

# SSC in Sustainable Urban Development, Copenhagen, Bogotá and Medellín

| <p><b>Key results:</b></p> <ul style="list-style-type: none"> <li>- Colombian water agencies in Bogotá and Medellín increase production of renewable energy from wastewater sludge, improve effluent and reduce energy consumption.</li> <li>- Colombian water agencies in Bogotá and Medellín reduce water loss from the water distribution networks.</li> <li>- A circular model for waste handling in Bogotá is introduced with a focus on reuse and recycling of solid waste related to organic and plastic waste with involvement of the citizens. City of Bogotá targets 10% recycling by 2027.</li> <li>- Improved infrastructure planning facilitates increased number of bicycle and walking commuters in Bogotá.</li> </ul> <p><b>Justification for support:</b></p> <ul style="list-style-type: none"> <li>- More than half of the world's population live in cities.</li> <li>- Cities are primary responsible for service delivery and as such key to deliver on the SDGs.</li> <li>- During the inception phase, City of Copenhagen and Cities of Bogotá and Medellín, respectively, have explored areas for SSC cooperation in sustainable urban development, matching City of Copenhagen's strongholds with the two cities' needs and priorities.</li> <li>- As a result, cooperation within the areas of wastewater, water loss, recycling of solid waste and enhanced mobility have been agreed.</li> <li>- Copenhagen will collaborate with C40 in target cities and through C40 share experience and results in a wider circle of cities.</li> </ul> <p><b>Major risks and challenges:</b></p> <ul style="list-style-type: none"> <li>- High turnover among partner personnel.</li> <li>- Corruption in Colombian public infrastructure projects.</li> <li>- Complexity of working with two cities within four thematic areas.</li> <li>- Risks related to security for Danish experts</li> </ul> | <p><b>File No.</b></p> <p>24/02636</p>  |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|---|---|--------------------------------------|-------------------------------|---------------------------------|--------------------------------------|-----------------|-------------------------|-------------------------|---------------------------|--------------------------------------|----------------------|---------------------------------|--------------------------------------|----------------|------------------|-------------------------------|-------------------------------|------------------------|-----|---|--|------|
|   | <p><b>Country</b></p> <p>Columbia</p>   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><b>Responsible Unit</b></p> <p>KLIMA</p>   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><b>Sector</b></p> <p>43030</p>   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><b>Partner</b></p> <p>City of Copenhagen</p>   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><i>DKK million</i></p> <table border="1"> <thead> <tr> <th></th> <th>2024</th> <th>2025</th> <th>2026</th> <th>2027</th> <th></th> <th>Total</th> </tr> </thead> <tbody> <tr> <td><b>Commitment</b></td> <td>14.8</td> <td></td> <td></td> <td></td> <td></td> <td>14.8</td> </tr> <tr> <td><b>Projected disbursement</b></td> <td>4.0</td> <td>5.6</td> <td>5.2</td> <td>0</td> <td></td> <td>14.8</td> </tr> </tbody> </table> |                                      | 2024                          | 2025                            | 2026                                 | 2027            |                         | Total                   | <b>Commitment</b>         | 14.8                                 |                      |                                 |                                      |                | 14.8             | <b>Projected disbursement</b> | 4.0                           | 5.6                    | 5.2 | 0 |  | 14.8 |
|   |   | 2024                                 | 2025                          | 2026                            | 2027                                 |                 | Total                   |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <b>Commitment</b>   | 14.8                                 |                               |                                 |                                      |                 | 14.8                    |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <b>Projected disbursement</b>   | 4.0                                  | 5.6                           | 5.2                             | 0                                    |                 | 14.8                    |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><b>Duration</b></p> <p>April 2024 – March 2027</p>   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><b>Previous grants</b></p> <p>SSC Bogotá, inception phase, DKK 1.4</p>   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><b>Finance Act code</b></p> <p>06.38.02.14</p>   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><b>Head of unit</b></p> <p>Karin Poulsen</p>   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
|   | <p><b>Desk officer</b></p> <p>Winnie Estrup Petersen</p>  |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
| <p><b>Reviewed by CFO</b></p> <p>Yes: Jan Hindhede Justsen</p>  |   |                                      |                               |                                 |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
| <p><b>Relevant SDGs</b> <i>[Maximum 1 – highlight with grey]</i></p> <table border="1"> <tbody> <tr> <td> No Poverty</td> <td> No Hunger</td> <td> Good Health, Wellbeing</td> <td> Quality Education</td> <td> Gender Equality</td> <td> Clean Water, Sanitation</td> </tr> <tr> <td> Affordable Clean Energy</td> <td> Decent Jobs, Econ. Growth</td> <td> Industry, Innovation, Infrastructure</td> <td> Reduced Inequalities</td> <td> Sustainable Cities, Communities</td> <td> Responsible Consumption &amp; Production</td> </tr> <tr> <td> Climate Action</td> <td> Life below Water</td> <td> Life on Land</td> <td> Peace &amp; Justice, strong Inst.</td> <td> Partnerships for Goals</td> <td></td> </tr> </tbody> </table>   |   | No Poverty                           | No Hunger                     | Good Health, Wellbeing          | Quality Education                    | Gender Equality | Clean Water, Sanitation | Affordable Clean Energy | Decent Jobs, Econ. Growth | Industry, Innovation, Infrastructure | Reduced Inequalities | Sustainable Cities, Communities | Responsible Consumption & Production | Climate Action | Life below Water | Life on Land                  | Peace & Justice, strong Inst. | Partnerships for Goals |     |   |  |      |
| No Poverty  | No Hunger   | Good Health, Wellbeing               | Quality Education             | Gender Equality                 | Clean Water, Sanitation              |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
| Affordable Clean Energy   | Decent Jobs, Econ. Growth   | Industry, Innovation, Infrastructure | Reduced Inequalities          | Sustainable Cities, Communities | Responsible Consumption & Production |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |
| Climate Action  | Life below Water  | Life on Land                         | Peace & Justice, strong Inst. | Partnerships for Goals          |                                      |                 |                         |                         |                           |                                      |                      |                                 |                                      |                |                  |                               |                               |                        |     |   |  |      |

## Objective

To contribute to a just, green transition and improved conditions for the poorest and most vulnerable Colombians through sustainable urban development within the areas of wastewater treatment; water loss; solid waste management; and mobility for cyclists and pedestrians.

## Environment and climate targeting - Principal objective (100%); Significant objective (50%)

|                                 | Climate adaptation | Climate mitigation | Biodiversity | Other green/environment |
|---------------------------------|--------------------|--------------------|--------------|-------------------------|
| Indicate 0, 50% or 100%         | 0                  | 0                  | 0            | 100                     |
| <b>Total green budget (DKK)</b> | 0                  | 0                  | 0            | 14.76 mio.              |

## Justification for choice of partner:

City of Copenhagen has satisfactorily completed a one year inception phase of the SSC cooperation with the municipalities of Bogotá and Medellín in Columbia.

A MYNSAM 2.0 frame agreement is under preparation with anticipated inception early 2025. This project will thus be included under the frame agreement.

## Summary:

Copenhagen will support the municipalities of Bogota and Medellín to improve service delivery and framework conditions through competence development. In both municipalities, the focus for cooperation will be on wastewater treatment and water loss. In addition, Copenhagen will support Bogotá in solid waste management/recycling; and mobility for cyclists and pedestrians.

## Budget:

|  |              |
|--|--------------|
| Danish Authority staff, reimbursables and activities | 13.21        |
| Consultancies  | 1.40         |
| Un-allocated funds                                   | 0.15         |
| <b>Total (DKK million)</b>                           | <b>14.76</b> |

**Project Document for Strategic Sector Co-  
operation in  
Sustainable urban development  
  
between  
  
The cities of Bogota, Medellin  
and Copenhagen**

## Guidelines for Strategic Sector Cooperation 2020, TEMPLATE 3

|  |   |                       |
|--|---|-----------------------|
| <b>General information</b>   |   | MFA File no. 24/02636 |
| <b>Project Title</b>   | Sustainable Urban Development   |                       |
| <b>Partner Cities</b>  | Bogota and Medellin of Colombia   |                       |
| <b>Project duration (years/months)<sup>1</sup></b>                               | 3 years   |                       |
| <b>Total budget (DKK)</b>  | 14.767.505 DKK  |                       |
| <b>Thematic focus</b>  | Sustainable Urban Development within water, circular economy, and sustainable mobility planning.  |                       |
| <b>Partner Public Authority</b><br><br><b>Contact person and contact details</b> | <p><b>City of Bogota</b><br/>Sandra Borda<br/>High Counselor for International Relations<br/>Carrera 8 No.10 - 65<br/>Mail: spborda@alcaldiabogota.gov.co<br/>Mobile: +57 317 5261983</p> <p><b>Empresa de Acueducto y Alcantarillado de Bogota (EAAB)</b><br/>Odalis Cristina Laviera<br/>Advisor of the General Manager<br/>Av. Calle 24 No. 37-15<br/>Mail: olaviera@acueducto.com<br/>Mobile: (+57) 3148188795</p> <p><b>Empresas Públicas de Medellín (EPM)</b><br/>Andrés Eduardo García Martínez<br/>Planning and Performance Professional<br/>Directorate Cooperation for Sustainability<br/>Mail: andres.garcia@epm.com.co<br/>Mobile: (+57) 316 3509535</p> |                       |
| <b>Responsible Danish</b>  | City of Copenhagen  |                       |

<sup>1</sup> Project start will be date of Danish MFA approval

## Guidelines for Strategic Sector Cooperation 2020, **TEMPLATE 3**

|  |  |
|--|--|
| <p><b>Public Authority</b></p> <p><b>Contact person and contact data</b></p>                       | <p>Nanna Rosenfeldt<br/>Kontor for Vækst og Erhverv<br/>Økonomiforvaltningen</p> <p>Københavns Rådhus, Rådhuspladsen 1<br/>1550 København V<br/>Mobil +45 23 39 76 48<br/>E-mail <a href="mailto:bw282kk.dk">bw282kk.dk</a></p>  |
| <p><b>Danish Embassy</b></p> <p><b>Head of Representation</b></p> <p><b>Sector Counsellor</b></p>  | <p>Embassy of Denmark in Bogota<br/>Embajada Real de Dinamarca<br/>Cra. 13 #93 - 40<br/>Piso 2, Chicó<br/>110221 Bogota, Colombia</p> <p>Ambassador: Erik Høeg<br/>Sector Counsellor: Mikkel Hall</p>  |
| <p><b>Summary of background analysis and key strategic choices</b></p> <p><b>(max 2 pages)</b></p> | <p>Colombia has seen rapid urbanization over the past decades. According to the latest population and housing census from 2018, 75.5% of its population lived in urban areas. Bogota and Medellin are the two most populated cities of the country.</p> <p>While cities are important national hubs for the economic growth of the country, the fast urbanization has led to a number of challenges. Cities like Bogota and Medellin are facing important issues of traffic congestion, inadequate water supply, and poor waste management.</p> <p>It is more important than ever to contribute to the development of better cities that are connected, that serve the citizenship and are nice to live in.</p> <p>Therefore, this project focuses on providing sustainable urban development in the following areas:</p> <ol style="list-style-type: none"> <li>1. Wastewater treatment</li> <li>2. Water loss</li> <li>3. Solid waste management</li> <li>4. Mobility for cyclists and pedestrians</li> </ol> <p><b><i>Main development challenges in the sector</i></b></p> <p><i>Wastewater treatment</i></p> <p>Bogota and Medellin encounter three main challenges related to wastewater treatment: 1) improving the quality of the highly polluted rivers that the cities are situated by, 2) controlling floods, and 3) introducing sewerage coverage of informal settlements, all while keeping costs to a minimum.</p> <p>Urban runoff, industrial wastewater, and sewage overflows frequently pollute rivers and streams, leading to contamination of the city's water sources. This contamination disproportionately affects low-income communities, who are more likely to live close to polluted water bodies and lack access to proper sanitation facilities.</p> |

The water and wastewater utilities, Empresas Publicas de Medellin (EPM) y Empresa de Acueducto y Alcantarillado de BOGOTA (EAAB), need to optimise their main wastewater treatment plants to reduce energy consumption and improve the water quality of the Bogota and Medellin Rivers. At the same time, they have an opportunity to increase production of renewable energy from the wastewater sludge and improve the management of their assets to improve the company economy and reduce their carbon emissions.

