

# Water for as Resilient Cities Leverage Asia

## Call for Action

“Water as Leverage for Resilient Cities Asia”

Opening:	22 April 2018
Closing date:	18 June 2018
Call for Action budget:	€ 1,200,000
Budget per team:	€ 200,000



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# 1 Challenge

The climate crisis is a water crisis. Nine out of every ten natural disasters are water-related. Between 1995 and 2015, wind and water caused 1.700 billion dollars' worth of damage worldwide, according to UN estimates. Without water, there can be no energy and no food. Periods of too much water and increasing "extremes" alternate with periods of far too little water; periods of drought align with flows of refugees and conflicts. While we are depleting our natural water supplies at a ruinous rate, rising seas levels are jeopardizing our cities and deltas. If there is no water women and children have to walk to the wells, but if there is water these women lead their communities towards more prosperity while their children go to school and progress even further.

The choice between prevention and repair is false. Both are essential. We need to start at the source: to reduce greenhouse gas emissions, and make efficient and careful use of our planet and all its resources. At the same time, we need to prepare boldly, comprehensively and inclusively for tomorrow's extremes.

Nowhere on earth are water-related disasters as widespread and costly, both in terms of human life and loss of (social) wealth, as in South and South East Asia. Asian cities account for 83 percent of the population affected by rising sea levels. Only a better understanding of the complex risks will allow us to eliminate those risks from the world effectively. Recognizing that water can also be used as leverage helps us identify opportunities for real change, for transformative projects everywhere and on every scale.

Water is therefore the leverage for impactful and catalytic change, yet according to the Netherlands Special Envoy for International Water Affairs, Henk Ovink, we lack an inclusive, holistic and innovative approach in his words: "it takes millions to invest billions wisely". Water as Leverage will provide this innovative, inclusive and comprehensive approach and this process of engagement for resilient and sustainable innovations and help generate the necessary investments for the bankable, innovative and integral urban water projects that are developed and supported locally. These projects will provide real climate resilience in cities facing major water challenges as a result of climate change. The ambition of Water as Leverage is to become a programme that generates multiple bankable climate resilience projects globally following this first Call for Action which serves as a pilot.

The Netherlands Ministry of Foreign Affairs, the Netherlands Special Envoy for International Water Affairs and the Netherlands Enterprise Agency partner with the cities of Chennai, Khulna and Semarang, the Asian Infrastructure Investment Bank (AIIB), the Dutch Development Bank (FMO), the Global Centre of Excellence on Climate Adaptation, Partners for Resilience and 100 Resilient Cities. Together they challenge interdisciplinary teams to build local coalitions and partner to develop bankable, innovative and comprehensive urban water proposals for the cities of Chennai (India), Khulna (Bangladesh) and Semarang (Indonesia) to address their urgent water and climate adaptation needs. The Water as Leverage programme is endorsed by the UN/World Bank High Level Panel on Water.



## 2 Objective

This Call for Action focuses on the pre-project preparation phase (see below). The premise of this collaborative pre-project preparation Call is to include all stakeholders from the beginning: local governments, NGOs and businesses, international and local experts in the teams and partners with funding capacity for the proposals to be developed (i.e. development banks, public and private partners).

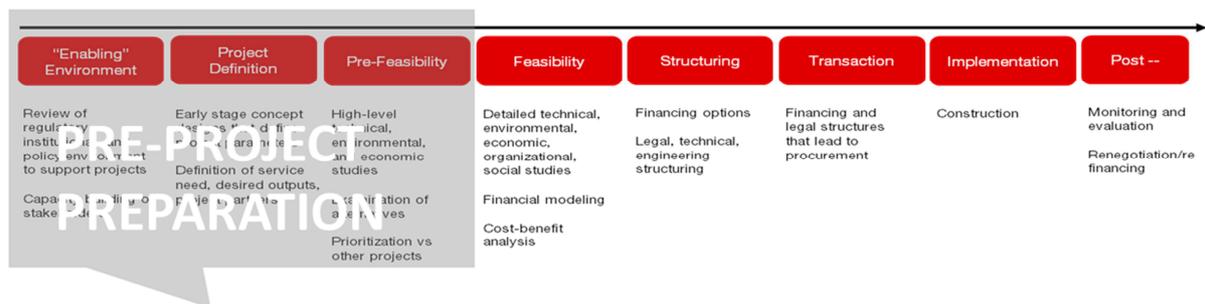


Figure 1: Typical Project Development Timeline

The objective of this Call for Action is to develop bankable, innovative and comprehensive Proposals for Urban Water Projects for the cities of Chennai (India), Khulna (Bangladesh) and Semarang (Indonesia) to address the urgent water and climate adaptation needs. The proposals should have local support, a focus on physical infrastructure and be developed with local partners.

