

# **SSC Water and Environment, China**

**Final**

**12.08.2016**

## SSC Project – Project Proposal

General information	
<b>Project Title</b>	Strategic Sector Cooperation, Environment
<b>Partner Country</b>	China
<b>Responsible Danish public authority</b>	Ministry of Environment and Food
<b>Partner Institution</b>	The Chinese Ministry of Water Resources (MWR) The Chinese Ministry of Environmental Protection (MEP)
<b>Project duration</b>	August 2016 to December 2018
<b>Total budget (DKK)</b>	5.120.098 million DKK
<b>Thematic focus</b>	Water resource management, and air and water pollution prevention
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<b>Summary of the preparation project</b>	<p>The preparation project was carried out from June 2015 to June 2016 with the aim of exploring opportunities for cooperation on water and environment including finding partners and focus areas, both geographic and topic wise.</p> <p>Early in the process it was decided that the partners on both sides, and both on Ministry and local level, would show commitment by a willingness to co-finance the activities. Then the cooperation topics proposed by the partners were compared with Danish knowledge and resources on ministry, agency and private level. Intersecting areas were then preliminary chosen for cooperation. Where necessary the ministry did an additional selection of local partners based on their national knowledge and overview in order to secure the best possible demand fit and implementation results. Finally the program was reduced to a size manageable by the Danish Ministry for Environment and Food. Ministerial partners are Ministry of Water Resources (MWR) and Ministry of Environmental Protection (MEP).</p> <p>During the partner and topic mapping process a parallel progress was carried out where the political and market mechanisms were mapped as well. These findings were included in the partner selection, topic selection and project strategy in order to strengthen the project and avoid potential project killers. The findings are presented in the Baseline Document.</p> <p>The water resource and environmental problems in China are many and serious. The problems of highest priority are in general the most visible or the problems that the citizens experience directly in their daily life.</p> <p>A key challenge for addressing the problems is constituted by lack of enforcement of legislation and implementation of government strategies and policies at decentral level. This challenge has throughout the preparation stages been depicted as the core of the co-operation.</p> <p>Areas with highest priority were identified as:</p> <ul style="list-style-type: none"> <li>• Water Resource scarcity (only 50% of the population have access to drinking water) – groundwater and surface water management, including flood management</li> <li>• Law enforcement on air pollution from traffic and industry.</li> <li>• Law enforcement and Investment Strategies reg wastewater</li> </ul> <p>Soil is “up-coming” with the “Soil Ten Plan” released in May 2016. For this SSC Programme, it has been decided not to focus on Soil Pollution.</p> <p><i>Water Resources</i></p> <p>There is water resource scarcity in large parts of China. This is clearly stated in the “Water Ten Plan” where also an integrated approach to the water resource management is described. All water resources must be taken into account. There is not room for wasting the water resource. Therefore the integrated approach not only</p>

includes the traditional surface water resources and groundwater resources – but also integrated management of wastewater and flood water.

There is a good fit with this demand and Danish knowledge and solutions and it builds on previous and ongoing cooperation on water with China. The “Water Ten Plan” describes the need for integrated water resource management including regulation and assigned responsibilities. So far implementation of integrated water resource management has been limited and consequently the MWR has requested support to unfold this part of the “Water Ten Plan”.

The responsibility and funding of integrated water resource management is divided between national, provincial and city level institutions. The demand from MWR is on implementation including enhanced awareness and implementation guideline preparation. The activities in demand are workshops and study tours and cooperation on concept report preparation.

Though half of China is water scarce the normal flood water mitigation is traditional surface water managing i.e. to funnel the water away from cities as fast as possible in sewer canals etc. Recently, however, city planners and governments are realizing that this design concept is flawed as it means that they are throwing away a highly valuable water resource. The new mode of thinking is to design a city in such a way that it retains all the surface water runoff that occurs within the confines of the city and that it can be reused at a later stage – with other words, an urban environment that absorbs the water and use it when required. This “sponge city” concept is described in the “Water Ten Plan” and knowledge exchange activities are demanded on order to prepare contributions to concept reports for local implementation.

#### *Law enforcement and Investment Strategies – air and wastewater*

On environmental protection national regulations are generally in place according to the national action plans “Water Ten” and “Air Ten”. Emission regulation is comparable to European standards, but regulations are not yet enforced. Enforcement is coordinated by MEP but implemented on provincial and city level. The areas with most focus are air and wastewater as they are the most visible issues and thereby exerting pressure on the local political level by the citizens. Public participation and pressure at local policy level is an important part of law enforcement and is now supported by new regulations including local appeals authorities where citizens can file complaints over environment threatening emissions. On air implementation and enforcement in the field of transport and industry is prioritized and in demand. On wastewater it is both urban and rural emission enforcement that is in demand including guidelines for implementation.