EPM and EAAB are making progress to improve conditions but face a multitude of challenges. For instance, in Bogota one wastewater treatment plant has been defectively constructed and the construction process of another larger plant has stalled for years. Meanwhile EAAB is running out of options for landfilling the sludge and are looking for options to utilize it instead. The technical expertise of BIOFOS can help EAAB overcome these challenges.

*Water loss*

Bogota and Medellin are growing rapidly, largely fuelled by a significant influx of rural population and refugees from Venezuela. This surge in urbanization brings about considerable challenges, including a heavy strain on the water supply and a concentration of poverty in informal settlements without running water.

Poorer formal neighbourhoods in Bogota may have access to the city's water supply, but they often experience water shortages due to aging infrastructure and inadequate investment in maintenance. These shortages can be particularly severe during the dry season. Residents of poorer neighbourhoods are more likely to experience intermittent water service. Even when water is available, it may not have sufficient pressure to reach all parts of the house.

Both Bogota and Medellin report losing a substantial portion of their drinking water supply, estimated at 35 % and 30 % of total production respectively. This situation forces them to confront a critical decision: whether to invest in the creation of new dams for water reservoirs or to undertake substantial measures to curb water loss. Environmentally, socially, and economically it is much better to reduce the losses than to increase production.

Water losses in Bogota and Medellin are roughly divided 50-50 between commercial and physical losses. Commercial losses mainly refer to theft of water for instance from informal settlements without established drinking water infrastructure. HOFOR has minimal experience within this issue, why the cooperation will focus on physical losses.

Physical losses consist of water lost from leakages in the distribution system, where no human users benefit from the water. Detection and repair of leakages in the two cities is hindered by lack of segmentation and monitoring of the network as well as a variety of material and age profiles of the pipes. HOFOR has ample experience in leakage detection and the planning of pipe maintenance.

*Solid waste management*

Around 85 % of municipal solid waste in Colombia ends up in landfills and only about 15 % is recovered. So-called recyclers are responsible for most recovery. Recyclers are informal workers organized in communities that collect waste from household and other containers throughout the city in small hand pushed carriers for a desperately small profit.

A key challenge is that the recyclers are poorly organized, and their work methods are such that the reuseable waste is not systematically collected. At the same time the public collection service by truck is not allowed to compete with the recyclers and are legally obliged to bring all their collected trash to landfill. As a consequence, the cooperation will support the recyclers' work to improve their efficiency and their business model for a higher rate of recycling and a decent living wage. At the same time, the cooperation will focus on assisting the municipal handling of bio-waste that is not in competition with the recyclers.

Another challenge that both Bogota and Medellin face is lack of knowledge and indiscipline among citizens that leads to poor separation of waste fractions.

In addition, public recycling of waste material must be proven cheaper than bringing it to landfill, which in turn is relatively cheap.

A shift from the landfill disposal model into a more environmentally, socially, and perhaps, financially suitable "circular economy" type model will require not just a considerable investment in terms of appropriate infrastructure but also major efforts in civic education and behavior. The city of Copenhagen has ample experience in moving towards a circular economy model for waste management.

#### *Mobility for cyclists*

Colombia has the richest bicycle culture in all of the Americas. Bogota has expansive bicycle infrastructure relative to other cities in the region. Nevertheless, bicycles are only used for 7 % of all trips in Bogota.

Given the strong culture for bicycling its use has the potential to increase significantly with the improvement of infrastructure. For instance, bicycle parking is a major obstacle for the daily use.

Bicycles are relatively cheaper than cars and motorcycles, which is why cycling can contribute to supporting social mobility through equal and safe access to jobs and studies. Low transport costs make cycling particularly attractive to people on low incomes. A coherent cycle path network can help create a well-functioning and safe transport network that is accessible across age groups and income levels.

Cycling and walking do not emit CO<sub>2</sub>, and when commuters switch from cars to cycling, the general emissions from transport work are thereby lowered. Cycling and walking are space-efficient, which frees up road space for e.g. freight or necessary car journeys.

Out of the 17 global goals, the UN estimates that cycling can support 8 (Analysis of the transport relevance of each of the 17 SDGs (un.org)) or up to 11 (Sustainable Development Goals & Cycling - United Nations Western Europe (unric.org)). Denmark's green think tank CONCITO also emphasizes the need for a shift in mobility in a concept note of December 2023, and concludes that "it will be very difficult for many low-income countries to reverse the trends and shape a more sustainable mobility future if they stand alone. Substantial financial, technological and institutional support from high-income countries is likely to be needed." . Other players who recommend cycling and walking as measures to reduce CO2 emissions are C40

Bogota has just over 500 km of bicycle lanes and a goal to reach 1000 km by 2035. For this purpose, they work to mainstream introduction of quality bicycle lanes when redoing main streets in the city. At the same time, they aim to significantly improve bicycle security and parking possibilities. All issues where Copenhagen has ample experience that can benefit the efforts to enhance bicycle usage.

***Rationale for choice of partner***

1. Through dialogue with Danish embassies and the engagement of city of Copenhagen experts in various international networks, Bogota and Medellin were found to have substantial needs in areas that match world leading expertise of the City of Copenhagen.
2. Bogota and Medellin and their respective water and wastewater utilities, EPM and EEAB, have shown keen interest in Danish solutions for efficient water supply and wastewater treatment, and they have the organisational capacity to implement them.
3. The City of Copenhagen as well as Bogota and Medellin are active members of the C40. Synergies with C40 programs and network as well as C40 resources will support the SSC. In addition, C40 will support dissemination of results in other cities in Latin America as per agreement.
4. Relations between the City of Copenhagen, Bogota and Medellin have been established and an MoU on sustainable urban development has been signed between Copenhagen and Bogota.
5. Potential for mutual learning has been identified which was a prerequisite for high level support for the SSC in the City of Copenhagen.
6. Several Danish companies have expressed a strong desire to engage in the collaboration with the City of Bogota as well as EAAB and EPM within the selected focus areas.
7. As the two principal cities of Colombia the urban development of Bogota and Medellin are an inspiration to all cities in Colombia and the region and so holds great potential for the dissemination of Copenhagen solutions beyond the cooperation.

8. Two national level MoU's are in place between Colombia and Denmark on environment and transportation respectively. The work within the MoU's can contribute to a nationwide impact of the collaboration with Bogota and Medellin.

***Demand and commitment from partner authority***

All four focus areas will be part of the cooperation with the city of Bogota and EAAB. However, due to difficulties with identifying the right topics and partner departments within the city of Medellin and the need to focus the efforts, for now it has been decided to only work on water loss and wastewater with EPM in Medellin. In the future, maybe the cooperation with Medellin can be augmented with the topics of circular economy and/or mobility if resources permit it.

All involved partners from Bogota and Medellin have shown great interest and commitment to cooperation with Copenhagen within the identified areas. Other areas were considered but dismissed due to lack of interest from the Colombian side. Key contacts have been appointed and significant resources already put into developing plans for the cooperation from the Colombian side. All tracks in the cooperation fit into existing administrative plans and political goals for the development of Bogota and Medellin.

A partner assessment is presented in annex 1.

***Rationale for selection of cooperation focus areas***

Potential focus areas for the cooperation were identified by the sector counsellor during 2022. The areas were further explored during a visit of technical experts from the City of Copenhagen - including experts from BIOFOS and HOFOR - to Bogota and Medellin in April and May 2023 and afterwards via a number of online meetings and workshops between experts from Bogota, Medellin and Copenhagen.

Focus areas have been identified as areas with demand from Bogota and Medellin and significant potential for improvement as well as world leading expertise and available experts in Copenhagen.

All areas are key to a sustainable urban development with significant potential for contribution to Copenhagen's climate and solid waste plans as well as plans for green transition, economic development, and liveability.

***Identified strength and expected contributions from Danish public authority in area of focus***

The international strategy for Copenhagen forms the overall framework and direction for the international cooperation of the municipality. The strategy underlines that Copenhagen will prioritize international cooperation which has the aim of creating sustainable, viable cities that contribute positively to the global effort against the climate crisis. This strategic sector cooperation with Bogota and Medellin is fully in line with the priorities and goals in the strategy.



*Wastewater*

BIOFOS is the largest wastewater utility company in Denmark treating wastewater from 1.2 million people living in Greater Copenhagen Area. As one of the world's first wastewater utility companies BIOFOS was able to achieve a positive energy balance in 2014. Presently, the overall energy balance is 151% across BIOFOS 3 treatment plants. BIOFOS achieve this by using the resources contained in the wastewater for climate-friendly energy in the for the grid.

BIOFOS uses sludge from the wastewater to produce biogas which, when up-graded, is sent to the public grid. Residual sludge is incinerated and used for heating. At the same time treatment methods are optimised for energy savings in traditionally extremely energy consuming processes. EAAB in Bogota and EPM in Medellin have recently build new large wastewater treatment plants and they are very interested in learning from BIOFOS, how they can increase energy efficiency and production at their plants. This is highly realistic because the plants in the two Colombian cities have the same basic structure as the plants in Copenhagen. This means that Danish solutions can be installed as add-ons without fundamental changes to the Colombian plants.

*Water loss*

HOFOR is the largest utility in Denmark and has the responsibility for distributing drinking water for 1 million people in the greater Copenhagen area. HOFOR has about 7% non-revenue-water, which is one of the lowest in the world for a capital city. HOFOR uses an automatic leakage management strategy based on state-of-the-art technologies and procedures to keep the low water loss. Even though the distribution systems in Bogota and Medellin are not as advanced as in Copenhagen the HOFOR solutions can still be implemented in Colombia. For instance, EAAB and EPM can learn from methods such as segmentation of the pipe network, installation of online remote sensors to provide various very detailed and valuable data that can be used to detect water loss and generate alerts. Various techniques are used in the field to find leaks and HOFOR continuously improve the speed of repair, which EAAB and EPM are eager to learn from.