The goal is to connect the best proposals for bankable implementable projects to funding opportunities and (co-)financiers, such as AIIB and FMO. The proposals must therefore be developed with a feasibility component and a preliminary costs benefits analysis to ensure the necessary evaluation for bankability. The role of the cities and the Netherlands Enterprise Agency (RVO.nl), in close cooperation with AIIB and FMO, is crucial in moving the results of the call further towards implementation. AIIB and FMO will help identify bankable projects, support their development and open its capacity for implementation.

The following elements should be taken into account and are described in more detail in the document 'Setting the Scene', downloadable from [www.waterasleverage.org](http://www.waterasleverage.org):

### 1) Proposals will be embedded in a complex planning context

Each city has different vulnerabilities in relation to water-related risks and their capacity to deal with these risks. The interaction with local stakeholders in the design workshops and through the Knowledge Support Track will strengthen local capacity in order to help move these projects forward. In this way, Water as Leverage aims to strengthen the local institutional environment to enable the results of the Call to be implemented within the complexity of the local planning context.

### 2) Comprehensive proposals that endorse strategies combining water and urban challenges

The outcome of Water as Leverage's prospective research is described in the background document 'Setting the Scene'. This document describes urban planning strategies to tackle water issues in combination with urban dynamics, as well as a series of questions that touch upon city-specific issues. They are described as potential pathways that should help the applicants transform their proposals into relevant project plans.



**3) Water as Leverage asks for processes that incorporate local expertise into concrete solutions with global resonance**

The aim of the Call for Action is that the winning multidisciplinary teams will propose transformative solutions with the potential of being scaled up and replicated across Asia and the world. Furthermore, starting in the cities of Chennai, Khulna and Semarang, the aim is to create an adaptable working methodology that will become a foundation for future coalitions with other cities where similar challenges are at stake and where local solutions can define global strategies and vice versa. The regional workshops, described in paragraph 6.2 will be used for this purpose.



### 3 Governance of the Programme

- **Commissioner:** This Call for Action is commissioned by The Netherlands Ministry of Foreign Affairs and the Netherlands Special Envoy for International Water Affairs, Henk Ovink.
- **Contracting Authority:** The Netherlands Enterprise Agency (RVO.nl) serves as the Contracting Authority and executing agency of the programme including this Call for Action.
- **Ultimate Beneficiaries:** The Netherlands Enterprise Agency (RVO.nl) is partnering with the cities of Chennai, Khulna and Semarang. These cities are the ultimate beneficiaries of the results of the Call.
- **Applicants Call for Action:** Internationally operating multi-disciplinary teams, consisting of international and local experts and/or organisations, responding to the Call for Action are the applicants.
- **Advisory Board Water as Leverage:** After the closing of the call, between phase 1 and 2, and at the end of phase 2, the Advisory Board of Water as Leverage is responsible for advising the contracting agency on
  1. The selection of multidisciplinary teams;
  2. The selection of conceptual designs to be further developed in the second phase;
  3. The project designs and proposals to be presented to the ultimate beneficiaries and potential funders.

The Advisory Board is chaired by the Netherlands Special Envoy for International Water Affairs. The Members are:

1. Representatives from the three cities (Chennai, Khulna and Semarang),
2. Representative from 100 Resilient Cities,
3. Representative from the Global Centre of Excellence on Climate Adaptation
4. Representative from the International Architecture Biennale Rotterdam

The Observers to the Advisory Board are

1. The Asian Infrastructure Investment Bank
2. FMO, the Dutch Development Bank

These Observers will also share their knowledge and expertise during the workshop(s) on the Requirements for a Bankable Project.