The Danish EPA and NA have carried out six missions to China, visiting the partner ministries as well as decentral project partners. The two partner ministries, MWR and MEP, have expressed a strong interest in a co-operation, and, as mentioned before, expressed a strong wish in having a project set-up where the ministry level could



work together with decentral (province and city level) partners.

For MWR, the inclusion of decentral partners were strongly emphasized from the beginning of the process. In November 2015 as part of the preparatory work for the SSC the MWR invited a wide range of regional and local authorities to a workshop in Beijing in order to explore the potential for exchange of knowledge and technologies with Denmark. The response from the authorities was very positive and the MWR has afterwards undertaken a selection of decentral partners and negotiated the conditions for participation.

Furthermore, the MWR has set up a Sino-Danish Secretariat, which will coordinate the activities, including ensuring dissemination of the SSC results to other decentral entities in China.

The cooperation area is water resource management with focus on groundwater aquifer storage capacity, and the partners are:

Haihe River Water Conservancy Commission, Zhejiang Institute of Hydraulic and Estuary, Taihu Basin Authority of Water Resources Management, China Institute of Water Resources and Hydropower, Liaoning Water Resource Department, Fujian Water Resource Department, Nanjing Hydraulic Research Institute, Chiangjiang Water Resources Commission and Jiangsu Water Resource Department and Jinan Water Resources Bureau.

China Institute of Water Resources and Hydropower will be the office under MWR responsible for the day to day execution of the program from Chinese side.

The design of the project outputs within environmental protection (wastewater and air pollution control) has taken part in close co-operation with the MEP and Foreign Economic Cooperation Centre (FECO) under MEP. Also, close dialogue has taken place with decentral partners where independent programs have been designed. The cooperation areas are enforcement of industry and transport air quality regulations and wastewater management including enforcement and technologies. The decentral partners are Jiangsu Environmental Protection Department and Beijing Environmental Protection Bureau. FECO is responsible for the day to day execution of the the program – from Chinese side.

To summarize, a full cooperation program has been designed in cooperation with the partners. The program includes the following 4 outputs:

WR: Strengthened awareness and knowledge of staff at national and provincial level about measures to reduce water scarcity by enhanced use of the storage capacity of groundwater aquifers by improved flood- and groundwater resource management.

EP1: Strengthened regulatory and institutional frameworks for control of emission of air pollution from traffic and industry.

EP2: Contributions to local implementation guidelines following Water Ten Plan for rejuvenation of black odour water canals.

Presentation of relevant Danish management.

	EP3: Improved exposure of the Danish private sector in the Chinese environmental protection market
<b>Background</b>	<p>China has during the past two decades moved through a rapid industrialisation phase, where focus on increasing GDP in many cases has been obtained on the expense of sustainable resource use, the environment and public health.</p> <p>It is now widely recognised by the Chinese Government that the environmental challenges are significant and need to be tackled as part of China's future economic development. In the 13<sup>th</sup> 5-year plan protection of the natural resource base, improving the environmental quality and ecological services are given significant attention. Ambitious targets have been set for CO<sub>2</sub> emissions per GDP, total water consumption, as well as fresh water consumption per unit of industrial added value. In general there are severe environmental challenges within water resource, wastewater, solid waste, soil and air.</p> <p>The majority of China has water resource scarcity in a degree where they cannot allow themselves not to use all available water. Hence it is necessary to include flooding water and wastewater in the water resource. This is a central part of the national water action plan, "Water Ten". In general only 50% of the population have access to clean drinking water. The human health impacts related to the water resource issues are mostly seen within the poor part of the population. The poorest part of the population does not have access to clean drinking water. This results in an increased occurrence of cancer of epidemic dimensions for this group of citizens. Digestive cancers (i.e. stomach, liver, esophageal) account for 11 percent of fatalities and nearly one million deaths annually.</p> <p>Air is likewise a highly prioritized area, with the "Air Ten Plan" from 2013 under implementation. Air emissions are furthermore, due to their visible nature, under close monitoring by the Chinese citizens who put pressure on especially local governments to speed up solving the air pollution problems. The human health impacts related to the air issues are mostly seen within the poor part of the population. Air pollution related diseases are increasing rapidly in China. In the past 30 years, death rate due to lung cancer has increased by 465%. Death rates are especially increasing among the young population with a total of 300,000 deaths annually. It is the poor population that have the highest death rates and investigations show that this is due to the fact that the more wealthy citizens can afford expensive domestic air cleaning systems whereas the poor citizens must rely on the inexpensive and much less efficient face masks.</p> <p>By early 2016 China is in a situation where basic legislation and principles are in place, but the necessary institutional development, capacity and knowledge of how to put policy into efficient practice is still in its infancy. New and strict enforcement of the laws have been announced and as the targets and ambitions are high, the challenges and investment needed to meet the targets are equally high.</p> <p>The Sino-Danish cooperation in water has been developing since</p>

