made available and accessible to stakeholders, and how interim and final research outcomes will be communicated to various target audiences. Final applications will need to include a specified plan. As such, the knowledge sharing and research uptake plan should describe i. stakeholder engagement, ii. capacity development and iii. communication. Because research uptake is also related to iv. Monitoring and Evaluation, activities that can enhance the feedback and learning with stakeholders on the course of the project should also be taken into account.¹⁰

To facilitate the planning, monitoring and evaluation of research uptake, final applications need to include a Research Impact Pathway and a narrative description of the impact pathway in the form of a Theory of Change.¹¹ A research impact pathway describes how research outputs will lead to developmental outcomes and impact (see also annex 6.3). Final applications should include an impact pathway with indicators at output and outcome level. Indicators should be defined SMARTly and describe financial, institutional, economic, technological and social aspects of sustainability. A theory of change is a narrative description of the research impact pathway, which outlines the expected causalities from output to outcome through which the projects aims to achieve impact, contingencies that might occur, and the assumptions which underlie this pathway to change.

Both the Research Impact Pathway and the Theory of Change are expected to be informed by stakeholders as well as to enhance the feedback and learning with stakeholders on the progress of the project. Stakeholders should participate in the continuous process of reflection of the Research Impact Pathway during the project period.

In the stage between preliminary and final applications a training on this matter is organised for the consortium coordinators that are selected to submit final applications.

At programme level, UDW will organise joint knowledge sharing activities to foster a learning culture among the projects (for example through joint workshops or publications). Besides cooperation between UDW projects, synergies between UDW projects and other relevant initiatives outside of the programme are also sought. Projects are expected to participate in these activities and are asked to describe initial ideas for this in the final application.

At least 3 per cent of the subsidy should be spent on research and knowledge uptake activities.

¹⁰ As a reference on research uptake, please see the DFID [Research Uptake Guide](#).

¹¹ For more information about a Theory of Change, see <http://www.theoryofchange.org>.

3.6 Monitoring and Evaluation

The research impact and change pathways form the central elements to monitor and evaluate the progress and outcomes of the research for projects and at programme level.

Around two years after the start of the research a mid-term review at project and programme level will take place. The mid-term review consists of an internal self-assessment focussed on the progress of the project and a joint workshop with other projects focussed on joint learning and progress of the UDW programme. The self-assessment must result in a mid-term financial and progress report.

Prior to the submission of the final report and financial account, the projects are expected to organise a final evaluation workshop.

Projects are expected to budget at least 20,000 euros in total for the mid-term self-assessment workshop and the final evaluation workshop.

Progress may also be monitored by means of annual progress reports, based on which the Steering Committee may request the project team to redirect its updated activity plan before the continuation of the project can be approved.

NWO-WOTRO reserves the right to externally review projects financed within this UDW call for proposals.

3.7 Data Management

UDW is selected as a pilot for NWO's data management programme. Applicants are therefore requested to store relevant data¹² which are suitable for reuse, as much as possible. Timely measures need to be taken to enable this, which means that prior to the start of the project applicants must formulate which data could be relevant and how these data could be stored in a way that they are accessible for reuse.

A first draft of the data management plan must be included in the final application. Approval of a final plan within a maximum of four months after the date of awarding is mandatory for a project to start.¹³ The data management plan can be adjusted during the course of the research. Costs for data storage can be covered by the subsidy.

During the pilot, the data management section *will not be included in the decision of a committee as to whether or not a proposal should be awarded funding*. However, both the referees and the committee can give advice concerning the data management section. Applicants are requested to make use of the advice from the referees and the committee in the final version of the data management plan.

¹² NWO understands 'data' to be both collected, unprocessed data as well as analysed, generated data. Under this all forms are conceivable; digital and non-digital (for example samples, completed questionnaires, sound recordings, etc.). NWO only requests storage of reusable *relevant* data. NWO assumes, in principle, that within different disciplines there is a widely held view about which data are relevant to store for reuse.

¹³ NWO will approve of the plan as quickly as possible. Plans where the data will be deposited in a national or international repository will, by definition, be approved. Confidential, privacy-sensitive or competition-sensitive data might require special forms of storage or limited access. Solely storing the data on computers or external media (e.g. USB flash drive, CD, DVD or hard disks) is in general too risky and will therefore, in principle, not be approved by NWO. If necessary, NWO will call upon the help of data experts and other experts from relevant scientific disciplines for the assessment of the data management plan.