## 4 Procedure and Description of the future Contract

The Netherlands Enterprise Agency (RVO.nl) will organise the Call for Action in the form of an open competition. Please refer to the Water as Leverage Guidelines (WaL Guidelines) for more details about the procedure. RVO.nl intends to award a contract to six (6) teams, two (2) teams per city following a selection procedure during which the submitted Bids will be assessed according to the award criteria.

As their end result, winning teams are expected to deliver up to three bankable proposals for innovative, integral and locally supported urban water projects with a focus on physical infrastructure.

The submitted proposals will be assessed and the teams behind the two highest ranked bids per City that score above the quality threshold will be awarded a contract for a pre-defined price. The competition consists of two phases:

- **Phase 1:** Research and Analysis for the Development of Conceptual Designs
- **Phase 2:** Development of Proposals for Urban Water Projects

After each phase a selection and assessment will take place. Only the best and most viable deliverables will be developed further.

The following standards/guidelines should be taken into account during the process and with regard to the deliverables:

- IFC's Environmental and Social Performance standards (responsibilities for managing environmental and social risks)
- OECD guidelines for Multinational enterprises: code of responsible business conduct.
- Principles on Valuing Water of the UN/World Bank High Level Panel on Water to sustainably, efficiently and inclusively allocate and manage water resources, and to deliver and price water services accordingly.

### 4.1 Contents and deliverables of Phase 1 and Phase 2 in this Call

#### ***Phase 1: Research and Analysis for the Development of Conceptual Designs***

In this phase the teams develop **three (3) to five (5) Conceptual Designs** for potential solutions to the challenges, based on new and/or existing research and analysis. Conceptual Designs could entail, but are not limited to, a combination of drawings, calculations, reflection on policy/information and a steering document for the topics to be discussed at the first local Design Workshop.

At the end of phase 1, the **deliverables** for each team should include but are not limited to: an accessible midterm review digital report and a presentation that includes at least the three to five Conceptual Designs for potential solutions to (a selection of) the challenges identified in one of the three cities. The potential solutions should be projected on a site within the city of choice. The deliverables should address bankability and the team's vision on the way these Conceptual Designs could be developed into Proposals for Urban Water Projects.

Based on the results of the midterm review for each Conceptual Design a go/no-go decision will be made by the Contracting Authority to decide whether and which conceptual designs are suitable for further development in Phase 2. It is up to the teams to decide which of these selected Conceptual Designs (with a 'go' from the Contracting Authority) will be developed further, with a



minimum of one (1) and preferably up to three (3). If a team ends up with not having a Conceptual Design with a 'go' at the end of phase 1, the Contract will end.

### ***Phase 2: Development of Proposals for Urban Water Projects***

In this phase up to three Conceptual Designs from Phase 1 are transformed into **Proposals for Urban Water Project(s)** with a focus on physical infrastructure. These should serve as solutions to the challenges in the cities.

At the end of Phase 2, the **deliverables** for each team should include but are not limited to, an accessible digital report and presentation that includes at least:

- Project designs up to three site-specific bankable design solutions;
- A feasibility component and a preliminary costs benefits analysis (to ensure the necessary evaluation for bankability);
- Implementation strategies for the Proposal for Urban Water Project(s) that identify partners, timing and funding potential. This includes a reflection on the fit of the Proposal within the processes, procedures and conditions of potential funders, specifically AIIB and FMO.

The combination of Phase 1, "Research and Analysis for the Development of Conceptual Designs" and Phase 2, "Development of Proposals for Urban Water Projects" operationalises the pre-project preparation phase and prepares the uptake of these Proposals into the feasibility phase, see Figure 1. The feasibility phase itself is not part of the Contract within the Water as Leverage programme. The feasibility phase entails for example detailed technical and financial feasibility, ESIA and other assessments to refine the Proposals for Urban Water Projects into implementable projects.

To smoothen this transition, the teams behind the winning proposals of phase 2 will be introduced by the Contracting Authority to the potential funder(s) (amongst others AIIB and FMO) to present their winning proposals. This event will be attended by RVO.nl, the Special Envoy for International Water Affairs, the relevant partnering city and if necessary other partners of the Water as Leverage Programme.

## **4.2 Applicants**

Applicants responding to the Call for Action should be internationally operating multi-disciplinary teams of water, climate, urban, financial and other experts. The teams consist of international and local experts and/or organisations. Experts and organisations can be private, non-profit, not-for-profit or educational. Applicants should maintain a clear focus on youth and gender balance while compiling their teams and proposals. RVO.nl will award a contract to the main contractor of the winning team.