	<p>2010 where the first Memorandum of Understanding was signed with the Danish Ministry of Environment. The co-operation between the two ministries has subsequently been specified in Action Plan 2014-2018 and a related Program of Activities 2014-2015. A substantial number of Chinese Study delegations have visited Denmark under the framework of the Action Plan and an annual policy workshop has been held in China focusing on current issues. The Sino-Danish cooperation has furthermore been supported by the cooperation activities in China Europe Water Platform where Denmark hosts the secretariat.</p> <p>The Sino-Danish cooperation in environmental protection has like the water cooperation developed over a number of years, mainly through provincial cooperation in wastewater and soil, e.g. in Jiangsu Province with partners in Denmark at Regional level. An agreement was signed at ministerial level in 2014 to be followed up by an action plan.</p> <p>The Danish Nature Agency has, in order to enhance Danish Environmental technology companies export to China, supported the establishment of three company-driven partnerships focusing on water resources, flood management and wastewater. Furthermore an air emission company group is established and coordinated by the Danish EPA. The partnerships are all working towards better presentation and presence of Danish technology in China.</p>
<p><b>Project description</b></p>	<p>The aim of the SSC project is enhance the capacity to address some of the large societal water challenges in China in a holistic and integrated way with input from Danish experiences and technological solutions. This will be done through a mix of short-term inputs from Danish public sector experts, training, dialogue and cooperation on case studies can provide know-how and examples of good practices to help develop and implement greener standards and solutions in China. As a partner project, both parties will contribute to the activities.</p> <p>The SSC Project focuses on knowledge building in Chinese institutions responsible for development of guidelines and monitoring and enforcement of environmental standards as expressed in the two national action plans, Water Ten and Air Ten. An important issue is to support the implementation effort in China through capacity building at provincial and city level and through preparation of regulation, guide lines and concept reports.</p> <p>The key Danish public partner is the Danish Ministry for Environment and Food through its two agencies, the Danish Nature Agency and the Danish Environmental Agency. The two Danish Agencies will provide expertise for implementation of the SSC project by use of its own staff as well as experts from Danish local authorities and the private sector.</p> <p>The tools used for the SSC will be knowledge exchange activities in Denmark and China including study tours, seminars, and workshops and on the job training and cooperation through the development of</p>



case studies and guide line contributions. Study tours will be applied mostly in the beginning of the cooperation within the different topics. Study Tours to Denmark reflecting Chinese water challenges and demonstrating potential solutions. They will demonstrate how specific and efficient standards and methodologies work in practice and provide an opportunity for the Chinese public authorities to interact with both public and private entities in Denmark. Seminars in China will provide an extended understanding of the state of the water resource, hereunder flooding, and air quality from a regulatory and technical view point.

After these initial study tours more targeted seminars and workshops will be designed and planned. The seminars and workshops will go into detail on the topics, followed by meetings, site visits and cooperation on the development of requested inputs e.g. on regulation aspects, guideline contributions and/or concept reports within the identified environmental aspects. These outputs at national level will contribute to effective implementation of water regulations and environmental protection enforcement at provincial level.

The two overall cooperation areas will start and end with a workshop organised at the respective ministries, MWR and MEP. The kick off workshop will present the total program for all central and decentral partners – and initial discussions on the cooperation will take place. The project processes and organisation will be presented along with expected outputs and results. The finalisation workshop will present the results in form of contributions to guidelines including how and to whom they are disseminated. The main cooperation areas are Water Resources Management and Environmental Protection Enforcement, described below

#### Water Resources Management

The water resource parts of the project (WR) supports solutions to the Chinese water scarcity problem in relation to utilisation of ground water and management of floods in urban areas. From this perspective cooperation that provides inspiration on effective implementation of integrated water resource management using all available resources. The activities will focus on using the groundwater aquifers as water recipients and long-term storage capacity and management of urban floods.

MWR will coordinate the SSC activities within water resource management with the aim of developing a new model for cooperation on ground water and floods management; strengthen the links between national and regional level, and links to international experiences and technological solutions.

#### Environmental Control and Enforcement

The environmental protection part of the project (EP) supports implementation of enforcement of pollution control regulations.