3.8 General regulations and Intellectual Property Rights (IPR)

With regard to ownership of results, the conditions as specified in the 'NWO-WOTRO regulations'¹⁴ apply. The NWO-WOTRO regulations describe that project partners together are required to conclude a Consortium Agreement. The first payment of an awarded grant will only be made after the agreement, signed by all Project Partners has been received and approved by NWO-WOTRO. A draft consortium agreement is required for the full proposal stage.

The Consortium Agreement – that must follow the format available on the NWO website¹⁵ - must take into account the NWO-WOTRO regulations (and additional specific Programme/Call conditions), including a description on how, where relevant, developing countries will be able to benefit from the (patented) results under market conditions that safeguard local affordability including but not restricted to sublicenses for humanitarian purposes. In addition, submitting a proposal implies that the consortium agrees to make available, at no cost, results and documents produced under the present grant to the Dutch government for the purpose of advancing the sustainable development in urbanising deltas, should the occasion arise.

With regard to accountability of the projects, the General Provisions of the NWO regulations on granting processes apply.¹⁶

The WOTRO and NWO regulations prescribe that both data and publications should be made accessible by **Open Access publication**. NWO believes that research results that have been obtained with public money must be freely accessible. This also applies to making research data available for follow-up research and applications. This will allow valuable knowledge to be utilised by researchers, companies and public institutions. NWO asks researchers to publish in a completely Open Access journal (Golden Road) or to deposit the article – or a version of a published article - in a centrally managed, findable database of the university or professional discipline (Green Road). Publication in hybrid open access journals, which provide open access only for those individual articles for which an open access publishing fee is paid, is also possible. Costs for open access publishing can be covered by the UDW subsidy applied for, or by applying to the NWO Incentive Fund Open Access publications (up to €5,000 per project). In case this fund cannot/no longer cover the costs, the overall UDW programme will make funds (up to €5,000 per project) available as long as this is applied for during the span of the project.¹⁷

3.9 Submitting an application

Final applications may be submitted until **3 August 2015, 14.00 CET**.

The entire assessment procedure takes about nine months and will be conducted in two stages. The submission of a preliminary application (deadline 16 March 2015) is a mandatory step in the application procedure.

An application can only be submitted to NWO via the electronic application system Iris. Applications not submitted via Iris will not be admitted to the selection procedure. A main applicant is obliged to submit his/her application via his/her own Iris account. If the main applicant does not have an Iris account yet, this should be created at least one day before the submission. Then any possible registration problems can still be

¹⁴ [NWO-WOTRO Regulations 07 May 2013](#).

¹⁵ [Format Consortium agreement](#).

¹⁶ [NWO regulations on granting](#).

¹⁷ More information on NWO's Open Access Policy and the NWO Incentive Fund open access can be found [here](#).

solved in time. If the main applicant already has an Iris account he/she does not need to create a new account to submit a new application.

A grant application contains two parts: a fact sheet and an application form.

- The fact sheet should be completed directly in NWO's electronic application system Iris;
- The application form can be found on the grant page for this programme on the NWO website. As soon as you have completed it you can add this form to the Iris fact sheet as a PDF file.

For technical questions, please contact the Iris helpdesk (see section 5.2).

4 Assessment procedure

4.1 Procedure

The first step in the assessment procedure is to determine the eligibility of the application. This is done using the conditions stated in Chapter 3 of this call for proposals.

First stage: preliminary application	
Launch Call / Application forms for preliminary application available via the website	December 2014
Deadline for the submission of preliminary applications	16 March 2015
Evaluation and selection of preliminary applications by the International Advisory Committee (IAC)	April 2015
Applicant informed of outcome selection procedure / Invitation sent to selected applicants to submit final application	Early May 2015
Second stage: final application	
Joint elaboration of consortia on final application (organisation of stakeholder workshop e.g.)	May – 3 August 2015
Joint UDW training on proposal development	June 2015
Deadline for the submission of final applications	3 August 2015
Peer review procedure	August - September 2015
Receipt of reviews, opportunity for response	Early October 2015
Evaluation applications by IAC	Late October 2015
Decision by SC on awarding / applicants notified	Early November 2015
Formal determination of budgets for awarded projects, formal award letter	December 2015

First stage

After the preliminary proposals are submitted, they will be assessed and ranked by an International Advisory Committee (IAC). Based on the recommendations of the IAC, the Steering Committee (SC) will invite a selected number of consortia to elaborate their preliminary applications into final applications. All applicants will be informed of the outcome of the preliminary selection procedure in writing. Depending on the number of applications submitted, it is expected that around ten to twelve consortia will be invited to submit a final application.