## **4.3 Budget and future Contract**

The predefined contract price (for phase 1 and phase 2 combined) is € 200,000.00 per selected team, which should include all team's costs (time commitment of staff members, travel & DSA costs etc.). The contract price is exclusive of Dutch VAT, inclusive of local VAT. If any duties, custom fees, taxes or other charges are applicable then these should be included in the predefined contract price.

No budget will be transferred from one City within the Call to another, unless there are no bids that meet the quality threshold, described in the document 'WaL guidelines' for a given City. In such an event, the Contracting Authority reserves the right to reallocate the remaining budget to other Cities (thereby allowing more contracts to be awarded for the remaining Cities).



For Phase 1 a pre-defined contract price of € 75,000.00 (lump sum) has been set. Those teams that receive a go for Phase 2 will receive an additional sum of € 125,000.00 (lump sum).

In order to meet the end results aimed for by the Water as Leverage programme, applicants are expected to provide an in-kind investment as referred to in the WaL guidelines. As part of the programme, selected teams are supported through a Knowledge Support Track (please refer to chapter 6), with Local Design Workshops and Regional Workshops.

The Intellectual Property Rights generated by a contractor during the Call within the Water as Leverage contract will be assigned to that Contractor, with an appropriate right of use for the Contracting Authority. A call-back provision will ensure that IPRs that are not exploited within 4 years after the contract end date will return to the Contracting Authority. (please refer to the WaL Contract)

#### **4.4 Award criteria**

Applicants must submit a short Bid per team for the city of choice (please refer to WaL proposal format). It is possible to apply for more than one city and/or for more than one proposal per city. The Bid needs to address the following three topics, with the underlying award criteria. The topics and underlying award criteria are:

1. *Understanding of the challenge (20 points)*
  - The extent of how well the applicant shows a comprehensive understanding of the urgent urban, water and climate challenges and the needs in the city of his choice.
  - The extent of how well the applicant shows a clear understanding of the complex planning context in which the final end result(s) of the Call for Action should be embedded.
2. *Quality of the approach and first ideas to address the city challenge (40 points)*
  - The extent to which the proposed idea addresses the urgent urban, water and climate adaptation needs of the city.
  - The extent to which this idea could address urban, water and climate change challenges in other cities (opportunity to replicate and scale up the proposals).
  - The extent to which the Bid shows a clear approach to reach the deliverables as described in this document (see paragraph 4.1), within the timeframe and budget of the Contract;
  - The extent to which the Bid shows a clear understanding of potential risks and how to cope with these risks through an assessment and risk management strategy;
  - The extent to which the approach shows youth and gender balance in the local coalitions and in the way to build local capacity;
  - Experience with similar relevant projects and quality of past work.
3. *Quality of the team and project management (40)*
  - The quality and composition of the team, taking youth and gender balance into account;
  - The extent to which the expertise of the team and the time dedicated by individual team members / organisations match with the chosen approach;
  - The extent to which the team composition explicitly shows a balance between local and international expertise;
  - The extent to which the Bid shows a clear project management structure.



## 5 Ultimate beneficiaries of the Call for Action

The ultimate beneficiaries of the Call for Action are the cities of Chennai, Khulna and Semarang. Their challenges are described in brief below. This information is derived from the 'Setting the Scene' document with helpful information about the three designated cities.

### ▪ **Chennai in India: a Lake Metropolis by the Sea**

Chennai is the second largest port in India and is located on the south eastern coast of the country. In addition to being an important trade centre, the city is also known for its healthcare, automotive, software export and chemical industries. Today, industrial corridors are being built to better connect these production zones to India's interior by road transport. For this reason, Chennai attracts many workers and is the fourth most populated metropolitan area of India. According to forecasts, these demographic figures will increase by another 30% by 2030.

Although water and culture are historically strongly intertwined- as can be seen in the many temple ponds and water tanks that function as retention basins- rapid urbanization and overexploitation of these scattered wetlands and other marshes lead to the expansion of impenetrable soil and the failure of the drainage system. The channels of Chennai are increasingly filled with several tons of waste. In addition to clogging up the drainage systems, this waste also makes the water unsuitable for consumption, irrigation or for bathing. Industrial pollution and sewage water discharged into the rivers also increases the risk of spreading diseases.