	<p>Emission regulation on air and wastewater is in place and described in the action plans for air and water, “Air Ten” and “Water Ten”. Implementation hasn’t been effectuated yet because of lacking enforcement systems and technologies. The SSC-project supports national and provincial emission regulation through enforcement implementation at provincial and city level on transport and industry.</p> <p>MEP will coordinate the SCC activities from the Chinese side at an overall level in the environmental field, but the main activities will be carried out and planned at regional and city level.</p> <p>MEP has established an international organisational and digital platform for environmental technology called 3iPET with the aim of facilitating information-sharing on environmental pollution control between China and other countries. The Danish platform State of Green will cooperate with FECO/3iPET with the aim of transferring knowledge on Danish solutions and promote Danish companies engagement and investments in China.</p>
<b>Purpose, results, outputs &amp; indicators</b>	<p>The aim of the SSC is increased capacity of selected Chinese authorities supporting for the greening of the economy in China within the following areas:</p> <p>Ground water management in the context of flood water and a broader water resource management</p> <p>Industrial and pollution control and prevention</p> <p>Results, outputs and indicators are defined within the following overall areas:</p> <ul style="list-style-type: none"> <li>• Improved enabling environment (with a focus on capacity building etc.) in water, wastewater and air.</li> <li>• Strengthened interaction between national and local authorities as an indirect result of the SSC</li> <li>• Improved private sector engagement on commercial terms and paving the way for public/private partnerships.</li> </ul>
<b>Result WR</b>	<p><b>Increased capacity within Chinese national and local water authorities on measures to reduce water scarcity through integrated groundwater and floodwater management, through improved practices in planning, monitoring, enforcement and public participation under implementation.</b></p>
<b>Result WR indicator</b>	<p>Water Resource authorities at both national and provincial level have endorsed project recommendations for elaboration of national and local guidelines on improving capacity and practices to address critical water scarcity challenges in an integrated and holistic manner as demanded in the Water Ten Plan.</p> <p>Target 2018: Implementation of Water Ten Plan supported through capacity for addressing key areas of the Water Ten Plan built at</p>

	decentralized level (provincial/city level) and experience fed back to national level.
<b>Output WR</b>	<b>Strengthened awareness and knowledge of staff at national and provincial level about measures to reduce water scarcity by enhanced use of the storage capacity of groundwater aquifers by improved flood- and groundwater resource management.</b>
Output WR indicator	<p>Guidelines Contributions on approaches and measures to combat water scarcity – focusing on ground water and how to integrate surface water and floodwater.</p> <p>Knowledge enhanced for 30 persons from ministry, provincial and city level.</p>
<b>Activities</b>	<p><b>WR1:</b></p> <p>Start-up workshop in China.</p> <p>The workshop will provide an important knowledge platform by the mapping and matching of challenges and measures to overcome theses, and the also as the starting point for the strengthened cooperation on water between China and Denmark. The workshop will include a presentation of Danish water resource management approach and mapping of Chinese water resource demand and supply flows - in an allocation, quality and efficiency perspective. Danish knowledge matched with Chinese demands and challenges.</p> <p><b>WR2:</b></p> <p>Next step in the program is to provide a profound understanding of the Danish regulatory framework, institutional setup and measures on groundwater management and urban flood management, hereunder thorough study tours to Danish groundwater and floods management institutions and site visits.</p> <p><b>WR3:</b></p> <p>During this activity the relevant Danish water resource management knowledge and solutions will be introduced and adapted to the Chinese context at specific case areas. WR3 will be a seminar in China on water balance and modelling hereof, enhanced floods water infiltration, groundwater mapping, monitoring and data compilation, related to case sites.</p> <p><b>WR4:</b></p> <p>After identifying the detailed case study issues to be solved, guidance on planning and the way forward will be provided at case area level. WR4 will be a study tour to Denmark presenting Danish water planning institutions – tasks and experiences, site visits regarding cloudburst planning and eutrophication mitigation.</p> <p><b>WR5:</b></p>

