ICP-AGIR Cooperation Action Plan for Cape Town (South Africa)– Hamburg (Germany)

Cooperation Data		
	Cape Town (South Africa)	**Hamburg (Germany)**
Departments / Institutions involved	**City of Cape Town:** **-Enterprise and Investment** **-Water and Sanitation** **-Urban Waste Management** **-Sustainable Energy Markets, Energy Directorate** **GreenCape:**	**City of Hamburg:** **-Senate of the Free and Hanseatic City of Hamburg, Senate Chancellery** **-Hamburg Wasser (Water Utility)** **-HiiCCE, Hamburg Institute for Innovation, Climate Protection and Circular Energy** **-Renewable Energy Hamburg**
ICP AGIR City Coordinator	**Faith KOLALA** **Enterprise and Investment, City of Cape Town**	**Thomas JACOB** **Senate Chancellery, City of Hamburg** **Brigitte KÖHNLEIN, Ministry for Environment, Climate, Energy and Agriculture**
ICP AGIR Pairing Manager	**Andreas Sieren**	
Description of the partnership	The partnership started with online meetings in early 2022 that continued a monthly basis to share best practices and identify common interests in the areas of water management, energy transition and waste management. During the ICP-Kick-Off Meeting on 24 February 2022 all three areas were covered. A delegation of Cape Town visited Hamburg from 13-17 June 2022, with the visit of the Hamburg delegation to Cape Town taking place from 18-21 October 2022, following the ICP South Africa 1-Day Seminar in Johannesburg on 17 October 2022. Both Cape Town and Hamburg are considered unique cities within their specific countries in terms of designing and implementing renewable energy and circular economy solutions.	

Best practices or Challenges identified in the questionnaire / first meetings		
Topic	**Cape Town (South Africa)**	**Hamburg (Germany)**
Water	**-Water reuse strategy**	**-Integrated rainwater management (Sponge City concept)** **-Energy Efficiency in drinking water supply and wastewater treatment**
Waste	**-Material recovery expansion** **-50 refuse bin procurement** **-Builders rubble value retention**	**-Circular economy in the building sector** **-Waste to energy** **-Waste reduction** **-Centre for Resources and Energy**
Energy	**-Renewable energy strategy**	**-Surplus energy (water management)** **-Cluster renewable energy** **-District energy concepts**
Circular Economy, Sustainability and Climate Change	**-Circular action plan**	**-Waste to energy** **-Sorting of recyclables** **-Recycling centres**
Innovation		

Confirmation of Priority Areas	
Key focus of cooperation themes following the idea generation online workshop	**Water management (Sludge beneficiation, maintenance strategy, storm water management)** **Waste management (4-bin system, recyclables, public wate company, Black Soldier Flies)** **Energy (Renewable energy networking between companies, energy and energy efficiency, expert exchange between energy utilities)**
Short description of main actions and key outputs	**The collaboration between CoCT and CoH will focus on information exchange, expert exchange, sharing of strategies, review and promotion of strategic plans, and technical support.**
Expected results and benefits	**To better address challenges in water management, waste management, and energy/circular economy**

Water Management (Sludge Beneficiation)	
Counterparts	**Hamburg Wasser & CoCT Department of Water and Sanitation**
Objective	**Sludge beneficiation** **Support CoCT sludge strategy and design of three regionalized biosolids to energy facilities** **Current designs have THP incorporated into but CoCT feels that if the facility gets funded and operated the cost benefit does not favour the THP** **Greater benefit will be seen from digestion (incorporating food/industry waste and followed by drying sludge incineration, subject to legislative and bylaw regulations)**
Activities	**Exchange of technical experts and knowledge**
Outcomes	**Improved sludge beneficiation strategy in CT** **Demonstrate** **Increase capacity for eThekwini municipality to conduct a waste visioning exercise. Educate political leadership on the "value" of waste as a resource which would in-turn influence the review of the Municipalities Integrated Waste Management Plan**
Indicators	**Expert meetings** **Sharing and incorporating of best practices into existing strategies**
Sustainability of the action	**Capacity building and enhancement of the existing sludge strategy through cooperation between the CoCT water departments and Hamburg Wasser**
Time and Resources	**TBC**

Water Management (Maintenance Strategies)	
Counterparts	**Hamburg Wasser & CoCT Department of Water and Sanitation**
Objective	**Development of maintenance strategy and asset management**
Activities	**Investigate and motivate for exchange of maintenance and operational staff between the two cities to address on of the**

Water Management (Maintenance Strategies)	
	fundamental stumbling blocks between the CoCT and greater country are facing
Outcomes	Developed best maintenance structure and model to best serve the core functions of processes and wastewater treatment incorporating maintenance planning and asset management. Addressing the question of in-sourcing or out-sourcing
Indicators	Best practice documents developed and shared
Sustainability of the action	Replicate best practices documents
Time and Resources	TBC

Water Management (Stormwater Management, WW network retention and planning)	
Counterparts	Hamburg Wasser & CoCT Department of Water and Sanitation
Objective	Establish how the CoCT approach the Sponge City with capacitating its sewer network to deal with surplus flow and prevent sewage spillage to later treat and dispose these flows
Activities	TBC
Outcomes	Rationalisation/centralization of WWTW capacity would be a long but beneficial process. CoCT ha 23 treatment works and 3 marine outfalls. Hamburg will share the experience in the process including planning steps, duration, and investment.
Indicators	TBC
Sustainability of the action	TBC
Time and Resources	TBC