When HOFOR make decisions, they prioritize their activities and investment using data-driven asset management tools for pipe renewal planning. In this way HOFOR can optimize the lifecycle value of their assets and get most value for money while preserving the low level of water loss. This data driven approach can help decision-making and thus major savings at EEAB and EPM. They appear sufficiently professional to be able introduce solutions for data-driven decision-making inspired by HOFOR.

*Planning for bicycles and pedestrians*

The City of Copenhagen stands as a global example on urban planning for cycling and walking with innovative infrastructure, a holistic approach to urban development, and a cultural embrace of cycling.

Founded in data-driven decision-making and active engagement of civic society and private stakeholders, Copenhagen has a long history of delivering a safe and

comfortable cycling experience through a network of dedicated lanes, traffic calmed roads and car-free bridges for pedestrians and cyclists. The city's policies seamlessly integrate cycling and walking into broader urban plans, showcasing measurable impacts.

Copenhagen will contribute with knowledge on management of cycling infrastructure. The improved conditions for cyclist and pedestrians and better planning standards are expected to make cycling and walking more attractive, and lead to increased levels of active travel in Bogota as well as higher citizen acceptance of projects.

Copenhagen will share its knowledge on how to integrate cycling and walking in other policies such as environment, urban planning, health, and education. It provides a possible roadmap for the Colombian city to emulate and adapt these strategies in its own unique urban context.

*Solid waste management*

The backbone of the waste management system in Copenhagen is source separation. Nearly all citizens in Copenhagen have access to specific bins for biowaste, metals, plastics, paper, cardboard, and small electronics at their residence.

City of Copenhagen will contribute with capacity building relating to i) biowaste collection and treatment, ii) plastic waste management, and iii) behavioural design. The main focus will be on biowaste collection and treatment. City of Copenhagen has had a city-wide source separation scheme for food waste in place since 2017. We will share our hard earned and valuable experience relating to collection, procurement of treatment services, biodegradability. The aim is to contribute to specific, ongoing organic waste projects in Bogota.

In relation to plastic waste recycling, City of Copenhagen will contribute with an analysis of the plastics recycling opportunities in Bogota and support the implementation of ongoing activities in Bogota to improve plastic waste management including the Industrial Plastic Park project. Among other things, this include sparring and discussions with Colombian partners on solutions to specific challenges and development of recommendations based on Copenhagen's experience.

Lastly, in relation to behavioural design, Copenhagen will contribute to the district strategy for citizen engagement (Estrategia de Cultura Ciudadana Distrital) on waste collection and utilisation. The Copenhagen input is based on decades of strategic communication to citizens in order to improve separation of all the different waste fractions.

*Capacity building*

The primary focus of the SSC activities is capacity develop of our partner organisations. The most important tool for this is to work together on concrete projects. For this reason, all activities are designed to have experts from Copenhagen work together with their peers in Colombia. The more expert time spend work-

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|  | <p>ing directly with Colombians and the less time spend behind the desk in Copenhagen the better. Learning by doing together is much better than preparing consultancy style reports.</p> <p>This approach also has the advantage of better understanding the context that our partners work within. Only by trying to solve our partners actual challenges can we hope to help build capacity.</p> <p>For this reason, we have four main ways of working that are reflected in the work plan activities:</p> <ol style="list-style-type: none"> <li>1. Activities must be actual projects that our partners need to solve and have a political mandate to address.</li> <li>2. We work together on these activities and try to avoid documents and other one-sided deliverables produced in Copenhagen.</li> <li>3. All main activities include training sessions for staff beyond the personnel that are directly involved in the work.</li> <li>4. We engage with other entities and stakeholders that are key to the implementation of the output of the SSC, so that there is an institutional anchoring beyond the primary partner entity.</li> </ol> |
| <p><b>Sustainable Development and the Sustainable Development Goals (SDGs)<sup>2</sup></b></p> | <p>The cooperation will primarily contribute towards:</p> <ul style="list-style-type: none"> <li>• No Poverty (especially 1.4)</li> <li>• Clean Water and Sanitation (especially 6.4, 6.5, 6.6, 6A, 6B)</li> <li>• Industry, Innovation and Infrastructure (especially 9A)</li> <li>• Sustainable Cities and Communities (especially 11.3, 11.6, 11.7)</li> <li>• Ensure sustainable consumption and production patterns (especially 12.5)</li> <li>• Take urgent action to combat climate change and its impacts Climate Action (especially 13.1, 13.2, 13.3)</li> </ul>   |
| <p><b>Project Logic</b><br/><b>(Theory of Change)</b></p>                                      | <p>Our theory of change is demonstrated in one chart for the relations between actions, output, outcome and impact of the SSC.</p> <p>The theory of change chart represents the overall project SSC objective of contributing to a sustainable development and delivering on the Paris Agreement.</p> <p>Our ambition and expectation are that the actions and outputs defined in the work plans will have a significant outcome in terms of how our partners invest and operate. This in turn will improve their infrastructure and their operations generating both economic, environmental, and social impacts.</p>  |

<sup>2</sup> Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs. The SDGs (adopted 2015) is a plan of 17 interlinked and integrated goals to achieve sustainable development

## Guidelines for Strategic Sector Cooperation 2020, **TEMPLATE 3**

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|  | <p>In the following we describe the expected overall impacts. For a schematic overview see annex 2 ToC.</p> <p>The <i>outcomes</i> are the sphere of influence the outputs are intended to have on the general work of the City of Bogota as well as EAAB and EPM.</p> <p>The <i>objective</i> is the wider sphere of influence on Bogota and Medellin and beyond with the overall objective of delivering on the Paris Agreement and promoting socially and just green transition. This could be reduced pollution, better conditions for the poor or inspiration to other municipalities and utilities in the region that learn from the SSC results.</p> <p><b>Communication</b></p> <p>The project will be used to inspire water utilities across Colombia and beyond in Latin American to make improvements to reduce water loss and increase energy production. The project will also inspire cities across Colombia and beyond to make improvements to cycling and walking planning.</p> <p>The project will also enhance the water utilities and the City of Bogota's communication with citizens on waste collection and utilization as well as collaborate on specific waste related communication campaigns within the strategy developed with input from Copenhagen.</p> <p>Copenhagen will amongst other forums use the city network C40 to communicate project results and both Copenhagen and the embassy will communicate projects events and results on SoMe channels.</p> |
| <p><b>Main objective of SSC project</b></p>    | <p>The main objective is to contribute to a just green transition and improved conditions for the most poor and vulnerable Colombians through a sustainable urban development. For this purpose, Copenhagen will support Bogota and Medellin to improve service delivery, framework conditions and competence development in the following key areas:</p> <ol style="list-style-type: none"> <li>1. Wastewater treatment</li> <li>2. Water loss</li> <li>3. Solid waste management</li> <li>4. Mobility for cyclists and pedestrians</li> </ol>   |
| <p><b>Outcome A – Wastewater treatment</b></p> | <p>Empresas Publicas de Medellin (EPM) and Empresa de Acueducto y Alcantarillado de BOGOTA (EAAB) increase production of renewable energy from wastewater sludges, improve effluent and reduce energy consumption.</p> <p>The baselines for the 3 companies in Colombia are:</p> <p>Salitre, EAAB: 761.252 Nm<sup>3</sup> per month</p> <p>San Fernando, EPM: 414.748 Nm<sup>3</sup> per month</p> <p>Agua Clara, EPM: 959.195 Nm<sup>3</sup> per month</p>   |

## Guidelines for Strategic Sector Cooperation 2020, **TEMPLATE 3**

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|   | <p>The potential for an increased production has to be determined during the project period, but the goal will be to significantly increase the biogas production at the three plants over the three-year period.</p>  |
| <b>Output A.1</b>                         | <ul style="list-style-type: none"> <li>• EPM and EAAB capacitated to improve sludge utilization based on evaluation of possible uses</li> <li>• Business case prepared to optimize processes and energy consumption and to reduce struvite formation and increase biogas production.</li> <li>• Wastewater primary treatment improvements identified and piloted, and business case developed</li> <li>• EPM and EAAB capacities strengthened to improve asset management</li> </ul> |
| <b>Outcome B – Water loss</b>             | <p>Empresas Publicas de Medellin (EPM) and Empresa de Acueducto y Alcantarillado de BOGOTA (EAAB) reduces their loss of water from the distribution network.</p> <p>The baselines for the two companies are:</p> <p>Baseline: EAAB water loss in 2022, roughly 35 %.</p> <p>Baseline: EPM water loss in 2022, 31 %.</p>  |
| <b>Output B.1</b>                         | <ul style="list-style-type: none"> <li>• EPM and EAAB capacitated to improve leakage detection based on analysis of methodologies and pilot test</li> <li>• Business case prepared to optimize processes</li> <li>• Assess availability of necessary data for calculation of economically and environmentally ideal leakage level and pipe replacement</li> <li>• Identify elements for training sessions</li> </ul>   |
| <b>Outcome C - Solid waste management</b> | <p>Waste handling in Bogota follows more circular model with focus on reuse and recycling of solid waste relating to organic waste, plastic waste, and citizen involvement.</p> <p>The prior city government of Bogota had a goal to reach 10 % recycling by the end of 2023, but they did not manage to get close. The goal of the SSC is to assist the new city government in reaching the 10 % target by the end of 2027.</p>   |
| <b>Output C 1</b>                         | <ul style="list-style-type: none"> <li>• Bogota mobility department capacitated to improve urban planning for cycling and walking infrastructure in Bogota</li> <li>• Relevant indicators and stakeholders identified to focus on for optimization of infrastructure in Bogotá</li> <li>• Bogota capacitated to improve asset management</li> <li>• Business cases for prioritisation of infrastructure developed</li> </ul>   |
| <b>Outcome D - Mobility for cyclists</b>  | <p>Improved infrastructure planning facilitates increased number of commutes done by bicycling and walking in Bogota</p> <p>Baseline: In 2022 Bogota had less than 600 km of bicycle lanes. By the end of the project period, the goal is to have increased this to more than 800 km. This will</p>  |