To enhance the collaboration with and input of consortium partners and other stakeholders from LMICs in the elaboration of the final application, it is compulsory to involve relevant stakeholders and conduct a joint problem analysis. This can be done through a collaborative multi-stakeholder workshop or other activities undertaken to this end (see section 3.4) For this a consortium will receive a maximum grant of 15,000 euros.

Second stage

The final applications are assessed by the IAC and are prioritised accordingly, based upon comments of independent reviewers and the response of the consortia to these. The SC takes a final decision on funding, based on the recommendations received from the IAC. The SC is in the position to deviate from the advice of the IAC, when this is deemed necessary to achieve a balance concerning geographical and/or thematic spread of the selected proposals. All second-stage applicants will be informed in writing about the outcome of the final selection procedure. Awarded projects should start no later than six months after the award letter is sent.

Appeals Procedure

If a consortium objects to a decision taken by the Steering Committee, it can lodge a complaint with the General Board of NWO through the NWO Appeals Committee. Any written appeal against a decision taken by the Steering Committee must be lodged within six weeks from the day on which the notice of this decision was sent.

4.2 Criteria

All applications will be assessed on formal eligibility criteria and subsequently for a fixed set of selection criteria that are in line with the aim and objectives of UDW.

Formal criteria for eligibility

- Timely application by using NWO's digital project- and application system Iris;
- Signed application form;
- Format, length of text, language;
- Composition of consortium;
- Budget conditions;
- Completed annexes, including letters of support outlining the availability and commitment of consortium members, including the valorised co-funding commitment (signed by heads of the organisations/departments);

Selection criteria

The following selection criteria are defined, which correspond to the objectives of this call for proposals. Each selection criteria carries equal weight in the ranking process. In the selection of full proposals, only proposals that are qualified as *excellent* or *very good* can be considered for funding.

I. Research & Knowledge generation:

- Originality of the project and potential to generate new theory knowledge and insights;
- Adequacy of the research approach including the robustness of the conceptual framework or experimental set-up, and the coherence of the hypotheses, research questions and methods;
- Competence of the consortium and potential for co-production of knowledge.

II. Innovation & Business development:

- Feasibility of research design and requested budget to support strategic innovation processes;
- Commitment and involvement of businesses;
- Relevance of the proposed output for businesses & potential for the commercial application of results.

III. Sustainable & inclusive development:

- Potential to contribute to the aim and focal areas of the call;
- Potential for sustainable development impact in the social, economic, and environmental domains;

- Inclusiveness of the project in providing perspectives for action to reduce poverty;
- Potential for uptake/application of results, and rootedness in local contexts.

4.3 Composition of the committees

The UDW Steering Committee (SC) consists of representatives of the funders and water sector community, with links to the Topsector Water.

The International Advisory Committee (IAC) is installed by the SC and is composed of international researchers and experts of the corporate, and development policy and practice sectors. Specific attention is paid to the involvement of expertise from the business sector. This expertise will also be included among the referees.

Proposals are evaluated by the IAC consisting of seven members. For full proposals, the composition of the IAC might be adapted and/or extended on an ad-hoc basis and tailored as much as possible to the applications.

The composition of the SC and the IAC is published on the UDW website (www.nwo.nl/udw).

5 Contact details

5.1 Questions regarding the content of this call

For specific questions about UDW and this call for proposals please contact:

Ms Kim de Vries (Academic Secretary)

E. udw@nwo.nl

T. +31 70 344 06 09

Ms Yvonne Rondeltap (general information and forms)

E. y.rondeltap@nwo.nl

T. +31 70 344 06 81

Postal address:

NWO-WOTRO

P.O. Box 93120

2509 AC The Hague

The Netherlands

Visiting address:

NWO-WOTRO

Laan van Nieuw Oost Indië 300

2593 CE The Hague

The Netherlands

Website: www.nwo.nl/udw

5.2 Technical questions about Iris

For technical questions about the use of Iris please contact the Iris helpdesk. Please read the Iris manual before consulting the helpdesk.

