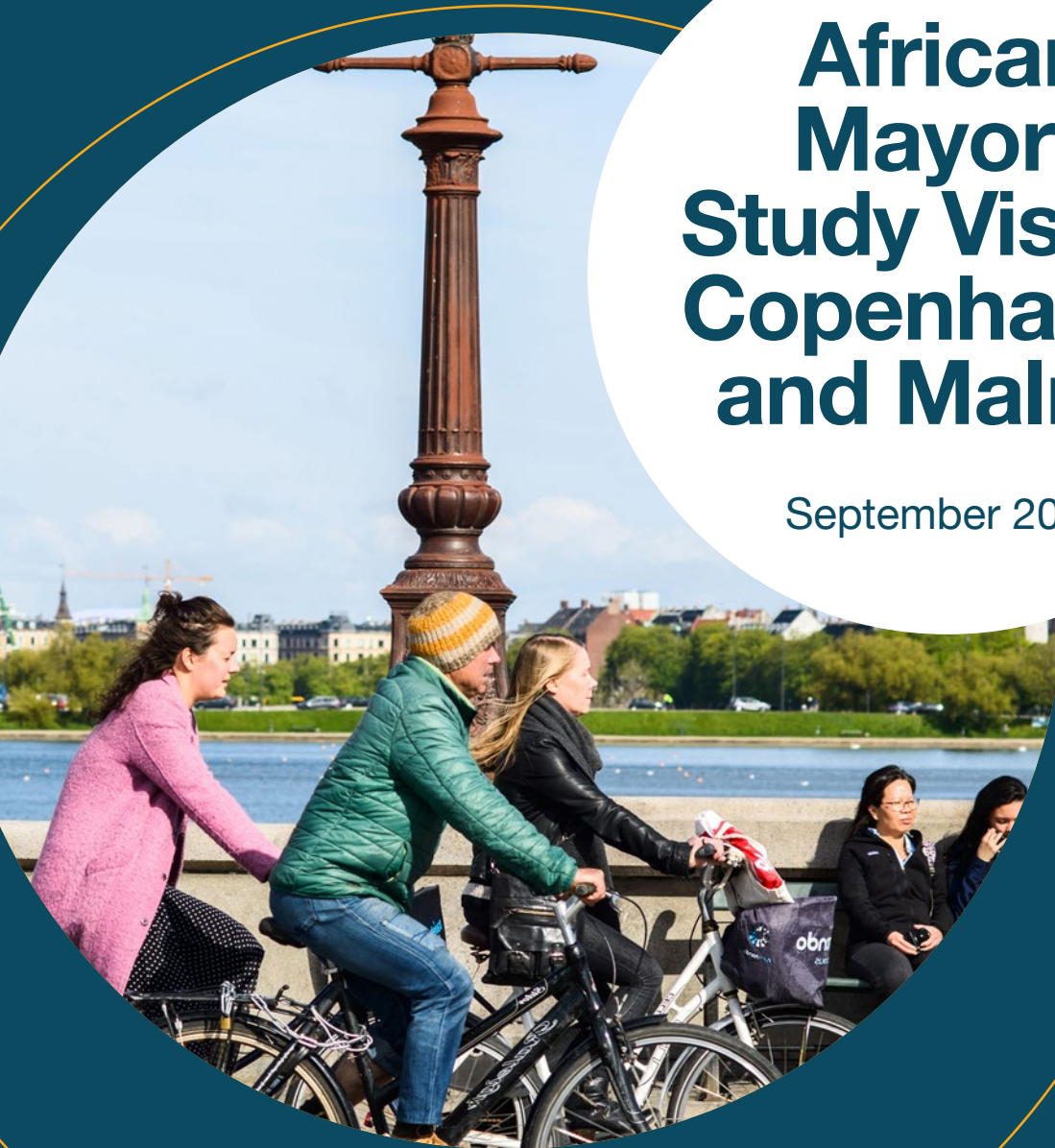


African Mayors Study Visit in Copenhagen and Malmö

September 2022



AFRICAN DEVELOPMENT BANK GROUP



Urban and
Municipal
Development
Fund

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1.

Context

Urbanisation is a huge potential for Africa, but at the same time it is a challenge to secure a sustainable and climate resilient transformation, economic growth and livability of the urban areas. By 2030, the continent's cities and towns are expected to double, to more than 800 million citizens, or roughly half of Africa's total population (AfDB, 2021). However, many African cities struggle with macroeconomic instability, a poor investment climate, and significantly less adequate infrastructure and urban services than most cities in other regions. More than 50% of African urban citizens live informally, and the number is increasing by 4.5 million each year.