## Guidelines for Strategic Sector Cooperation 2020, **TEMPLATE 3**

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| <b>and pedestrians</b>                              | support the local government in reaching its goal of 1000 km bicycle lanes by 2035.  |
| <b>Output D1</b>                                    | <ul style="list-style-type: none"> <li>• Bogota mobility department capacitated to improve urban planning for cycling and walking infrastructure in Bogota</li> <li>• Relevant indicators and stakeholders identified to focus on for optimization of infrastructure in Bogotá</li> <li>• Bogota capacitated to improve asset management</li> <li>• Business cases for prioritisation of infrastructure developed</li> </ul>   |
| <b>Assumptions and risks</b><br><br><b>½-1 page</b> | <p>Risks are identified and analysed in Annex 3: Risk Management.</p> <p>In terms of contextual risk, the most likely is drought and flooding increased by climate change. Two years ago Colombia saw heavy flooding and mudslides in many places and now a heavy drought is limiting water supply and energy production from hydro plants. The assumption for the SSC is that these events will happen. This, however disastrous, is not a direct problem to the SSC, because the water objectives become more relevant.</p> <p>Other severe contextual risks such as government collapse is highly unlikely, while increased armed conflict or social uprising is possible but highly unlikely to impact the SSC directly.</p> <p>The most severe risks for the SSC are programmatic. The political leadership at all level of partner administrations in Bogota create a risk of rapid shift in priorities. For this reason, we need to stay close to top leadership to ensure continued commitment. At the same time political appointments and short contracts at all levels create a likely risk of high personnel turnover jeopardizing continuity in the cooperation. As a consequence, the SSC needs to ensure a broad foundation by working with a wide range of local experts and include relevant stakeholders in the work. This risk is higher at the city administrations than with the water and wastewater utilities.</p> <p>Another important programmatic risk is corruption, that is widespread in Colombia and jeopardizes implementation of infrastructure projects within all four work areas. We need to insist on full transparency to minimize risks of corruption, but corruption is largely beyond the influence of the cooperation as we do not have responsibility for tender processes, financing, nor construction. Association with corrupt projects is also the main risk to Copenhagen and Denmark within the SSC.</p> <p>The main risk to participating Danish experts is the relatively high crime rate in Colombia. Risk of physical damage is extremely small, but petty crimes are widespread. For this reason, the experts need instructions on how to behave and where not to go in order to minimize the risk.</p> |
| <b>Management set-up</b>                            | <i>Project steering Committee</i>  |

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A steering committee is established for each city with the following members:

In Bogota:

City of Copenhagen:

- Jakob Heltoft, Head of Division for Business & International Affairs, Lord Mayor's Administration (Økonomiforvaltningen)

City of Bogota:

- Sandra Borda, High Counselor for International Relations
- Claudia Diaz, Secretary of Mobility of Bogota
- Vanessa Velasco, Secretary of Habitat of Bogota

Danish Ministry of Foreign Affairs:

- Erik Høegh, Ambassador of Denmark in Colombia

In Medellin:

City of Copenhagen:

- Jakob Heltoft, Head of Division for Business & International Affairs, Lord Mayor's Administration (Økonomiforvaltningen)
- Dan Fredskov, Director og planning and projects, BIOFOS
- Jesper Elkjær, head of section, HOFOR

Danish Ministry of Foreign Affairs:

- Erik Høegh, Ambassador of Denmark in Colombia

EPM:

- Leon Arturo Yepes Enriquez, Director of wastewater
- Andrea Patricia Laverde Bermudez, Director of wáter loss control
- Henry Parra Molina, President of Aguas Nacionales
- Victor Giraldo Calderon, Director of cooperation for sustainability

*Mandate and number of meetings*

The two Steering Committees will monitor progress in delivering on agreed work plan and outputs. Discuss and suggest changes to the work plan relative to changes in context, risks and identified critical assumptions. The Steering Committee will approve annual work plans. Additionally, the Steering Committee can include high level strategic discussions and dialogues on sector specific development, green transition and inclusive growth and sustainable development. The

## Guidelines for Strategic Sector Cooperation 2020, **TEMPLATE 3**

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|  | <p>Danish Authority will ensure that the SSC project is fully aligned with the MFA AMG and other guidelines.</p> <p>The two steering committees will meet annually. Extraordinary meetings may be called at the request of any member.</p> <p><i>Operational management</i></p> <p>The operational management for each track in each city is comprised of the focal points from both cities, the sector counsellor, and the City of Copenhagen project manager. Heads of BIOFOS, HOFOR and the Technical and Environmental department are included in relevant decisions.</p> <p><i>Coordination between the embassy/ sector counsellor and the Danish public authority</i></p> <p>The project manager and the sector counsellor will have fixed online meetings every week. The Ambassador and the City of Copenhagen Head of division for Business &amp; International Affairs are involved as needed and will meet regularly.</p> <p><i>Financial management and reporting</i></p> <p>The project will follow the overall MFA requirements for financial management outlined in the Annex to Danida Guidelines for Financial Management for Danish Authorities engaging in Danish officially financed Development Assistance.</p> |
| <p><b>Contributions from Danish Public Authority</b></p> | <p>The city of Copenhagen has assigned expert focal points for each of the four cooperation tracks. One focal point from BIOFOS on wastewater management, one focal point from HOFOR on water loss, two focal points from the Technical and Environmental Administration for the tracks on solid waste management and one for mobility for cyclist and pedestrians. Focal points have each established core groups of experts expected to be involved at relevant phases of the project. Focal points in coordination with the project manager and the sector counsellor, continuously assess the need for involvement of relevant experts.</p> <p><i>TOR for specialist travelling on a SSC assignment</i></p> <p>For each specialist traveling on a SSC assignment to Colombia a brief document with purpose and program of the trip is made and approved by the City of Copenhagen, the Danish Embassy and the relevant partner organization. The purpose and program will be revised during the trip. When the trip is finalized results and next steps are added and the document can then serve as a Mission report.</p>   |
| <p><b>Contributions from partner authority</b></p>       | <p>The city of Bogota has assigned expert focal points for the four cooperation tracks. The tracks on wastewater and water loss are led by EAAB.</p> <p>EPM in Medellin has assigned expert focal points for the two tracks on wastewater and water loss.</p> <p>Focal points have during the inception phase, involved other relevant parts of the administration in both Bogota and Medellin and will lead the cooperation and internal coordination for the full SSC project.</p>   |

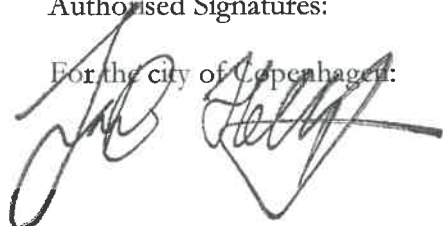


## Guidelines for Strategic Sector Cooperation 2020, **TEMPLATE 3**

|   | The content of the programme as it is formulated in this project document have been preliminarily approved by relevant managers in the respective partner authorities. (Work programmes annex 4-7)  |                  |                  |                   |             |                  |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |
|---|---|------------------|------------------|-------------------|-------------|------------------|------------------|-----|-----|-----|-----|------------------------------|-----------|-----------|-----------|------------|-------|---|---------|---------|---------|-----------|-------|--|---------|---------|---------|---------|------|---|--------|---------|---------|-----------|------|---|--------|--------|--------|---------|------|--------------------|------------------|------------------|------------------|-------------------|-------------|
| <b>Budget</b>                                 | <p>Full budget presented in annex 8.</p> <p>MFA Grant</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: right;"> <thead> <tr> <th rowspan="2"></th> <th>2024</th> <th>2025</th> <th>2026</th> <th>Total</th> <th rowspan="2">% of grand total</th> </tr> <tr> <th>DKK</th> <th>DKK</th> <th>DKK</th> <th>DKK</th> </tr> </thead> <tbody> <tr> <td>Personnel – Danish Authority</td> <td>2.586.204</td> <td>3.748.388</td> <td>3.825.477</td> <td>10.533.989</td> <td>71,3%</td> </tr> <tr> <td>Reimbursable costs for Danish Authority Staff</td> <td>665.754</td> <td>629.876</td> <td>629.876</td> <td>1.926.539</td> <td>13,0%</td> </tr> <tr> <td>Activities, including Capacity development</td> <td>254.000</td> <td>254.000</td> <td>254.000</td> <td>762.000</td> <td>5,2%</td> </tr> <tr> <td>Consultancies (max. 30% of grand total)</td> <td>50.000</td> <td>880.500</td> <td>485.000</td> <td>1.395.000</td> <td>9,4%</td> </tr> <tr> <td>Unallocated funds (max. 20% of grand total)</td> <td>25.000</td> <td>50.000</td> <td>75.000</td> <td>150.000</td> <td>1,0%</td> </tr> <tr> <td><b>Grand total</b></td> <td><b>5.955.988</b></td> <td><b>5.562.164</b></td> <td><b>5.249.353</b></td> <td><b>14.767.505</b></td> <td><b>100%</b></td> </tr> </tbody> </table> |                  | 2024             | 2025              | 2026        | Total            | % of grand total | DKK | DKK | DKK | DKK | Personnel – Danish Authority | 2.586.204 | 3.748.388 | 3.825.477 | 10.533.989 | 71,3% | Reimbursable costs for Danish Authority Staff | 665.754 | 629.876 | 629.876 | 1.926.539 | 13,0% | Activities, including Capacity development | 254.000 | 254.000 | 254.000 | 762.000 | 5,2% | Consultancies (max. 30% of grand total) | 50.000 | 880.500 | 485.000 | 1.395.000 | 9,4% | Unallocated funds (max. 20% of grand total) | 25.000 | 50.000 | 75.000 | 150.000 | 1,0% | <b>Grand total</b> | <b>5.955.988</b> | <b>5.562.164</b> | <b>5.249.353</b> | <b>14.767.505</b> | <b>100%</b> |
|   | 2024  |                  | 2025             | 2026              | Total       | % of grand total |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |
|   | DKK   | DKK              | DKK              | DKK               |             |                  |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |
| Personnel – Danish Authority                  | 2.586.204   | 3.748.388        | 3.825.477        | 10.533.989        | 71,3%       |                  |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |
| Reimbursable costs for Danish Authority Staff | 665.754   | 629.876          | 629.876          | 1.926.539         | 13,0%       |                  |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |
| Activities, including Capacity development    | 254.000   | 254.000          | 254.000          | 762.000           | 5,2%        |                  |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |
| Consultancies (max. 30% of grand total)       | 50.000  | 880.500          | 485.000          | 1.395.000         | 9,4%        |                  |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |
| Unallocated funds (max. 20% of grand total)   | 25.000  | 50.000           | 75.000           | 150.000           | 1,0%        |                  |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |
| <b>Grand total</b>                            | <b>5.955.988</b>  | <b>5.562.164</b> | <b>5.249.353</b> | <b>14.767.505</b> | <b>100%</b> |                  |                  |     |     |     |     |                              |           |           |           |            |       |   |         |         |         |           |       |  |         |         |         |         |      |   |        |         |         |           |      |   |        |        |        |         |      |                    |                  |                  |                  |                   |             |

Authorised Signatures:

For the city of Copenhagen:



Jakob Heltoft

Head of Division for Business & International Affairs,

Lord Mayor's Administration

## ANNEX 1: PARTNER ASSESSMENT

### 1. **Brief presentation of partners**

In the SSC Copenhagen will partner with the cities of Bogota and Medellin. Bogotá is the capital and most populous city of Colombia. It houses over 7.6 million people with a high population density around 4,500 people per square kilometre mainly due to its placement in a valley in the Andean Mountains at 2600 meters above sea level. Medellín has a population of some 2 million and even higher population density at an estimated 5,000 people per square kilometer. Medellín sits at 1400 meters above sea level in a rather narrow Andean valley with urban sprawl up the sides of the mountains.