The Iris helpdesk is available from Monday to Friday from 11.00 to 17.00 hours on +31 900 696 4747. Unfortunately not all foreign phone companies allow you to phone to a 0900 number in the Netherlands. You can also send your question by e-mail to iris@nwo.nl.

6 Annexes

6.1 Instructions for filling out the application form

The application form must be completed in English. For some items on the form, a maximum number of words or pages is stated. Do not exceed this number and fill in the number of words. Your application may be disqualified if you exceed the maximum number of words or pages stated. Please use Arial font size 10.

The application needs to be submitted through the Iris system, which can be accessed on the NWO website. Please note that the electronic application must be submitted through the Iris account of the main applicant.

Explanatory notes to each question on the application form are provided below (the numbers refer to the questions on the application form). A number of details presented in this section should also be completed/copied in the application details for the Iris system. These are indicated on the fact sheet.

1. Project characteristics

1a. Title

The project title must state the country or countries where the research will be carried out. It is preferred that a shortened title or acronym is included.

1b. The focal area(s) of the proposal;

1c. Project duration (expressed in months);

1d. Main field(s) of research. Please fill out the main field(s) of research that corresponds to the subject of your research proposal. Please follow the link provided in the form for an overview of the NWO research fields. When applicable, other fields of research can be included.

2. Composition of the consortium & project staff

2a. Consortium members

- Coordinator of the consortium / main applicant
- Consortium members / co-applicants

The three different partners as specified under Section 3.1 should at least be indicated, although additional partners can be added to the consortium. Copy and paste the tables in order to add other consortium members. A maximum of 2 consortium partners per institute is allowed. Please provide all details requested. Please note that if an organisation (for instance a start-up company) is to deliver specific expertise as subcontracting party under research and innovation costs, it cannot act as a consortium member.

- CVs (max 1 A4) of consortium members should be annexed.

2b. Project staff

Provide a list of the identified and yet unidentified project staff members to be hired for carrying out the project. In addition, (non-enumerated) advisors and supervisors should be specified. You may copy the tables.

- CVs (max 1 A4) of project staff may be annexed.

3. Consortium and track record

3a. 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. If applicable, describe the consortium partners' past experience with joint activities. This section should not exceed 400 words.

3b. Consortium: track record

For each consortium member provide a list of a maximum of five key publications / reference materials. Also state any relevant published patents. Design and construction disciplines can, if so wished, include designs realised (selected works).

4. Summary of the project proposal

The summary should describe briefly, in no more than 250 words, the opportunity or problem addressed, the main objectives, knowledge gaps and approaches as well as the stakeholders involved. Summaries should be clear to potential reviewers and non-specialists. When a proposal is granted, this section may be used for publication purposes; the confidentiality of the data will be taken into account at all times.

5. Reporting on proposal development workshop

5a. Summary

Include a summary of the objectives, results and conclusions of the workshop organised to elaborate the preliminary application into a final application (maximum 500 words). Focus on the main insights that have shaped the proposal.

5b. Participants

Provide a list of participating institutes or organisations by filling in the table provided in the form. Specify the future means of engagement of these stakeholders. The table may not exceed the maximum of one page.

- Additional information about the proposal development workshop may be annexed (max 2 A4)

6. Description of the project

Please consult the assessment criteria against which the proposal will be assessed (Section 4.2). Note that co-production is considered essential. The description of the project should include the following aspects and should not exceed 3,000 words (excluding references):

6a. Background and innovation opportunity

Please provide an analysis and contextualisation of the opportunity or problem addressed (linked to the delta(s) under research).

6b. Research objective(s)

Describe the project's objective(s) in terms of its contribution to the main aim & the three objectives of UDW.