Today, the city only consists of 15% wetlands, whereas 30 years ago wetlands still accounted for 80% of the urban area. In addition, about 40% of the coast of Chennai is currently threatened by erosion caused by rising sea levels, changing sea currents and hard sea defences such as dikes and dams.

### ▪ **Khulna in Bangladesh: a Pond City amidst the Delta**

Khulna is part of the largest delta in the world: the Ganges-Brahmaputra Delta. The largest part of this delta consists of a labyrinth of canals, swamps, lakes and flood plains and is mainly composed of alluvial soils, making it a very fertile region. Khulna is also the gateway to the Sundarbans: the world's largest mangrove forest and the home of the royal Bengal tiger.

The urban structure of the city is dominated by dozens of ponds. Originally these were used as a drinking water supply, for washing and bathing and for aquaculture. Like Khulna's canals and rivers, many of these ponds have been drained and used for real estate development. In addition to immediate water problems caused by poor water drainage, high water stress, seasonal flooding of rivers and rising sea levels, only 64% of the population of Khulna has direct access to potable water. By consequence, many depend on public tube pumps. The increase in salinity in the Khulna area represents a serious new challenge for the sustainable development of the city: harvest yields are falling and food prices are rising threatening food security and the water supply, and climate migration is a growing phenomenon.

### ▪ **Semarang in Indonesia: a Sinking City between Coast and Hills**

Semarang is a port city on the north coast of the Indonesian island of Java that is stretched between the sea and the hills. Because of its central position, it is of strategic importance for domestic trade and transit. However, Semarang has a strongly fluctuating coastline, created by natural sedimentation processes and man-made sea-harvested areas. The coast was formerly protected by long stretches of mangrove forest. Urbanization and aquafarming are the main



causes of the mangrove forest's decline, which in turn has led to coastal erosion, flooding and salinization.

Currently, programs have been started to restore these mangrove forests, but these initiatives cannot stop the larger subsidence problem. Semarang is a sinking city. Each year the soil drops 8 cm in the most affected areas. By way of comparison: the rise in sea levels as a result of climate change is only 2 mm per year.

The main cause of this subsidence may be the pumping of drinking water from the deep aquifers. Regardless, the problem is acute and the land is expected to subside even further if the causes are not addressed. In the future, parts of the city will therefore be below sea level, which only increases the vulnerability to flooding during high tide. This is also deeply intertwined with the recent rapid urbanization that has been taking place especially in the upper hilly areas. The urbanisation of the previously green space on the hills also leads to more flash floods and a decline in the water supply.

The coastal defence master plan that is currently under construction consists of a large dike structure that will serve as an important highway connection to East and West Java, but the weakest links in this approach still have to be investigated.



## 6 Knowledge Support Track

### 6.1 Local Design Workshops

Substituting the Call, to support the teams and cities, RVO.nl will organise local design workshops in each of the three cities in cooperation with Partners for Resilience (PFR). RVO.nl, PFR and 100 Resilient Cities will work with each city to bring together leaders of local communities, local experts and local government representative(s). Partners of the Water as Leverage Programme will participate as well.

Partners for Resilience is an alliance of 50 civil society organisations, active at grassroots, national, regional and global level, who jointly advocate for increased investments in disaster preparedness and disaster prevention. PFR has been asked to share knowledge and information on the local 'resilience' context to the teams, on subjects such as urban flooding, informal settlements, water management, subsidence, land rights, laws & regulations, inclusion, gender etc. PFR partners in-country will share and collect the most important data, information, and maps and will advise on which local stakeholders should be participating in the workshops, in close cooperation with RVO.nl and the local government.

The winning teams are obliged to participate actively in the local design workshops organized in their selected city. It is the responsibility of the teams to engage in building local coalitions, capacity and local support during the process and as part of the deliverables.

The workshops will be designed to meet the needs of both the teams and the cities. Through an approach combining research and design, these workshops will give teams a better understanding of the region's strengths and its vulnerabilities and the local context (culture, vulnerable communities, etc.). It will help the teams to develop work processes in close collaboration with local stakeholders and also to share ideas, information and data as well as discuss their conceptual designs/proposals with the local community and the other city team. These workshops will be organised on three occasions: September, early December and March 2019.