In Bogota the SSC include four topics. Two with the City administration represented by UAESP on solid waste management and the mobility administration on bicycling and pedestrian infrastructure. In Medellín the cooperation is only planned to include the two water related issues in cooperation with Empresas Publicas de Medellín (EPM).

Bogota and Medellín's government operates under a Mayor-Council system, with the popularly elected Mayor leading the executive branch and the City Council holding legislative power. Both have decentralized local government entities manage specific sectors like solid waste and water. In addition, Bogota has a special administrative status as a district capital of Colombia. This grants it greater autonomy compared to other Colombian municipalities.

Bogota and Medellín were found to have substantial needs in areas that match particularly strong expertise of the City of Copenhagen. Bogota and Medellín and their respective water and wastewater utilities, EPM and EEAB, have shown keen interest in Danish solutions in the selected areas and they generally have the organisational capacity to implement them. There are plans within the SSC to take advantage of synergies between the activities on water and sanitation with EPM and EEAB.

Relations between the City of Copenhagen, Bogota and Medellín have been established and an MoU on sustainable urban development has been signed between Copenhagen and Bogota.

As the two principal cities of Colombia the urban development of Bogota and Medellín are an inspiration to all cities in Colombia and the region and so holds great potential for the dissemination of Copenhagen solutions beyond the cooperation.

Two national level MoU's are in place between Colombia and Denmark on environment and transportation respectively. The work within the MoU's can contribute to a nationwide impact of the collaboration with Bogota and Medellín.

## 2. Summary of partner capacity assessment

Bagota and Medellin have relatively stable public administrations and institutions that are able to govern in most of their territory and are among the least corrupt cities in Colombia. However, they lack strong institutions and governance making them vulnerable to corruption and favouritism. Furthermore, transparency in the interactions between interest groups and policymakers is not regulated by law in Colombia. These issues make it easier for officials to collude with private companies increasing risk of unfair contracts or inflated prices. Also, favouritism towards friends and family in awarding contracts can limit competition. As a consequence, it is particularly important to be aware of corruption risks when working on issues related to infrastructure investments in Colombia.

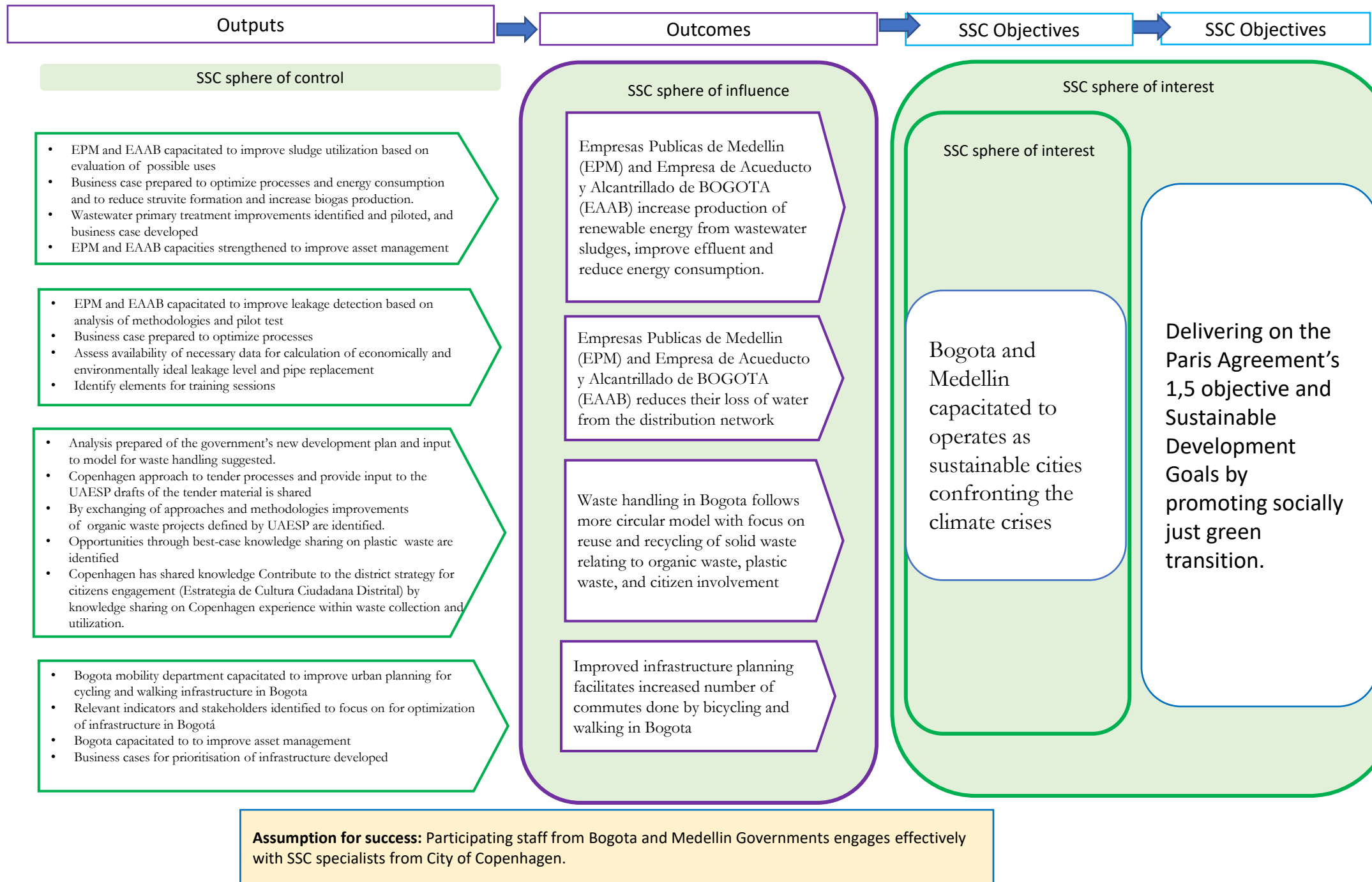
Crime is one of the largest concerns of citizens in both Bogota and Medellin. Generally the larger Colombian cities see higher crime rates. The population density and large scale settlement of millions of internally displaced people and refugees from Venezuela has led to large informal settlements with very little government control, which increase the concentration and risk of crime in the two cities. Projects ought to reassure robust security plans that address potential crime and involve and collaborate with local authorities.

## 3. Summary of key partner features

| Name of Partner          | Core business<br><i>What is the main business, interest and goal of the partner?</i>                            | Importance<br><i>How important is the project/ programme for the partner's activity-level (Low, medium high)?</i> | Influence<br><i>How much influence does the partner have over the project/programme (low, medium, high)?</i>   | Contribution<br><i>What will be the partner's main contribution?</i>  | Capacity<br><i>What are the main issues emerging from the assessment of the partner's capacity?</i>   | Exit strategy<br><i>What is the strategy for exiting the partnership?</i>  |
|--------------------------|---|---|--|---|---|--|
| Alcaldia Mayor de Bogota | Set political direction for the entire city administration and coordinate activities between the city entities. | Low, it is a very large municipality and a small project in the grand scheme of things.                           | High, as we do not engage in activities that the partner is not fully on board with so in effect Bogota can veto anything we do with them.<br><br>It probably should be "very high" as the top political leadership of Bogota can effectively shut down the entire SSC if they pull their commitment to the cooperation. | The partner is the main actor. Their contribution will be to make overall political decisions on how to advance at a strategic level and coordinate between the other partner entities of the City of Bogota. | The Alcaldia Mayor is a relatively well functioning politically led public organization. The city government is able to make decisions and has the capacity to implement projects. The greatest weaknesses to the city's capacity in general is: <ul style="list-style-type: none"> <li>All leaders in the organization are politically selected and exchanged at least after each</li> </ul> | Because of the obligatory change in political leadership and high employee turnover it is crucial to ensure solid anchoring of each SSC deliverable beyond the directly involved personnel and political leaders. Main tools for this are to engage with entities beyond our direct partners and training of personnel beyond the people directly involved with the cooperation. |

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|--|---|--|---|--|--|--|
|  |   |  |   |  | <p>election every four years – often more frequently.</p> <ul style="list-style-type: none"> <li>• Non-political staff have very poor career perspectives, low pay and often insecure contracts creating a very high degree of staff turnover.</li> <li>• Infrastructure projects are subject to political whims and risk of corruption throughout their development and implementation making them volatile.</li> </ul> |  |
| Secretaria Distrital de Movilidad (SDM)                      | Plan for the development of mobility infrastructure in Bogota as well as develop and execute initiatives to promote safe and sustainable transport. | Medium, as the mobility activities are of high significance for the division of cyclist and pedestrian mobility.               | High, as we do not engage in activities that the partner is not fully on board with so in effect SDM can veto anything we do with them.   | The partner is the main actor. Their contribution will be to make decisions on how to advance, dedicate personnel to the tasks, provide financing for implementation, and approve every product of the SSC before it is finalized. | The office of Cyclist and pedestrian mobility does not seem to hold much power over decisions on the overall development of transport infrastructure. They rely heavily on ad-hoc agreements with other entities. Often the implementing agencies alter infrastructure projects coming from our partner before it is constructed.  | It is crucial to align the cyclist and pedestrian office with other offices within the SDM and with other entities of the City administration. In particular, activities need to be coordinated with IDU, the infrastructure construction company of the City. |
| Unidad Administrativa Especial de Servicios Públicos (UAESP) | Provide a range of public utility services to the citizens of Bogota  | Medium, as although it is a very large organisation, right now they are developing a new model for their solid waste handling. | High, as we do not engage in activities that the partner is not fully on board with so in effect UAESP can veto anything we do with them. | The partner is the main actor. Their contribution will be to make decisions on how to advance, dedicate personnel to the tasks, provide financing for implementation, and approve every product                                    | UAESP seems the most poorly organized partner of the SSC and as the only partner it has been hit by a recent corruption scandal.<br><br>Long term decision making and planning   | Because of the obligatory change in political leadership and high employee turnover it is crucial to ensure solid anchoring of the activities beyond the directly involved   |

|   |   |  |  |  |   |   |
|---|---|--|--|--|---|---|
|   |   |  |  | of the SSC before it is finalized.   | heavily suffers in the organization with a high degree of political influence on decision making and a history of quick rotation of the political leaders.  | personnel and political leaders.  |
| Acueducto y Alcantarillado de Bogota (EAAB) | Provide drinking water and manage wastewater in the greater Bogota region.  | Low, it is an immense public utility and a relative small cooperation. | High, as we do not engage in activities that the partner is not fully on board with so in effect EAAB can veto anything we do with them. | The partner is the main actor. Their contribution will be to make decisions on how to advance, dedicate personnel to the tasks, provide financing for implementation, and approve every product of the SSC before it is fully implemented. | EAAB is a large and well organized organization with skilled engineers that can absorb our contribution based on the Copenhagen experience. The greatest challenge is that the organization at times is too large for its own good and coordination across sectors and projects is difficult. At the same time resources are scarce and in heavy competition between sectors. | All the main SSC activities with EAAB will include training of local staff in use of the adopted solutions. In addition, we plan to develop simple guides to the implemented solutions and business plans on their possible implementation throughout the service area of EAAB. |
| Empresas Publicas de Medellin (EPM)         | Provide drinking water and manage wastewater as well as produce and supply energy and gas and handle solid waste in the greater Medellin region as well as provide some of these services in several other cities in Latin America. | Low, it is an immense public utility and a relative small cooperation. | High, as we do not engage in activities that the partner is not fully on board with so in effect EPM can veto anything we do with them.  | The partner is the main actor. Their contribution will be to make decisions on how to advance, dedicate personnel to the tasks, provide financing for implementation, and approve every product of the SSC before it is fully implemented. | EPM is a large and very capable organization with skilled engineers that can absorb our contribution based on the Copenhagen experience.  | All the main SSC activities with EPM include training of local staff in use of the adopted solutions. In addition, we plan to develop simple guides to the implemented solutions and business plans on their possible implementation throughout the service area of Acueducto.  |