To answer those challenges, in February 2019 the African Development Bank (AfDB) approved the creation of a new Urban Development Division within the Infrastructure and Urban Development Department (PICU). In April 2019 the Bank group launched the first multi-donor trust fund, the Urban Municipal Development Fund (UMDF), to support AfDB's engagement in and with cities.

The overall objective of the UMDF is to support African cities and municipalities improve livability and resilience and better manage urban growth and development by improving planning, governance, and quality of basic services in support of the objectives of the AfDB Group in cities of the continent. The UMDF is meant to (i) strengthen the capacity of municipalities in the upstream areas of urban planning and urban management; (ii) support the preparation of urban projects by municipalities; and (iii) contribute to the production of knowledge on urban and municipal development.

The Cities Program nurtures partnerships and links between the Bank and African cities. The program supports cities turning ideas into action plans and further into concrete investments, using a programmatic approach to assess a city's current development status, key challenges and potential, and identify concrete investments projects that can be matured and guided into the Bank's financial pipeline.

Objectives

Strengthen African cities, through a complete and operational understanding of the Nordic Solutions towards liveable and green cities

Strengthen the networking character of the City Program

Inspire and contribute to the visions of the decision makers from the African cities represented

Results

- ✓ Visits to 2 cities
- ✓ Formal and informal meetings with 12+ experts and local authorities
- ✓ 14 thematic meetings and field visits

- ✓ Attendance by 19 African mayors and representatives from the City Program
- ✓ 4 days' complete immersion from 8am to 8pm

"We could measure during this visit the Importance of networking for purposes of sharing best practices in urban planning and managing resources"

Davis MWAMFUPE, Mayor of Dodoma

"Cities thrive on its citizens"

Christine M'Ba N'Dutume Mayor of Libreville



2. Agenda

Monday, September 19th

(Copenhagen, Denmark)

Time	Activity	People
	Arrival and check in at Scandic Palace Hotel .	Delegation / AfDB
18:30	Walk from hotel to House of DI (100 m)	
19:00-21:00	Official Welcome by Mayor Line Barfod Dinner at DI 7 th Floor	Line Barfod, City of Copenhagen

Day 01.

Tuesday, September 20th

(Copenhagen, Denmark)

Thematically focus:
Urban planning and financing

Time	Activity	People
8:00-8:30	Arrival and Coffee at DI - Danish Industry	
9:00-11:00	- Welcome by Marcus Mayr AfDB - Discussion and meeting on Urbanism of Greater Copenhagen - Presentation of Two cities (Dodoma Marrakech - QA/Roundtable (30min) - Short intro to the "Capturing inspiration" process during the week	- Tina Saaby, City Architect, Gladsaxe - Esbjerg Neander, Gehl Architects - Jeppa Grønhoj-Pedersen, City of Copenhagen - Kasper A. Schmidt, Rejsekort & Rejseplan A/S
11:15-11:45	Walk in historic Christianhavns old bastioned fortification Ravelinen, Torvegade 79, 1400 København to Ravelinen, Torvegade, Copenhagen	
11:45-12:45	Full Danish Lunch at historic Ravelinen, Christianshavn	
13:00-15:00	Waste to energy plant: Copenhill / Amager Resource Centre	Nils Rosted, Amager Resource Centre
15:30-17:00	Canal tour – transition of the harbour area, liveability, interconnection: Boat pick up at the Opera House Henning Larsen Copenhagen Opera House and drop off at The Black Diamond (The national Library) The Black Diamond, Copenhagen kb.dk	Monica Magnussen and Kristine Munkgaard Pedersen, City of Copenhagen
17:00-17:30	Walk from The Black Diamond to Hotel (500 m) - pedestrian priority and cycling lanes.	
19:00-20:30	Dinner with AfDB Ag, Director Mike Salawou and representatives from other stakeholders – welcome by the AfDB and open dialogue.	Guide to The Meatpacking District VisitCopenhagen

Day 02.