	<p>Following up on the planning activities in WR4 will be an implementation seminar in China on water resource optimisation including potentials for surface water/floodwater integration in the groundwater resource.</p> <p>WR6: Last seminar in the WR activity flow will be focused on identification and formulation of learnings and recommendations as input to national guidance notes on water efficiency and demand assessment, stakeholder dialogue and awareness and socio-economic assessment and prioritization.</p> <p>WR7: Completion workshop in China.</p> <p>After each separate WR activity concept reports will be drafted based on the outcomes. Before the completion workshop the concept reports will be collected and reviewed by the MWR in order to make them implementable in a guideline context. At the completion workshop the reports will be presented and future cooperation will be perspectivated in relation to the cooperation results.</p>
<b>Result EP</b>	<b>Sino – Danish Cooperation expanded in environmental protection, for knowledge exchange and improved practices in planning, monitoring, enforcement and public participation</b>
Result EP indicator	<ul style="list-style-type: none"> <li>• Environmental authorities at national, provincial and city level have improved their capacity to implement and enforce critical regulation with regard to air and wastewater regulations.</li> <li>• Target 2018: Implementation of Water Ten Plan and Air Ten Plan supported through capacity built for addressing key enforcement areas at decentralized level (provincial/city level) and experience fed back to national level.</li> </ul>
Output EP1	<ul style="list-style-type: none"> <li>• Capacity increased for staff within 3 institutions for air quality control.</li> <li>• Knowledge enhanced on Danish solutions on control and monitoring of air pollution in 2 specific areas relevant for implementation of the Air10 strategy.</li> <li>• Inputs provided for Chinese guidelines for implementation of 2 specific areas of the Air 10 strategy.</li> </ul>
Output EP1 indicator	<ul style="list-style-type: none"> <li>• Capacity built for efficient air quality control and enforcement</li> <li>• Input or elements to possible guidelines for local implementation of air quality control in line with AIR 10 developed.</li> </ul>
Activities EP 1.1 (case: transport)	Air pollution is harmful to our health, environment and nature and causes severe costs for society and is a serious and highly prioritized problem in China. EP1 is divided into EP1.1 (cooperation on transport emissions) and EP1.2 (cooperation on industry emissions).

	<p>Air pollution is a serious problem in many Chinese cities and transport is a major source. China have already done a lot to reduce pollution from traffic., but can still take advantage of long and effective Danish experiences in reducing pollution from traffic</p> <p><b>Activity EP 1.1.1</b> Start-up workshop in China together with EP 1.2, EP 2 and EP 3. Present and discuss the programme, the expected output and activities and the inputs expected from all partners. The workshop will further divide into 3 tracks (transport, industry and wastewater) for initial presentation and evaluation of the administrative and legal setup in China.</p> <p><b>Activity EP 1.1.2</b> Seminar in China on in-use vehicle test and enforcement.</p> <p><b>Activity EP 1.1.3</b> Study tour to Denmark focusing on Danish experiences and solutions to control and monitor emissions from traffic and industry.</p> <p><b>Activity EP 1.1.4-1.1.6</b> 2 seminars in China and a possible study tour to Denmark on techniques for abatement and control of transport emissions</p> <p><b>Activity EP 1.1.7</b> Seminar in China on identifying local urban planning as measures as tools to reduce air pollution (low emission zones, congestion charging, bus lanes, bicycling lanes, traffic separation etc.)  Provide an overall study mapping governance tools to reduce traffic emissions and assessment of the effects on air quality. Elaborate a concept report on the above issues.  Capacity building at local level will enhance case studies supporting the ongoing process in detailing Chinese national law.</p> <p><b>Activity EP 1.1.8</b> Seminar on above continued and closing seminar on the transport case.</p>
<p><b>Activities EP 1.2 (case: industry)</b></p>	<p>Regulation of industrial emissions in China can differ in many ways from Denmark. Preconditions as economic structure, legal tradition and political governance are very different. A thorough evaluation and fact finding in China is therefore central, to identify relevant areas for sharing of Danish experiences and prepare for enforcement or other mechanisms in China that can improve the overall air quality and substantially reduce days with heavy pollution in China.</p> <p>Air Ten Plan is setting the direction for defining a permitting system for the larger industry on both national, regional and city level in China. The SSC cooperation will take advance of long and effective</p>