## ANNEX 3: RISK MANAGEMENT

### Contextual risks

| Risk Factor                                    | Likelihood    | Impact      | Risk response  | Residual risk  | Background to assessment   |
|--|---------------|-------------|--|--|--|
| <i>Political</i>                               |               |             |  |  |  |
| Collapse of national or city government        | Very unlikely | Significant | Consider closure of programme                                | Collapse worsened by donors pulling out.                                       | Governance is volatile in Colombia and collapse or hostile takeover not impossible, but Colombia has remained relatively stable over the last decades.   |
| <i>Economic</i>                                |               |             |  |  |  |
| Radical change in the political economy        | Very unlikely | Major       | Adjust programme to function economic change                 | Reinforce reforms that hamper free trade and impoverish Colombia.              | Colombia has its first left wing government and there is fear of replication of development in Venezuela. However, so far that fear has proved exaggerated.  |
| <i>Societal</i>                                |               |             |  |  |  |
| Widespread social uprising                     | Unlikely      | Minor       | Re-evaluate safety of experts and viability of each activity | Pause of activities can jeopardize progress.                                   | 2021 saw widespread social uprising in most Colombian cities. This could happen again as underlying problems have not been solved. Risk particularly high in combination with collapse of the present left-wing government.    |
| <i>Environment</i>                             |               |             |  |  |  |
| Flooding and droughts                          | Likely        | Minor       | Adjustments of specific activities as needed.                | In extreme cases activities within the SSC can become impossible to implement. | A combination of climate change and the El Niño and La Niña phenomenon has increased flood and drought risks in Colombia. The recurrent earthquakes are very unlikely to impact the programme.                                 |
| <i>Security</i>                                |               |             |  |  |  |
| Violent conflict re-emerge in Colombian cities | Unlikely      | Minor       | Re-evaluate safety of experts and viability of each activity | Pause of activities can jeopardize progress.                                   | Colombia has experienced waves of internal armed conflict for centuries. The current peace treaty with FARC may collapse and armed mafias increase their activities to a level that see violent re-emerge in Colombian cities. |

**Programmatic risks** (for bilateral programmes at the country level, it has to be filled out for the portfolio under each strategic objective)

| Risk Factor   | Likelihood  | Impact      | Risk response  | Residual risk  | Background to assessment   |
|---|-------------|-------------|--|--|--|
| High turnover among partner personnel               | Very likely | Major       | Ensure cooperation is spread out beyond one institution and a few employees  | No one partner institution or employee see themselves as responsible for advancing the cooperation.  | Widespread political appointment of personnel at public institutions at all levels creates a very high employee turnover, which is a severe concern for the cooperation.   |
| Programme covers too many objectives and two cities | Likely      | Minor       | Be ready to downsize the programme if any one objective turns out too hard to pursue or a partner turn out to be too difficult to work with.                                     | Having initiated work on an objective or established a relation to a partner may waste resources already spend and damage Copenhagen and Denmark reputation. | The SSC with two cities and four main objectives is more complex than most SSC. This comes with a risk of spreading the resources too thin to achieve the objectives.  |
| Corruption impacts implementation                   | Likely      | Significant | Ensure maximum transparency, but corruption is largely beyond the influence of the cooperation as we do not have responsibility for tender processes, financing or construction. | Transparency can make it harder to work closely with partners.   | All tracks within the SSC concern public infrastructure, that are prime targets for corruptions. Colombia is marred by widespread corruption, which can happen within our activities.  |
| Shift of political focus                            | Unlikely    | Major       | Adjust or close down activities as needed  | Help increase political volatility that already heavily impact the governance capacity in Colombia.  | Local governments in Colombia are only allowed one period of four years. This and other factors make political focus particularly short sighted and volatile. The cooperation needs political backing to succeed, so we cannot ignore shifts in political focus. |

### Institutional risks

| <b>Risk Factor</b>                                   | <b>Likelihood</b> | <b>Impact</b> | <b>Risk response</b>   | <b>Residual risk</b>  | <b>Background to assessment</b>   |
|--|-------------------|---------------|--|---|---|
| Local crime  | Likely            | Major         | Instruct Danish experts on how to minimize crime exposure  | Activities are limited by where experts can go and what they can do.  | Crime is widespread in Bogota and Colombia and seem to be rising. Experts are likely to be exposed to petty crime, while risk of violent crime is minimal, but not zero.  |
| Copenhagen and Denmark is associated with corruption | Unlikely          | Major         | Insist on full transparency in all activities and pull out with well-founded indications of corruption | Transparency can make it harder to work closely with partners and wasted resources for all involved if we pull out. | All tracks within the SSC concern public infrastructure, that are prime targets for corruptions. Colombia is marred by widespread corruption, which can happen within our activities. And end up damaging Copenhagen's and Denmark's image. |



## ANNEX 7: SUMMARY OF RECOMMENDATIONS

|   |   |
|---|---|
| <b>Title of Project</b>   | <b>Strategic Sector Cooperation in Sustainable Urban Development between The cities of Bogota, Medellin and Copenhagen</b>  |
| <b>File number/F2 reference</b>   | <b>24/02636</b>   |
| <b>Appraisal report date</b>  | <b>April 2024</b>   |
| <b>Council for Development Policy meeting date</b>  | <b>N/A</b>  |
| <p><b>Summary of possible recommendations not followed</b><br/> <b>Recommendation #7</b> recommends to establish an output based budget for the project. City of Copenhagen prefers to continue working on the basis of current SSC guidelines but is prepared to prepare an output based budget in connection with preparations of a MYNSAM 2.0 frame agreement.</p> |   |
| <p><b>Overall conclusions of the appraisal</b><br/> The overall conclusion of the appraisal is that the proposed project is <i>recommended for approval with adjustments</i> taking the recommendations of the appraisal report into consideration</p>  |   |
| <b>Recommendations by the appraisal team</b>  | <b>Follow up by the responsible unit</b>  |
| <p><b>Recommendation #1:</b> The PD is supplemented with a partner assessment (applying AMG Annex 2) and a section on political economy should be prepared as part of the inception to guide implementation and oversight by the steering committees.</p>   | OK accepted   |
| <p><b>Recommendation #2:</b> Present in the PD the narrative ToC amalgamating the entire SSC between City of Copenhagen and Bogota and Medellin with focus on capacity development in specific thematic areas of sustainable urban development and present this in a one-graphic illustration of the support.</p>   | OK accepted   |
| <p><b>Recommendation #3:</b> Recognize that the SSC is capacity development only, by preparing a short section on approaches to capacity development that will be applied in the support and adjust the level of ambitions of outputs accordingly with realistic indicators at both outcome and output level.</p>   | OK accepted   |
| <p><b>Recommendation #4:</b> The composition of the two Steering Committees should carefully be considered to ensure relevant representation in both steering committees. Also, the mandate and number of meetings for the two Steering Committees should clearly emerge from the PD.</p>   | The composition of the two steering committees has been reconsidered, so the embassy and the City of Copenhagen are represented in both. Mandate will be based on template 13 from SSC guideline 2020 and mandate and number of meetings clarified in the PD. |


|   |  |
|---|--|
| <p><b>Recommendation #5:</b> Include procedures to prepare TOR for each specialist traveling on an SSC assignment to Colombian and include in the decision-making process that the TOR are approved by the Colombian SSC partner before any assignment is carried out.</p>  | <p>OK accepted</p>   |
| <p><b>Recommendation #6:</b> Describe and establish a reporting and monitoring system that will provide overview of progress, ease operational management, and facilitate Steering Committee meetings and their decision making.</p>  | <p>OK accepted. A review and monitoring system will be prepared as part of inception.</p>  |
| <p><b>Recommendation #7:</b> Prepare an output-based budget in DKK summarized per outcomes and present this in the PDs budget section.</p>  | <p>Output based budget is not required for SSC projects. It will be prepared as part of the preparations for a framework agreement that Copenhagen City intend to enter with the MFA by the end of 2023.</p> |
| <p><b>Recommendation #8:</b> Financial management and reporting should be summarized in the PD and make reference to the overall MFA requirements for financial management outlined in <u><i>Annex to Danida Guidelines for Financial Management for Danish Authorities engaging in Danish officially financed Development Assistance</i></u></p> | <p>OK accepted</p>   |
| <p><b>Recommendation #9:</b> Turn uncertain assumptions into risks and apply the AMG risk management matrix to guide a proper analysis of risks and their associated mitigation measures.</p>   | <p>OK accepted</p>   |

I hereby confirm that the appraisal team has identified the above-mentioned issues and provided the corresponding recommendations as stated above to be addressed properly in the follow-up to the appraisal.

Signed in  on the 24/4/2024

/GDK

I hereby confirm that the responsible unit has undertaken the follow-up activities as stated above. In cases where appraisal recommendations have not been accepted, reasons for these are given either in the table or in the notes enclosed.