Wednesday, September 21st

(Copenhagen, Denmark)

Thematically focus:
Waste and Water

Time	Activity	People
8:45-9:00	Walk from hotel to State of Green (in House of DI)	
9:00-11:00	At State of Green - Introduction to Denmark's green transition. - Water Utility (HOFOR) and Waste (DANISH EPA) - Presentation from 3 Cities in the delegation - Q&A Discussion .	- Mie Johnson, State of Green - Jesper Elkjaer, HOFOR - Rasmus Tønder, The Danish Environmental Protection Agency (EPA)
11:30-13:00	Wastewater treatment plant Lynetten, Refshalevej. Wastewater to energy and resource recovery. Wastewater (biofos.dk)	John Buur, BIOFOS /
13:15-14:30	Lunch at Aristo https://restaurantaristo.dk/menukort/ , at Islands Brygge Islands Brygge - Wikipedia	
14:45-16:00	Sydhavns Genbrugsstation Sydhavn Genbrugscenter Sydhavn Genbrugscenter (kk.dk)	Mette Hagedorn
16:30-18:30	Roundtable/Reception at DI with private sector - Welcome by DI / Marie Gad - Presentation by 2 visiting cities; Kinshasa and Libreville, and 2-3 Danish companies - Standing reception with companies.	Marie Gad, Confederation of Danish Industry
	Back to hotel (following own arrangements)	

Day 03.

Thursday, September 22nd

(Malmö, Sweden)

Thematically focus:
e-mobility, housing and climate resilience

Time	Activity	People
8:30-9:30	Bus from hotel to Malmö	
9:30-12:00	Skane trafik, e-solutions for public transport Nya kollektivtrafikstråk - Malmö stad (malmo.se) Room 4033, Stadsbyggnadskont. Stadshuset, August Palms plats 1	Malena Möller, traffic planner, City of Malmö
12:30-14:00	Official lunch with the chairman of the municipal council, Mrs Carina Nilsson at the Old City Hall of Malmö	Politiker - Malmö stad (malmo.se)
14:00-16:00	Sustainable urbanism in the Western Harbour and Hyllie. Västra Hamnen, Malmö Visit Sweden and Hyllie - Malmö stad (malmo.se)	Lotta Hansson@malmo.se
16:00-17:00	Bus back to Copenhagen / Hotel	
18:15-18:30	Bus from hotel to Danish Ministry of Foreign Affairs	
18:30-21:00	Official dinner and round table dialogue with Danish Ministry of Foreign Affairs.	

Day 04.

Friday, September 23rd

(Copenhagen, Denmark)

Thematically focus:
Energy and new urban development

Time	Activity	People
9:00-9:30	Bus transport from hotel to Nordhavn	
9:30-12:00	Nordhavn – planning and development of a new city area, with innovative energy systems.	Marc Jørgensen, By & Havn Anders Dyrrelund, Rambøll
12:15-13:15	From Kastellet (North entrance) a walk through the historical defence system Kastellet, via the harbour front, to Amalienborg Amalienborg (kongehuset.dk)	AfDB / Ole Stubdrup
13:15-13:30	Metro from Marmorkirken to Raahuspladsen, and walk to DI (100 m)	
13:30-14:30	Lunch at Danish Association of Industries (DI)	
14:30-15:30	Remarks on findings and inspiration from delegates, next steps and wrap up. Closing remarks by Nordic Development Fund Director, Portfolio Origination & Management Henrik Franklin	AfDB / DI Bjarne Palstrom www.ndf.int
15:30	Closure of official visit	

3. Participants

African Mayors Visiti to Copenhagen and Malmo 19-23 September 2022				
N	City/ Country	First Name(s)	Last Name	Function
1	Antananarivo/ Madagascar	Andriatiana mandresy	RAKOTOARISON	Dirc. of international Cooperation Municipality
2	Antananarivo/ Madagascar	Guy Emmanuel	RAZAFIN-DRALAMBO	Chief of Staff
3	Nairobi/Kenya	Charles Otieno	KONYANGO	Dr/ National Director Urban Development
4	Nairobi/Kenya	Robert Ogara	SANGORI	
5	Dodoma/Tanzania	Davis G	MWAMFUPE	Mayor
6	Dodoma/Tanzania	Mr Joseph Constantine	MAFURU	Senior Town planner and City Director
7	Bangui/ Centrafrique	Émile Gros Raymond	NAKOMBO	Mayor
8	Bangui/ Centrafrique	Herbert	KEMATA	Head of environment and sustainable development
9	Kanifing/Gambia	Andrew Jonathan	EMPSON	Kanifing Municipal Council
10	Bizerte/Tunisia	Kamel	BEN AMARA	Mayor
11	Bizerte/Tunisia	Adel	BOURAOU	President of the municipal planning commission
12	Tunis/Tunisia	Souad	BEN ABDERRAHIM	Mayor
13	Douala/Cameroun	Roger Victor	MBASSA NDINE	Mayor
14	Douala/Cameroun	Gabriel	NJOCKE	Head of Economic Affairs and Territorial Attractiveness Division
15	Marrakech/ Morocco	M. Achraf	BERRAZZOUK	Deputy Mayor
16	Kinshasa / Congo	Gerard	MULUMBA KONGOLO WA KONGOLO	Vice governor of Kinshasa City
17	Kinshasa / Congo	Patou	TABU OSIM	Deputy Director of Protocol to the Provincial Governor
18	Libreville / Gabon	Christine	MBA NDUTUME	Mayor
19	Libreville / Gabon	Aimé Mannix Rachid	MONDJOT	Mayor Advisor

4. Speakers biographies



Line Barfod

Technical and environmental mayor in the Municipality of Copenhagen

After a brilliant career as a lawyer for a few years, Line Baford started her political career in 1985 as president of Fælles Kurs Ungdom from 1984 to 1985 and professional secretary of communist students from 1987 to 1989.