	<p>Danish experience to give input or elements guidance on enforcement measures.</p> <p>Learning and regulatory or institutional challenges and barriers identified during the progress of the project will feed back into the guidance revision process.</p> <p><b>Activity EP 1.2.1</b></p> <p>Start-up workshop – <i>see EP 1.1.1</i></p> <p><b>Activity EP 1.2.2</b></p> <p>Evaluate regulatory framework and administrative set-up in China, and presentation of Danish experiences, through 1 seminar and ongoing dialogue with the long-term adviser.</p> <p><b>Activity EP 1.2.3</b></p> <p>Specific case: Self-inspection (enterprise) as a measure to ensure compliance, through 2 seminars and ongoing dialogue.</p> <p><b>Activity EP 1.2.4</b></p> <p>The long-term adviser will perform coordination in all 3 EP outputs (transport, industry and wastewater).</p> <p><b>Activity EP 1.2.5</b></p> <p>Specific case: Action plans as a measure to reduce the emissions, through a seminar and ongoing dialogue with long-term adviser.</p> <p><b>Activity EP 1.2.6</b></p> <p>Closing seminar to conclude on work and provide input, elements and/or recommendations.</p> <p><b>Activity EP 1.2.7</b></p> <p>The long-term adviser will perform coordination in all 3 EP outputs (transport, industry and wastewater).</p>
<b>Output EP2</b>	<b>Knowledge enhanced on methods for rejuvenation of black odour water canals.</b>
Output EP2 indicators	<p>Contribution to development of Guidelines for Wastewater Management Planning and Technological Solutions for mitigating black water odour canals.</p> <p>Knowledge enhanced for 30 participants from MEP/FECO, Jiangsu EPD and Beijing EPB.</p> <p>Contribution to development of Guidelines for Improving enforcement systems relevant to emission to black odour water canals.</p>
<b>Activities EP 2</b>	Wastewater is discharged into streams without prior treatment. This results in black odour water canals. These canals have high priority as

they pose a very visible environmental problem and are seen all over China in both urbanised and rural areas. Furthermore wastewater, when treated appropriate, can be re-introduced to the water resource and thereby become an asset.

In order to support solutions to this problem a black water canal will be the central case for the cooperation in both Beijing and Jiangsu for presenting wastewater management solutions. The cooperation activities will all have their focus on the black water canals and the related issues.

#### EP2.1:

Wastewater Management Planning and Technological Solutions for mitigating black water odour canals.

##### EP 2.1.1

Start-up workshop. Presentation of the analysis and planning systems necessary to rejuvenate a black odour water canal. Danish solutions will be presented and brought into a Chinese perspective.

##### EP 2.1.2

Seminar in China. The seminar will treat wastewater management with regards to analysis and planning systems relevant to black odour canals implemented and in operation.

#### EP2.2:

Introduction of solutions to mitigate black water odour canals to local implementation guidelines

##### EP 2.2.1

After the initial activities describing data requirements and tools necessary for wastewater management planning, these requirements and tools are now presented as solutions in operation in a Danish context via a study tour to Denmark.

##### EP2.2.2

Important actions related to black water canal rejuvenation is pollution control at the source. A seminar/conference will be held in China on point source mitigation.

##### EP2.2.3

EP2.2.2 will be followed up by a similar seminar on area source mitigation – agricultural non-point source pollution.

##### EP2.2.4

Staff exchange in Denmark (2 parts). The black water canal will at a study tour to Denmark be put into an integrated perspective – including impact on surface and groundwater.

##### EP2.2.5

A study tour to Denmark will present the Danish approach on pollution source mitigation – including the necessary data for efficient prioritization.

	<p>EP2.3 Introduction of enforcement systems relevant to emission to black water canals. Contributions to local implementation guidelines.</p> <p><u>EP2.3.1</u> Seminar in China on total water pollutant control systems in areas relevant for case sites.</p> <p><u>EP2.3.2</u> Completion workshop. Presentation of results and finalization of guideline contributions for Technology Solutions for Wastewater Management reg. rejuvenation of a black water channel.</p>
<b>Output EP3</b>	<b>Improved exposure of Danish private sector in Chinese environmental protection market</b>
Output EP3 indicator	<p>Enabling environment established for Danish private sector companies to showcase state-of-the art technical solutions in China</p> <p>Sustainable and long-term solution for a Danish hub established as part of 3iPET that efficiently provide access for Chinese partners to Danish knowhow and technical solutions</p> <p>Majority of Danish companies active in China are presenting themselves on the 3iPET platform</p>
	<p>EP3: Little knowledge exists on Danish solutions and knowhow.</p> <p>In support of establishing a more efficient knowledge base on green solutions, a cooperation on improving and enhancing access to information on Danish green solutions on the Chinese market and vice versa will be initiated.</p> <p>Study tour and establishment of platform in China will be done in order to promote Danish technology via State of Green and MEP/FECO's 3iPET.</p>
<b>Management set-up</b>	<p>A SSC Steering Group will be set up for each output, WR and EP, between the Embassy, the Partner authority, MWR and MEP respectively, and the Danish public authority. The Steering Groups will at annual meetings evaluate the progress and reassess the program. Meetings will be followed up by approval of the yearly work plan and progress reports for the SSC project.</p> <p>The Steering Groups will furthermore have midyear conference calls to follow progress in the SSC implementation and decide on</p>