#### *Preliminary timetable for the Knowledge Support Track*

<b>Date</b>	<b>Activity</b>
September 2018	Local workshops in Chennai, Khulna and Semarang (consecutively*)
Early December 2018	Local workshops in Chennai, Khulna and Semarang (consecutively*)
Early March 2019	Local workshops in Chennai, Khulna and Semarang (consecutively*)

\*exact sequence of the cities is still to be decided



## **6.2 Regional Workshops**

RVO.nl will organise two regional workshops in Singapore to coincide with the last two local workshops. The regional workshops serve two purposes:

1. **Assessment of deliverables:** the winning teams will be asked to present their deliverables to the Advisory Board which – together with RVO.nl – will assess the quality of the deliverables and select the best to move forward to the next phase.
2. **To share knowledge:** with the input of this first Call for Action Water as Leverage has the ambition to come up with a more systemic way to apply the Call for Action to other cities in Asia and the wider world. During regional workshops, in which all teams and partners will be asked to participate, we aim to maintain a continuous and growing knowledge exchange across the region and concrete area-specific projects. This will enable the winning teams and partners of the programme to link common or recurring questions, formulate the most apt solutions, stimulate follow-up programs and guide new or existing innovative practices.



## 7 Information meeting

On Thursday 26 April, from 10.30h to 13.00h CEST an information meeting will be organised. Water as Leverage and the application procedure will be explained. During this meeting there will be an opportunity to ask questions. The meeting will be held at VNO-NCW/NLinBusiness, Malietoren, Bezuidenhoutseweg 12 The Hague. It will be conducted in English. Please register by sending an email to [WaL@rvo.nl](mailto:WaL@rvo.nl)

The meeting will be live streamed at: <https://www.youtube.com/RvoNI/live> and will be available afterwards via a link to be communicated.



## 8 Documents, information and contact

The following documents, information and contact procedures are part of this Call for Action:

- The **Questions and Answers** document. This contains a summation of all anonymised questions and answers addressed to the contact point. Questions can be directed to [WAL@rvo.nl](mailto:WAL@rvo.nl). The answers to the questions will be published in the 'Questions and Answers Document' on <https://english.rvo.nl/waterasleverage>.
- The **Call for Action**. This document.
- The **WaL Guidelines**. This describes the procedure of the challenge.
- The **formats, application form and the contract** which are mentioned in the Guidelines.

If there are contradictions between these documents, then the aforementioned document prevails the later mentioned document. The documents can be downloaded from the website <https://english.rvo.nl/waterasleverage>

The background document Setting the Scene will be available for download at [www.waterasleverage.org](http://www.waterasleverage.org)



## 9 Submission of Bids

Bids within the Call for Action Water as Leverage for Resilient Cities Asia can be submitted to the Netherlands Enterprise Agency (RVO.nl) through email: [WaL@rvo.nl](mailto:WaL@rvo.nl). The Bid must be received on **18 June 2018, 12:00 CEST**.

A complete Bid consists of (digital):

1. A completed and signed Water as Leverage Application Form;
2. The Proposal according to the Water as Leverage Proposal Format, including annexes.



## 10 Preliminary time table for the Programme

<b>Date</b>	<b>Activity</b>
22 April 2018	Publication of the Water as Leverage Call for Action document
26 April 2018	Information meeting
18 June 2018, 12:00 CEST	Deadline for Bids
early July 2018	Assessment by experts
13 July 2018	Applicants notified of award decision
end of July 2018	Contract sent to winning teams
September 2018	Local workshops in Chennai, Khulna and Semarang (consecutively)
Early December 2018	Local workshops in Chennai, Khulna and Semarang (consecutively)
Early December 2018	Regional workshop in Singapore, connected to the local workshop
Early December 2018	Completion of Phase 1
December 2018	Contractors notified of Phase 2 decision
Early March 2019	Local workshops in Chennai, Khulna and Semarang (consecutively)
Early April 2019	Regional workshop in Singapore
Early April 2019	Completion of Phase 2

The Contracting Authority reserves the right to adjust the time table, if necessary. This will be communicated to applicants in a timely manner.



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