6c. Research outline

Give a detailed description of the knowledge gaps addressed, conceptual framework, experimental design, description of the trans-disciplinary and integrative approach, hypotheses, research questions and methods and major results expected (please include an analysis of the type of data that will be collected, and the challenges or risks that could be faced in this regard);

6d. Planning & division of tasks

Give a specified outline of the proposed research planning over the years. Include all activities and subprojects to be carried out within the project (including research uptake activities) and note which staff members will carry out the activities.

6e References

Provide a list of references (max. 2 A4)

7. Uptake of IAC comments

Please explain how the comments provided by the International Advisory Committee on the preliminary proposal have been taken into account. This section should not exceed the maximum of 500 words.

8. Research Impact Pathway & Theory of Change

8a. Research Impact Pathway

Please present schematically how the research is believed to achieve impact, by integrating scientific and development objectives (max. 1 A4). In this final application, the diagram is expected to be provided in a conceptual and concise manner with

SMART indicators for output and outcome levels. Specify the project's objective(s), the main output(s) and outcome(s) and the impact of the project in terms of its contribution to UDW. For more information, please see Annex 6.3.

8b. Theory of Change

Please describe in narrative the *relationship, logical flow and/or causalities and contingencies* between planned activities, expected results (output), desired changes (outcome) and main objective (contribution to impact) presented in the impact pathway. The *context* and the *assumptions* underlying the impact pathway should be part of the description. Max. 1 A4.

9. Knowledge sharing and research uptake

This section should describe the main activities and time line of the project for knowledge sharing and research uptake. The section should not exceed 1000 words.

9a. Stakeholder engagement

Include an initial mapping of relevant stakeholders and their role in the project.

9b. Capacity development

Describe the activities incorporated in the project with the purpose of capacity development.

9c. Communication

Please describe the planned communication activities, specifying target groups, specific objectives, communication issues and products as well as means of communication.

9d. Shared knowledge activities

Please describe initial ideas for collaboration and knowledge sharing with other UDW projects and other relevant initiatives outside of the programme.

10. Draft Data Management plan

Please consult section 3.7 before filling in the data management plan.

1. Description dataset

1.1 Describe the data and documents that will be archived after the research and will be made available for reuse. State whether these data lie at the basis of publications. With regard to possible documentation that will be archived, please note that this is important for making the use of the data possible, such as methodology (codebooks, metadata) or persons involved (study subjects, researchers).

1.2 Include details on the type of data that will be stored: digital/non-digital, raw/processed data, software, curricula material or combinations of these.

1.3. Define the groups/institutions for whom the data may be useful.

2. Storage of data

During the research

2.1 State where you plan to store the data during the research. In the case of digital data, NWO prefers data to be stored in the central storage centre of your institution, for example the ICT department and/or the university library.

2.2 It is important that there is storage capacity, and in the case of digital data, also a backup of your data. An automatic backup by the ICT Department is safer than a manual backup. Storage of data on laptops, hard disks or external media is in general risky and will therefore, in principle, not be accepted by NWO. If external services are used then you must ensure that no conflicts of interest with the policy of research partners or co-financiers and with the policy of your department or institute, for example about the security of sensitive data. Take into account the security of data; this can be physical measures (for example, a burglar alarm and a safe for the storage of data) or logical access controls (such as passwords, and coach, passes and biometric characteristics).

2.3 Describe which facilities are already present for data and which are still needed. In the case of ICT think about data storage capacity, bandwidth for data transport and calculation power for data processing. The ICT or research support service at your institution can help you to draw up this description.

2.4 Make an estimate of the costs. Important factors that determine the costs are:

- a. the type of data;
- b. the capacity needed for storage and backup;

- c. the amount of manual work for the allocating of metadata and the drawing up of other documentation such as code books and queries used in the statistical package;
- d. the extent to which the data needs to be made secure;
- e. the hiring in of external data management and other expertise.

2.5 Make an estimate of the final volume of the data that will be archived.

After the research

The data should preferably be stored for the long-term in a national or international data repository. If this is not possible then the data should be stored by the institutional repository. Contact the intended data repository or archive in good time about the available file formats and necessary metadata, for example.

2.6 State the repository where the data will be stored. Please note that international guidelines are available for the sustainable storage of data. Of these the international Data Seal of Approval has the simplest set of criteria. State at which existing repository the data will be stored and what type this is (for example an institutional repository or a standard repository in your discipline). Trusted Digital Repositories with a quality mark include repositories with a Data Seal of Approval, DIN-31644-, ISO-16363- or WDS/ICSU certification. An overview of existing repositories with Data Seal of Approval can be found in this [list of repositories](#).