	<p>adjustments, if needed. The growth advisor will in cooperation with the contact persons in the NA and EPA prepare material for the Steering Group meetings.</p> <p>MWR will establish a Sino-Danish secretariat under output WR that will be responsible for the Chinese side of activity coordination and for knowledge dissemination between provincial level and national level and between relevant provincial levels. The secretariat will furthermore facilitate the process of national level reviewing of local level implementation concept reports.</p> <p>FECO under MEP will be responsible under output EP for the Chinese side of activity coordination and for knowledge dissemination between city level, provincial level and national level.</p> <p>FECO will be the main coordinating partner both internally in MEP and for those activities carried out in cooperation with the decentral partners. FECO will be responsible for dissemination of the results from the cooperation. The cooperation areas under environmental protection enforcement are enforcement of air quality regulations and wastewater management including enforcement and technology development. The decentral partners are Jiangsu Environmental Protection Department and Beijing Environmental Protection Bureau.</p> <p>For issues of cross-ministerial importance, if deemed relevant, a special SSC Committee will be established, consisting of the members of the two Steering Groups.</p> <p>On the Danish side, the Growth Advisor based at the Danish Embassy will be the contact person at daily basis for the Chinese Partners and responsible for the project management.</p> <p>The Growth Advisor will thus facilitate the co-operation between the Danish and Chinese and Ministries, and their local partners, including preparations of activities etc.</p> <p>A long-term adviser from the Danish EPA will be posted in Beijing through the project, being responsible for coordination of the substantial input from the Danish side, and cooperating on a daily basis with the Chinese partners.</p> <p>Decision-making at daily level will be undertaken by a Project Management Team for each of the three outputs consisting of the relevant Key Expert and the Growth Advisor on the Danish side, and the Project Management on the Chinese side.</p>
<b>Input and budget</b>	<p>The detailed budget for the proposed SSC Environment is annexed. The expected input of DKK 5.1 million is distributed over the project period as follows: 2016: 1.3 million, 2017: 2.4 million and 2018: 1.4 million.</p>



	<p>The man-power input committed by the Danish public authority amounts to approx. 1.023 man-days plus administration work covered by the overhead. The Growth Counsellor will be involved in the preparation and implementation of seminars and workshops in China (approximately 29 events of 1-2 weeks duration each).</p> <p>From the Danish EPA and the Danish WNA, one overall SSC Team Leader, a Key Expert as well as a number of permanent specialists and/or a number of ad hoc specialists per output will be provided for the SSC.</p> <p>Specifically for outputs EP1 and EP2, a senior specialist from the Danish EPA will be posted in China as long-term adviser for the cooperation, providing key expertise, coordination and technical cooperation on a daily basis for these outputs. A TOR will be developed in order to detail the tasks and deliverables for this Key Expert, which a.o. also will include conduct of mini-analysis and mini-seminars of relevance for progressing the SSC.</p> <p>The agreed input from the partner public authority includes all workshop and seminar facilities, local travel expenses as well as accommodation and meals in China.</p>
<p><b>Contribution by the partner organizations</b></p>	<p>The Ministry of Water Resources (MWR) is responsible for water administration in China with the mandate of ensuring among other that water resources are rationally developed and utilised, properly managed planned and protected. The MWR provide guidance to management and protection of water infrastructure as well as developing standards and monitoring of water quantity and quality. MWR has ensured the necessary resources for the SSC activities and the specific involved provinces and institutions, e.g. Haihe River Water Conservatory Commission, Taihu Basin Authority of MWR have agreed to coordinate and disseminate knowledge in their fields. The partners contribute with funds for activities. They will coordinate and arrange workshops and seminars, contribute with content and take part in the drafting of guidelines etc. MWR will via the steering committee take part in the planning and ongoing evaluation of the process and will review and disseminate the concept reports to relevant organisation on central and decentral level.</p> <p>Ministry of Environmental Protection (MEP) is in charge of environmental regulations related to wastewater and air pollution. The main focus of the project will be on developing and testing intervention at provincial/city level, e.g. Beijing and Jiangsu where both parties have committed the necessary resources to the cooperation including funds. The local partners will coordinate and arrange workshops and seminars, contribute with content and drafting of local regulation and guideline contribution. FECO under MEP will arrange workshops and gather and disseminate knowledge</p>