Signed in  on the 24/4 - 24  
 Head of Unit/GDK

KARIN POULSEN

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**TEMPLATE 5A: Distribution of Activities/Workdays**

Country: Sector: MFA File No. : 201X-XXXX

|   | 2024 |     |     |     | 2025 |     |     |     | 2026 |     |     |     | 2024 | 2025 | 2026 | Total |      |
|---|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|------|------|------|-------|------|
|   | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  | Q3  | Q4  |      |      |      |       |      |
| <b>Output 1: Waste water management track</b>   |      |     |     |     |      |     |     |     |      |     |     |     |      |      |      |       |      |
| Activity 1.1: Investigation of the plants Salitre and San Fernando and Aguas Claras as well as discharge points along Bogota River        | 15   | 20  | 25  |     |      |     |     |     |      |     |     |     |      | 60   | 0    | 0     | 60   |
| Activity 1.2: Analysis of process data  |      | 15  | 15  | 10  |      |     |     |     |      |     |     |     |      | 40   | 0    | 0     | 40   |
| Activity 1.3 Discription of pilots  |      |     | 15  | 15  | 5    | 5   | 10  |     |      |     |     |     |      | 30   | 20   | 0     | 50   |
| Activity 1.4 Implementation and assessment of pilots  |      |     |     |     | 15   | 15  | 15  | 10  | 20   |     |     |     |      | 0    | 55   | 20    | 75   |
| Activity 1.5 Sludge incineration plant study  |      | 20  | 20  | 20  | 5    | 10  | 5   | 5   | 15   | 10  |     |     |      | 60   | 25   | 25    | 110  |
| Activity 1.6 Analyse sludge utilization options   |      |     |     | 20  | 5    | 15  | 15  | 5   | 20   | 10  |     |     |      | 20   | 40   | 30    | 90   |
| Activity 1.7 Asset management study   |      |     |     |     |      |     | 10  | 10  |      |     |     |     |      | 0    | 20   | 0     | 20   |
| Activity 1.8 Asset management white paper   |      |     |     |     |      |     |     | 5   | 15   | 10  |     |     |      | 0    | 5    | 25    | 30   |
| Activity 1.9 Training   |      |     |     |     |      |     | 15  | 10  | 15   | 20  | 15  | 20  |      | 0    | 25   | 70    | 95   |
| Activity 1.9.1 Nationwide and global sharing  |      |     |     |     |      | 5   | 5   | 5   | 10   | 10  | 10  | 10  |      | 0    | 15   | 40    | 55   |
| <b>Total Output</b>   | 15   | 55  | 75  | 65  | 30   | 50  | 75  | 50  | 95   | 60  | 25  | 30  |      | 210  | 205  | 210   | 625  |
| <b>Output 2: Water loss track</b>   |      |     |     |     |      |     |     |     |      |     |     |     |      |      |      |       |      |
| Activity 2.1: Leakage detection: Analysis of methodologies  | 5    | 10  |     |     |      |     |     |     |      |     |     |     |      | 15   | 0    | 0     | 15   |
| Activity 2.2 Leakage detection: Test of methodologies   |      |     | 10  | 15  | 5    | 20  | 5   | 5   |      |     |     |     |      | 25   | 35   | 0     | 60   |
| Activity 2.3 Leakage detection: Business cases for improvement  |      |     |     |     |      |     | 15  | 10  | 10   | 10  | 10  | 10  |      | 0    | 25   | 40    | 65   |
| Activity 2.4 Ideal leakage level: Data assessment   | 10   | 10  |     |     |      |     |     |     |      |     |     |     |      | 20   | 0    | 0     | 20   |
| Activity 2.5 Ideal leakage level: Calculation   |      |     | 10  | 10  | 5    | 10  | 5   | 10  |      |     |     |     |      | 20   | 30   | 0     | 50   |
| Activity 2.6 Pipe replacement planning: Data assessment   |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
| Activity 2.7 Pipe replacement planning: Data collection and planning  |      |     |     | 15  | 5    | 20  | 20  | 5   | 20   | 10  | 20  | 5   |      | 15   | 50   | 55    | 120  |
| Activity 2.8 Training and Management introduction   |      |     |     |     |      |     |     | 5   | 10   | 20  | 10  | 5   |      | 0    | 5    | 45    | 50   |
| Activity 2.9 Nationwide and global sharing  |      |     |     |     |      | 2   | 2   | 2   | 5    | 5   | 5   | 5   |      | 0    | 6    | 20    | 26   |
| <b>Total Output</b>   | 15   | 20  | 20  | 25  | 10   | 30  | 45  | 37  | 10   | 10  | 10  | 10  |      | 95   | 151  | 160   | 406  |
| <b>Output 3 Cycling and walking planning</b>  |      |     |     |     |      |     |     |     |      |     |     |     |      |      |      |       |      |
| Activity 3.1 Kick-off capacity building   | 10   | 10  | 5   |     |      |     |     |     |      |     |     |     |      | 25   | 0    | 0     | 25   |
| Activity 3.2 Analysis of cycling and walking network, asset   |      | 5   | 10  | 5   |      |     |     |     |      |     |     |     |      | 20   | 0    | 0     | 20   |
| Activity 3.3 First draft of asset management guidelines   |      |     |     | 10  |      |     |     |     |      |     |     |     |      | 10   | 0    | 0     | 10   |
| Activity 3.4 Test of indicators and methodologies towards guidelines  |      |     |     | 5   |      |     |     |     |      |     |     |     |      | 5    | 0    | 0     | 5    |
| Activity 3.5 Identifying concrete types of indicators and cycling and walking infrastructure to test                                      |      |     |     |     | 20   |     |     |     |      |     |     |     |      | 0    | 20   | 0     | 20   |
| Activity 3.6 Creation of work plan and procedures to be evaluated for cycling infrastructure asset management                             |      |     |     |     | 10   |     |     |     |      |     |     |     |      | 0    | 10   | 0     | 10   |
| Activity 3.7 Assessment of data needs and input to create a pilot   |      |     |     |     | 20   | 20  |     |     |      |     |     |     |      | 0    | 40   | 0     | 40   |
| Activity 3.8 xxxxx  |      |     |     |     |      |     | 20  |     |      |     |     |     |      | 0    | 20   | 0     | 20   |
| Activity 3.9 Final product for asset management guidelines  |      |     |     |     |      |     | 10  | 25  |      |     |     |     |      | 0    | 35   | 0     | 35   |
| Activity 3.9.1 Definition of relevant pilot project mentioned in 3.7 for a future full-scale demonstration of optimal technical solotions |      |     |     |     |      |     |     |     | 30   | 30  | 20  |     |      | 0    | 0    | 80    | 80   |
| Activity 3.9.2 Final project report, event and way forward, visit Bogota  |      |     |     |     |      |     |     |     |      |     |     | 25  |      | 0    | 0    | 25    | 25   |
| Activity 3.9.3 Nationwide and global sharing  |      |     |     |     |      |     |     |     |      |     |     | 15  |      | 0    | 0    | 15    | 15   |
| <b>Total Output</b>   | 10   | 15  | 15  | 20  | 50   | 20  | 30  | 25  | 30   | 30  | 20  | 40  |      | 60   | 125  | 120   | 305  |
| <b>Output 4 Solid waste management track</b>  |      |     |     |     |      |     |     |     |      |     |     |     |      |      |      |       |      |
| Activity 4.1 Integrate organic waste initiative and objectives into the priorities og the new city administration                         | 10   | 10  |     |     |      |     |     |     |      |     |     |     |      | 20   | 0    | 0     | 20   |
| Activity 4.2 Improvement study on organic waste projects  |      |     | 5   | 10  |      |     |     |     |      |     |     |     |      | 15   | 0    | 0     | 15   |
| Activity 4.3 Analysis of the plastic recycling opportunities  | 5    | 10  |     |     |      |     |     |     |      |     |     |     |      | 15   | 0    | 0     | 15   |
| Activity 4.4 Support implementation of plastic waste activities   |      |     | 5   | 10  | 10   | 20  | 10  | 20  | 25   | 25  | 25  |     |      | 15   | 60   | 75    | 150  |
| Activity 4.5 Offer technical support/assistatnce on a plastic project, based on the needs of Bogota                                       |      |     | 5   | 10  |      |     |     |     |      |     |     |     |      | 15   | 0    | 0     | 15   |
| Activity 4.6 One week knowledge exchange on behavioural change initiatives  |      |     |     | 10  | 10   | 10  | 15  | 10  |      |     |     |     |      | 10   | 45   | 0     | 55   |
| Activity 6.7 Support, knowledge sharing and assistance in development of communication eefforts, based on the needs of Bogota             |      |     |     |     |      |     |     |     |      |     | 20  | 15  |      | 0    | 0    | 35    | 35   |
| <b>Total Output</b>   | 15   | 20  | 15  | 40  | 20   | 30  | 25  | 30  | 25   | 25  | 45  | 15  |      | 90   | 105  | 110   | 305  |
| <b>Project management and expert support</b>  |      |     |     |     |      |     |     |     |      |     |     |     |      |      |      |       |      |
| Project management and expert support   | 10   | 20  | 30  | 30  | 30   | 30  | 30  | 30  | 30   | 30  | 30  | 30  |      | 90   | 120  | 120   | 330  |
|   |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
|   |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
|   |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
|   |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
| <b>Total Output</b>   | 10   | 20  | 30  | 30  | 30   | 30  | 30  | 30  | 30   | 30  | 30  | 30  |      | 90   | 120  | 120   | 330  |
| <b>Output 6</b>   |      |     |     |     |      |     |     |     |      |     |     |     |      |      |      |       |      |
| Activity 6.1  |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
| Activity 6.2  |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
| Activity 6.3  |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
| Activity 6.4  |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
| Activity 6.5  |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
| Activity 6.6  |      |     |     |     |      |     |     |     |      |     |     |     |      | 0    | 0    | 0     | 0    |
| <b>Total Output</b>   | 0    | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0    | 0   | 0   | 0   |      | 0    | 0    | 0     | 0    |
| <b>Total alle Outputs</b>   | 65   | 130 | 155 | 180 | 140  | 160 | 205 | 172 | 190  | 155 | 130 | 125 |      | 545  | 706  | 720   | 1971 |

**TEMPLATE 5.B: Distribution of Human Resources from Danish Authorities and Fee Budget**

Country: Sector: MFA File No. : 201X-XXXX

| Human Resources (days)  |                     | 2024        |             | 2025        |             | 2026        |             | Total working days |            |             |
|---|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|------------|-------------|
| Human Ressource   | DK Public Authority | TWP, days** | in DK, days | TWP, days** | in DK, days | TWP, days** | in DK, days | TWP                | in DK      | Total       |
| Project manager   | ØKF                 | 30          | 44          | 40          | 50          | 50          | 56          | 120                | 150        | 270         |
| Biofos, management  | Biofos              | 20          | 20          | 30          | 25          | 30          | 20          | 80                 | 65         | 145         |
| Biofos, expert 1  | Biofos              | 25          | 25          | 20          | 20          | 20          | 20          | 65                 | 65         | 130         |
| Biofos, expert 2  | Biofos              | 20          | 20          | 20          | 20          | 25          | 25          | 65                 | 65         | 130         |
| Biofos, expert 3  | Biofos              | 15          | 20          | 25          | 23          | 15          | 20          | 55                 | 63         | 118         |
| Biofos, expert 4  | Biofos              | 20          | 20          | 25          | 15          | 20          | 20          | 65                 | 55         | 120         |
| Biofos, Senior management   | Biofos              | 10          | 10          | 10          | 10          | 20          | 20          | 40                 | 40         | 80          |
| Hofor, expert 1   | Hofor               | 20          | 20          | 26          | 25          | 20          | 22          | 66                 | 67         | 133         |
| Hofor, expert 2   | Hofor               | 20          | 20          | 25          | 25          | 20          | 21          | 65                 | 66         | 131         |
| Hofor, expert 3   | Hofor               | 10          | 5           | 20          | 20          | 25          | 20          | 55                 | 45         | 100         |
| TMF, cycling, Henrik  | TMF                 | 25          | 25          | 25          | 20          | 24          | 25          | 74                 | 65         | 139         |
| TMF, pedestrian expert 2  | TMF                 | 6           | 6           | 20          | 16          | 15          | 15          | 41                 | 37         | 78          |
| TMF, cycling expert 3   | TMF                 | 6           | 6           | 20          | 20          | 25          | 25          | 51                 | 51         | 102         |
| TMF, solid waste Jonas  | TMF                 | 20          | 20          | 25          | 25          | 20          | 20          | 65                 | 65         | 130         |
| TMF, solid waste, expert 2  | TMF                 | 12          | 12          | 10          | 10          | 7           | 7           | 29                 | 29         | 58          |
| TMF, solid waste expert 3   | TMF                 | 5           | 5           | 20          | 20          | 25          | 20          | 50                 | 45         | 95          |
| TMF, delegations, Monica  | TMF                 | 1           | 2           |             | 1           | 1           | 2           | 2                  | 5          | 7           |
| <b>Total</b>  | Total               | 265         | 280         | 361         | 345         | 362         | 358         | <b>988</b>         | <b>978</b> | <b>1966</b> |
| <b>Total workdays - from Annex B.1, must be equal to TWP + in DK days</b> |                     | ● 545       |             | ● 706       |             | ● 720       |             | ● 50%              | ● 50%      | 100%        |