2.7 Describe how long you intend to store data. According to the Netherlands Code of Conduct for Scientific Practice, raw data must be stored for a period of at least 5 years. A longer period is certainly recommended.

2.8 Describe how long you intend to keep the data and any associated software. Please make use of sustainable software to make reuse possible. When doing this consider the following points: 1. Work with preferred file formats that are not limited to specific software, e.g. CSV for spreadsheets. 2. Carefully document which version of which software the data have been made in; just as the exact settings of equipment in some disciplines. 3. Use of software standardly used within the discipline. 4. Document the exact syntax queries in the case of statistics software, for example.

2.9 Describe which facilities (ICT or another type such as refrigerators or legal expertise) are already present for your data and which are still needed. In the case of ICT think about data storage capacity, bandwidth for data transport and calculation power for data processing. The ICT or research support service at your institution can help you to draw up this description.

2.10 Give an estimation of the costs (see also 2.4)

2.11 To allow stakeholders in developing countries to benefit from the research, it is important that they have access to data generated within research project. Describe which measures can be taken to ensure that stakeholders in developing countries can access your project's data.

2.12 Please describe how you will consider the ethical aspects of the data collection and management. If relevant to your data, please explain how you intend to safeguard privacy in the storage and (future) use of the data generated.

3. Standards and metadata

To make data findable and readable in the future and to be able to interpret it the data collection must be provided with descriptive information in the form of metadata. The most widely used standards can be compared with each other, such as the standardized metadata of the Dublin Core standard, SNOMED CT and the Data Documentation Initiative.

4. Making data available

4.1 Please state whether and if so when data will be made available after the end of the project.

4.2 State whether there are embargoes, licenses, commercial objectives or other conditions made on the reuse of the data.

4.3 Mention any conditions that will apply to reuse. Please note that for data to be shared with third parties it is important that the necessary software or other tools needed are available for reuse. In addition it is advisable to determine which conditions a research group that wants to obtain access to your data must satisfy. Examples of this

are agreements that will be made concerning methodology, publications, the access period, availability of data, the costs (handling fee), copyright aspects, etc.

11. Budget estimates

Please consult Section 3.2, 3.3. and 6.2 of the call before completing this section

11a. Total budget, the sum of b and c.

11b. Funds requested from UDW

Please present the total amount of subsidy applied for (maximum 600,000 euros).

11c. Amount and source of co-funding expected

Please present the expected co-funding contributions. Co-funding should contribute at least 10 % of the total project budget (as presented under 10a).

11d. Budget specification

Please provide a detailed specification of the budget. Be as specific as possible, general terms such as 'durables' 'consumables' or 'overhead', should be avoided. A clear budget will help the IAC to better understand your research project.

Please present estimates for:

- Personnel costs, including the names/roles, number of person years, and appointments on a fulltime basis;
- Research & innovation cost, including costs of materials (durables and consumables) and other costs (e.g. travel, overheads in LMICs);
Please note that the budget line 'Knowledge products or expertise' is specifically meant for subcontracting to third parties.
- Specific mandatory activities, including the proposal development grant, costs of research and knowledge uptake, M&E activities.

Specify co-funding contributions per budget line, and distinguish between in-kind and in cash contributions

Annexes

Please attach:

1. CVs of the consortium members. CVs of other project staff may also be annexed. (max. 1 A4 per CV)
2. Letters of support of co-funding partners, including a specified description financial contribution(s) (max 2 A4 each).
3. Draft Consortium Agreement.
4. Proposal Development Workshop information (optional, max 2 A4).

Signatures

The application must be signed by all members of the consortium. Faxed, electronic or scanned signatures will be accepted.

6.2 Co-funding guidelines

Co-funders are expected to be partners in the co-design of the project and to utilize the research results. Such contributions have to be made clear in the research proposal as well as in the support letters. No conditions may be imposed on the co-funding. Nor may the co-funding be contingent upon reaching a certain stage in the research plan (e.g. go/no-go moment).