	<p>created locally (Jiangsu and Beijing) to relevant central and decentral organisations. FECO will create a platform on 3iPET for presentation of Danish environmental technologies.</p> <p>Beijing Environmental Protection Bureau will provide office-space for the long-term adviser.</p>
<p><b>Justification of proposed methodology, activities and input in relation to expected results (simple theory of change)</b></p>	<p>The cooperation has been designed with emphasis on local commitment and ownership both in the selection of topics and in selection of the public partners. The topics chosen are prioritised by the partners and are all high on the political agenda. All topics intersect with Danish regulative and technical knowledge. In order to secure proper buy in from the partners, they finance their own participation in all activities, e.g. international travels in connection with study tours, cost of venue and meals in China for seminars and workshops etc.</p> <p>Water resource management (WR).</p> <p>The topics, partners and contributions are managed by MWR's Sino-Danish secretariat and the outputs, local implementation concept reports reviewed by MWR, will support a long term change of the water resource management approach and be a basis for development. This change mechanism has been seen from the earlier EU China River Basin Management Program, 2011, where strategy notes were prepared. These strategies are now an integrated part of MWR's official guidelines and are being implemented. Thus the assumption is that the SSC produced concept reports will have a similar long term effect on integrated water resource management with implementation dissemination from the ministry to the decentral authorities in China and lead to less water scarcity, improved water resource quality and better drinking water supply. The technical solution needed for this are all existing technologies that can be provided by Danish environmental tech. companies.</p> <p>Environmental protection enforcement (EP).</p> <p>Enforcement of air and wastewater emission regulation was clearly demanded as these topics are very visible problems and therefore solutions are especially in demand. Citizens exert pressure on politicians especially at local level. Environmental protection regulation is often in place but not enforced. The assumption is that by enhancing the enforcement in China, the air quality will improve, because companies, power plants, traffic etc. will have to comply with the political required emissions levels and standards. A main barrier for enforcement in China is the parallel need for economic growth. Denmark has introduced and continuously development its enforcement system, and at the same time had economic growth. It is the assumption that by introducing Danish knowledge, China can be supported in maintaining growth while improving the environment and solving health related issues. It is assumed input or elements to guidelines from the SSC over time will become part of the</p>

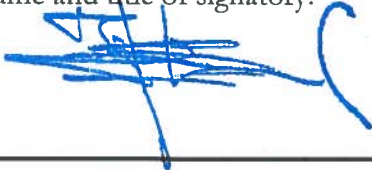
	<p>enforcement and regulation in China, and support Chinas ambition on sustainable development.</p> <p>The approach on all outputs is to evaluate regulatory and administrative setup and present Danish experiences as concrete as possible, as basis for detailed design of the following activities. Specific cases based on Danish experiences will be central for the cooperation, and the main background for the contributions to guidelines, concept reports and regulation. The cases will be used through the SSC as reference points for the generic discussions taking place in the Activities, providing empiric data, concrete cause-effect relations, visualisation of real-life water and air management challenges, as well as test grounds for utilisation of the lessons learned, main findings and recommendations developed during the Activities.</p> <p>The follow-up to the activities through implementation of the guidelines, concept reports etc. will be performed by the ministries. After each year the activities and partner engagement will be evaluated and enhanced focus either on selected topics or partners could be executed, if it is evident that this will enhance the chances of good results. Furthermore the relations build through the process could open up for new types of cooperation activities that should not be neglected.</p>
<p><b>Environmental, gender and social impacts – and improvements to good governance</b></p>	<p>The SSC Environment in China is directly linked to the implementation of the Chinese Action Plans for improving air quality and water management.</p> <p>The activities will enable introducing improved planning practices, monitoring and enforcement of regulations to the benefit of all citizens, especially the poorer segments who have little or no means of avoiding the negative health impact of air pollution and poor water management.</p> <p>The Chinese public partners have expressed an interest in the Danish experience with public participation in planning and management. Danish approach to public participation as a means to ensure efficient and cost-effective regulation is therefore reflected in presentations and dialogue on best practice in Denmark in as well study tours programmes to Denmark and in the workshops and seminars in China.</p> <p>An employee of the Danish EPA – skilled in industry regulation, pollution control and enforcement – will be posted in Beijing and working part time on the SSC (EP1 and EP2). Beijing Environmental Protection Bureau has kindly indicated its willingness to facilitate an office-space for this purpose. This will allow for day-to-day discussions, a.o. reg. governance, conduct of mini-analysis and mini-seminars of relevance for progressing the SSC, facilitated by the Danish EPA employee. If time allows, the Danish EPA employee will</p>

	also be taking part in the WR part of the SSC.
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Authorised Signature: Danish Ministry of the Environment and Food (MFVM)

Date: 13/9-2016

Name and title of signatory:



Permanent Secretary

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Partner Authority: The Chinese Ministry of Water Resources (MWR)

Date:

Name and title of signatory:

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Partner Authorities: The Chinese Ministry of Environmental Protection (MEP)

Date:

Name and title of signatory:

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