**TEMPLATE 5.C: Reimbursables**

Country:            Sector:            MFA File No. : 201X-XXXX

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| Team position              | Subsistence allowance |            |            |            |                | Accommodation    |            |            |              |                | International travel incl. Visum |           |           |                |                   | Local travel            |           |           |               |               | Total          |                |                | Total DKK        |
|----------------------------|-----------------------|------------|------------|------------|----------------|------------------|------------|------------|--------------|----------------|----------------------------------|-----------|-----------|----------------|-------------------|-------------------------|-----------|-----------|---------------|---------------|----------------|----------------|----------------|------------------|
|                            | Number of Days Abroad |            |            |            |                | Number of nights |            |            |              |                | Number of trips                  |           |           |                |                   | Number of local travels |           |           |               |               | 2024           | 2025           | 2026           |                  |
|                            | 2024                  | 2025       | 2026       | Rate DKK*  | Total DKK      | 2024             | 2025       | 2026       | Rate DKK     | Total DKK      | 2024                             | 2025      | 2026      | Rate DKK       | Total DKK         | 2024                    | 2025      | 2026      | Rate DKK      | Total DKK     |                |                |                |                  |
| Project manager            | 14                    | 14         | 14         | 422        | 17.724         | 13               | 13         | 13         | 1.000        | 39.000         | 1                                | 1         | 1         | 15.000         | 45.000            | 2                       | 2         | 2         | 2.000         | 12.000        | 37.908         | 37.908         | 37.908         | 113.724          |
| Biofos, management         | 30                    | 30         | 30         | 422        | 37.980         | 28               | 28         | 28         | 1.000        | 84.000         | 2                                | 2         | 2         | 15.000         | 90.000            | 2                       | 2         | 2         | 2.000         | 12.000        | 74.660         | 74.660         | 74.660         | 223.980          |
| Biofos, expert 1           | 30                    | 30         | 30         | 422        | 37.980         | 28               | 28         | 28         | 1.000        | 84.000         | 2                                | 2         | 2         | 15.000         | 90.000            | 2                       | 2         | 2         | 2.000         | 12.000        | 74.660         | 74.660         | 74.660         | 223.980          |
| Biofos, expert 2           | 30                    | 30         | 30         | 422        | 37.980         | 28               | 28         | 28         | 1.000        | 84.000         | 2                                | 2         | 2         | 15.000         | 90.000            | 2                       | 2         | 2         | 2.000         | 12.000        | 74.660         | 74.660         | 74.660         | 223.980          |
| Biofos, expert 3           | 14                    |            | 14         | 422        | 11.816         | 12               |            | 12         | 1.000        | 24.000         | 1                                |           | 1         | 15.000         | 30.000            | 1                       |           | 1         | 2.000         | 4.000         | 34.908         | 0              | 34.908         | 69.816           |
| Biofos, expert 4           | 14                    | 14         |            | 422        | 11.816         | 12               | 12         |            | 1.000        | 24.000         | 1                                | 1         |           | 15.000         | 30.000            | 1                       | 1         |           | 2.000         | 4.000         | 34.908         | 34.908         | 0              | 69.816           |
| Biofos, Senior management  | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            | 1                       | 1         | 1         | 2.000         | 6.000         | 34.908         | 34.908         | 34.908         | 104.724          |
| Hofor, expert 1            | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            | 1                       |           |           | 2.000         | 2.000         | 34.908         | 32.908         | 32.908         | 100.724          |
| Hofor, expert 2            | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            | 1                       |           |           | 2.000         | 2.000         | 34.908         | 32.908         | 32.908         | 100.724          |
| Hofor expert 3             | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            |                         | 1         | 1         | 2.000         | 4.000         | 32.908         | 34.908         | 34.908         | 102.724          |
| TMF, cycling, Henrik       | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            |                         |           |           | 2.000         | 0             | 32.908         | 32.908         | 32.908         | 98.724           |
| TMF, pedestrian expert 2   | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            |                         |           |           | 2.000         | 0             | 32.908         | 32.908         | 32.908         | 98.724           |
| TMF, cycling expert 3      | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            |                         |           |           | 2.000         | 0             | 32.908         | 32.908         | 32.908         | 98.724           |
| TMF, solid waste Jonas     | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            |                         |           |           | 2.000         | 0             | 32.908         | 32.908         | 32.908         | 98.724           |
| TMF, solid waste, expert 2 | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            |                         |           |           | 2.000         | 0             | 32.908         | 32.908         | 32.908         | 98.724           |
| TMF, solid waste expert 3  | 14                    | 14         | 14         | 422        | 17.724         | 12               | 12         | 12         | 1.000        | 36.000         | 1                                | 1         | 1         | 15.000         | 45.000            |                         |           |           | 2.000         | 0             | 32.908         | 32.908         | 32.908         | 98.724           |
| <b>Total reimbursables</b> | <b>272</b>            | <b>258</b> | <b>258</b> | <b>422</b> | <b>332.536</b> | <b>241</b>       | <b>229</b> | <b>229</b> | <b>1.000</b> | <b>699.000</b> | <b>19</b>                        | <b>18</b> | <b>18</b> | <b>240.000</b> | <b>13.200.000</b> | <b>13</b>               | <b>11</b> | <b>11</b> | <b>32.000</b> | <b>70.000</b> | <b>666.784</b> | <b>629.876</b> | <b>629.876</b> | <b>1.926.536</b> |

| Type  | Reference  | Unit cost | Unit |
|---|--|-----------|------|
| Per Diem in Colombia                        | Country specific rate according to "Moderniseringsstyrelsen" | 422       | DKK  |
| Accommodation                               |  | 1.000     | DKK  |
| Flights Copenhagen-bogota/Medellin          |  | 15.000    | DKK  |
| Visa  |  | -         | DKK  |
| Local travel (e.g. public transport, taxi)* |  | 2.000     | DKK  |

\*domestic flight between Bogota/Medellin

## TEMPLATE 5.D: Capacity Development

**Do not change grey cells, as they fill out automatically**

Country:                      Sector:                      MFA File No. : 201X-XXXX

| Activities                     | 2024  |          |                | 2025  |          |                | 2026  |          |                | Total          |
|--------------------------------|-------|----------|----------------|-------|----------|----------------|-------|----------|----------------|----------------|
|                                | Units | Rate DKK | Total          | Units | Rate DKK | Total          | Units | Rate DKK | Total          |                |
| Workshop/seminar               | 2     | 5.000    | 10.000         | 2     | 5.000    | 10.000         | 2     | 5.000    | 10.000         | 30.000         |
| Analysis / studies             | 1     | 12.000   | 12.000         | 1     | 12.000   | 12.000         | 1     | 12.000   | 12.000         | 36.000         |
| Testing / training             | 1     | 12.000   | 12.000         | 1     | 12.000   | 12.000         | 1     | 12.000   | 12.000         | 36.000         |
| Exchange visit                 | 1     | 120.000  | 120.000        | 1     | 120.000  | 120.000        | 1     | 120.000  | 120.000        | 360.000        |
| Extended stay after DFC course | 20    | 5.000    | 100.000        | 20    | 5.000    | 100.000        | 20    | 5.000    | 100.000        | 300.000        |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
|                                |       |          | 0              |       |          | 0              |       |          | 0              | -              |
| <b>Total</b>                   |       |          | <b>254.000</b> |       |          | <b>254.000</b> |       |          | <b>254.000</b> | <b>762.000</b> |

### Template 5.E: Consultancies

Country:                      Sector:                      MFA File No. : 201X-XXXX

**Do not change grey cells, as they fill out automatically**

| Consultants    | 2024  |          |               | 2025  |          |                | 2026  |          |                | Total            |
|----------------|-------|----------|---------------|-------|----------|----------------|-------|----------|----------------|------------------|
|                | Units | Rate DKK | Total         | Units | Rate DKK | Total          | Units | Rate DKK | Total          |                  |
| External audit |       |          | 0             |       |          | 0              | 1     | 25.000   | 25.000         | 25.000           |
| Consultants    | 1     | 50.000   | 50.000        | 8     | 110.000  | 880.000        | 4     | 110.000  | 440.000        | 1.370.000        |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
|                |       |          | 0             |       |          | 0              |       |          | 0              | -                |
| <b>Total</b>   |       |          | <b>50.000</b> |       |          | <b>880.000</b> |       |          | <b>465.000</b> | <b>1.395.000</b> |

**Template 5.F: Total budget**

Do not change grey cells, as they fill out automatically

Country:                      Sector:                      MFA File No. : 201X-XXXX

**MFA Grant**

|  | 2024             | 2025             | 2026             | Total             |                  |
|--|------------------|------------------|------------------|-------------------|------------------|
|  | DKK              | DKK              | DKK              | DKK               | % of grand total |
| <b>Personnel – Danish Authority</b>                  | 2.960.204        | 3.748.288        | 3.825.477        | 10.533.969        | 71,3%            |
| <b>Reimbursable costs for Danish Authority Staff</b> | 666.784          | 629.876          | 629.876          | 1.926.536         | 13,0%            |
| <b>Activities, including Capacity development</b>    | 254.000          | 254.000          | 254.000          | 762.000           | 5,2%             |
| <b>Consultancies (max 30% of grand total)</b>        | 50.000           | 880.000          | 465.000          | 1.395.000         | 9,4%             |
| <b>Unallocated funds (max. 20% of grand total)</b>   | 25.000           | 50.000           | 75.000           | 150.000           | 1,0%             |
| <b>Grand total</b>                                   | <b>3.955.988</b> | <b>5.562.164</b> | <b>5.249.353</b> | <b>14.767.505</b> | <b>100%</b>      |

**Share paid by Danish authority**

|                                     | 2020    | 2021    | 2022    | Total     |                      |
|-------------------------------------|---------|---------|---------|-----------|----------------------|
|                                     | DKK     | DKK     | DKK     | DKK       | % of total personnel |
| <b>Personnel – Danish Authority</b> | 328.912 | 416.476 | 425.053 | 1.170.441 | 10,0%                |