Water Management (Wastewater Effluent Use)	
Counterparts	Hamburg Wasser & CoCT Department of Water and Sanitation

Water Management (Wastewater Effluent Use)	
Objective	**CoCT to share its reuse strategy with the main areas of reuse: industrial, agricultural, public spaces, school, sports facilities** **Source of portable water requires significant tertiary treatment compared to uses above; CoH can share strategy and experience thus far. CoCTR will embark on two large-scale final effluent to portable reuse schemes the near future, one in Zandvliet (new Faure Water Scheme) and one at the Cape Flats (Managed Aquifer Recharge)** **CoCT has also managed and aquifer facility in Atlantis that has been in operation from the 1980s that uses final effluent to infiltrate into the ground water and then extracted and treated and used as portable water to supply the area of Atlantis**
Activities	**Webinar held between the two water departments**
Outcomes	**To establish the FHH strategy for reuse and to understand if it is to offset portable through reuse for industry, agriculture and public spaces**
Indicators	**Sharing of existing strategies and possible learning exchange**
Sustainability of the action	**Commitment to the development of a reuse strategy with related implementation plans**
Time and Resources	**TBC**

Waste Management (Incineration & Waste to Energy)	
Counterparts	**Urban Waste Management & HiiCCE**
Objective	**Sharing of information on CoH incineration strategy** **Incineration (considered as too expensive but could be interesting from energy perspective) or refuse derived fuels (existing reservations could be Addressed in the context of energy crises)**
Activities	**Digital seminars held between the two departments**
Outcomes	**Information from Hamburg:** **-Digital tour through waste incineration plant (MVB)** **-Detailed presentation on Centre for Resources (ZRE)** **-Detailed information on 4-bin system, fees and incentivization of separate collection**

Waste Management (Incineration & Waste to Energy)	
	- Detailed information on marketing recyclables (from an enabling point of view, how to make materials available to industry, how to take down barriers)
Indicators	Webinar held and good practices shared and documented, outputs of incorporated in CoCT Waste Management Strategy
Sustainability of the action	Commitment to the development of waste minimization strategy
Time and Resources	TBC

Waste Management (Organic Waste)	
Counterparts	Urban Waste Management & HiiCCE
Objective	Ban on landfilling organic waste by 2027: submission of proposal in response to CoCT's request for information to assess innovative SWM initiatives: combined energy and compost production plant.
Activities	Webinar held between the two organizations and exchange of best practices regarding the establishment of Roof Gardens
Outcomes	Capacity built and developed on using existing recyclable materials to create a people centered public space
Indicators	Webinar held, sharing of existing strategies and possible learning exchange
Sustainability of the action	The actions proposed are simple and can have a multiplier effect on organizations both private and public. As such the replicability of the project is extremely high. There is further potential for the use of roof gardens to be a catalyst for food security.
Time and Resources	TBC

Waste Management (Incineration & Waste to Energy)	

Waste Management (Black Soldier Flies & Organic Household Waste)	
Counterparts	**Stellenbosch University & Hamburg University of Technology**
Objective	**Develop research cooperation**
Activities	**Webinar held between the two academic institutions and exchange of information regarding the application of Black Soldier Flies**
Outcomes	**Capacity built and developed on using existing recyclable materials to create a people centered public space**
Indicators	**Webinar held, sharing of existing strategies and possible learning exchange**
Sustainability of the action	**The actions proposed are simple and can have a multiplier effect on organizations both private and public. As such the replicability of the project is extremely high. There is further potential for the use of roof gardens to be a catalyst for food security.**
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Time and Resources	TBC

Energy (Renewable Energy)	
Counterparts	Renewable Energy Hamburg, German Chamber of Commerce, GreenCape
Objective	Promoting South Africa as emerging renewable energy market to cluster's members
Activities	Joint online seminar held Webinar held on 8 February 2023 with 60 participants attending
Outcomes	Renewable energy sector-specific information shared by public sector and private sector speakers
Indicators	Webinar held, sharing of existing strategies and possible learning exchange
Sustainability of the action	Networking and Capacity Building
Time and Resources	Online seminar held in February 2023

Energy (Various)	
Counterparts	Stromnetz Hamburg (Hamburg Electricity Grid Operator) WindEnergy Hamburg Renewable Energy Hamburg HAW - Hamburg University of Applied Sciences, CC4E Sustainable Energy Markets, Energy Directorate, CoCT GreenCape

Waste Management (Incineration & Waste to Energy)	
Objective	**Develop exchanges on** **-Renewable energy topics (working on grid, infrastructure, technology by engaging with municipal renewable utility companies)** **-Working on RE-generation and RE-demand**
Activities	**-Webinars** **-Expert roundtables** **-Exchanges of experiences** **-Project related support by cluster's members with required competencies** **-Blog articles**
Outcomes	**Capacity-building**
Indicators	**Activities held**
Sustainability of the action	**Building sustainable networks of companies with regular expert exchanges**
Time and Resources	**TBC**