Improper mixing of funding sources is not permitted: co-funding may in no instance originate directly or indirectly from NWO, KNAW or from any other research institute that is eligible to apply to NWO. Co-funding may neither originate from other Dutch governmental institutions.

The basic principle is that UDW funds a maximum of 90% of the total project costs and that co-financing amounts to at least 10% of the total project costs. The co-financing may be contributed in cash, in kind or as a combination of both. UDW contribution

amounts to a maximum of € 600,000. Co-funding may not exceed the amount of subsidy applied for. Therefore, the total costs of a project, including co-financing, cannot exceed 1.200,000 euro. With a total maximum subsidy of 600,000 euros, the minimum in co-funding is thus 66,667 euros, which amounts to a total project budget of: 666,667 euros.

The co-funding to be provided by partners must be confirmed in a letter of support, written in English. This letter should contain information on i. the specific interest of the institution in the project ii. the role and contribution of the organisation to the project, and iii. the explicit confirmation of the pledged financial or capitalised material or personnel contribution (for personnel costs include an hour rate). The amounts presented in letters of support should correspond to the amounts put forward in the budget. Letters of support should be addressed to the project leader, not to NWO. After the research proposal has been approved, the partners will be asked for confirmation of the co-funding ('confirmation of commitment by third parties') and, in relevant cases, further arrangements must be set out in an agreement.

In-cash contributions:

In cash contributions of more than 5000 euros are to be channelled via NWO for reasons of transparency. After a project has been approved, an invoice will be sent to users who have pledged a financial contribution. Once the funds have been received, they will be allocated to the project. NWO will invoice the in cash co-funding partner(s) in regular tranches after which the funds are allocated to the project coordinator. The in-cash co-funding becomes part of the total project budget, and no other conditions apply to this part of the budget other than what is mentioned in this call text.

In-kind contributions:

Personnel input and material contributions may be accepted as co-funding on the condition that they are capitalised and that they form an integral part of the project. This should be made clear in the description and planning/phasing of the research.

For the salary costs an hourly wage is assumed calculated on the basis of the annual salary for a full-time position according to the wages column for the income tax of the payroll, incremented by the statutory allowances and/or allowances owed on the basis of an individual or collective labour agreement for social security contributions, and for 1650 productive hours per year. Over and above this amount an allowance can be budgeted for other general costs, which at most may be 50% of the costs stated above. The hourly rate arising from this to be attributed to the project, including the 50% allowance for the general costs, may be no more than 100 euros.

Material resources pledged must be presented at cost; commercial rates will not be accepted. For pledges of equipment, take previous depreciation and intensity of use into account. Pledges in the form of supplies of services are possible only if the service can be itemised as an identifiable new endeavour. The service should not already be available at the research institute or institutes realising the research.

Please note that acceptance of in-kind co-funding is dependent on NWO's approval. If deemed necessary, further negotiations will take place to decide whether a specific value can be determined for the supply of services.

The following are not permitted as in-kind contributions:

- Costs related to overhead;
- Costs relating to the exploitation of the research results.

6.3 Guidelines for filling out a research impact pathway

Outputs: most immediate results of a research project, falling under the direct span of control of the project.

For instance:

- New knowledge and insights gained, applied, and shared in policies, business practices, NGO programmes.
- Innovations made readily available to markets, governments and society, which enhance the future.

Indicators may include:

- Publications, data-sets, models, and patenting request
- Policy briefs, lobby and advocacy materials, and other communication products and services
- Pilots/proof of concept
- Workshops/trainings
- Bankable proposals

Outcomes: external use, adoption or influence of a project's outputs by various stakeholders and the effects thereof. (The uptake by early adopters may be part of the project. The uptake by next and final users that results in adopter-level changes needed to achieve the intended impact, fall outside the span of control of the research.)

For instance:

- Uptake of new processes, tools or technologies.
- New institutional arrangements, rules and regulations.

Indicators may include:

- Figures and numbers on (early) adopters.
- Citations in other publications, reports, etc.
- White papers, proceedings of Parliaments, publication of new laws and rules and regulations.

Impact: changes in Financial, Institutional, Environmental Technical and Social conditions that a project is working toward.

Should be in line with the aim of the UDW programme (global water safety, water and food security and pro-poor sustainable economic and urban development in river deltas worldwide).



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