She was elected Mayor of Technology and Environment of the Municipality of Copenhagen in 2021 following the municipal elections where she obtained the highest number of personal votes. She is also a former member of the Norwegian Parliament and is currently a member of the board and executive committee of Enhedslisten.



Tina Saaby

Citymaker and placemaker

Tina Saaby was the City Architect of Copenhagen between 2010 and 2019. Since april 2020, she is city architect in Gladsaxe. She was previously Vice President of the Danish Architects' Association. Tina has experience as

a sketching and designing architect as a leader and partner of Witraz Architects. Tina Saaby is a member of the Think Tank” The city 2025” run by the Ministry of Housing, Urban and Rural Affairs. Furthermore Tina is chairman of the Advisory board of the employer panel at The Royal Academy of Art.



Esben Neander Kristensen

Partner, Director, Gehl Architect MAA

As a Partner and Director at Gehl, Esben has worked with a broad range of public and private clients, focusing on strategy, large-scale urban design and masterplanning frameworks. His work is based on both a pragmatic and idealistic approach, linking the

Gehl analytical toolbox to design at all scales with a strong focus on people. Esben has been responsible for numerous projects in Europe, Latin America, North America and Australia, with more than 15 years of work experience spanning urban design, strategy, architecture and interior design.



Kasper A. Schmidt:

Managing Director / CEO at Rejsekort & Rejseplan A/Nordhavn

Kasper A. Schmidt is 46 years old, graduated from RUC (business economics and psychology), and also studied management and IT.. During his career, Kasper A. Schmidt has

held management positions within finance, HR and IT, and as director of Corporate Services in the municipality of Copenhagen. Kasper A. Schmidt has extensive experience in the public sector, as he implemented and operated complex IT solutions as well as worked with financial management and HR.



Jeppe Grønholt-Pedersen
Office manager at Copenhagen Municipality/Head of Division City of Copenhagen

Jeppe Pedersen is the office manager of two teams in Copenhagen Municipality's Economic Management: Mobility and Safe City, where he works with development of public transport (bus operations, conversion

to electric buses, more metro/light rail/BRT, etc.) and overall traffic planning (Nordhavnstunnel, Østlig Ringvej, Lynetteholm, etc.) and crime prevention and ensuring a safer Copenhagen (security study, impact follow-up on municipal efforts, security partnerships, analyses, campaigns, etc.). In the past, he has worked with political and managerial services, communication and advocacy.



Ulrik Raabjerg Søndergaard
Head of Insights, State of GreenDenmark

Ulrik has stated at State of Green since 2018 as Head of communications, and since May 2022, he has held the position of head of Insights. His career has revolved around corporate communications,

stakeholder relations, sustainability communication, marketing, branding and media relations. He has a strong track record of supporting business objectives and protecting and strengthening the image of his employer using a carefully tailored mix of tools from the communications tool box.



Nils Thor Rosted
Communications manager at ARC – Amager Ressource center/Copenhil

Graduated in political sciences at the University of Southern Denmark, Nils Thor Rosted contributed for nine years to the communication of Kombit, a foundation which supports municipalities' digitalisation process.

Since 2020 Nils Thor Rosted is chief of communication for the Amager Ressourcecenter, a new breed of waste-to-energy plant, where industrial needs are combined with urban leisure.



Kristine Munkgård Pedersen
Programme Director, Ph.D. - World Capital of Architecture 2023 UNESCO. UIA at Copenhagen Municipality

Graduated from Copenhagen Business School, former teacher and searcher in architecture and urban culture at Roskilde University. Kristine Munkgård Pedersen joined the municipality of Copenhagen

team in 2015 as Program director for «Meet Copenhagen City», with the ambition «to share Copenhagen's liveable and sustainable solutions with urban influencers, decision makers and professionals to create beautiful and resilient cities in a changing world». Since 2020, Kristine Munkgård Pedersen is coordinating the Copenhagen participation to the «World Capital of Architecture 2023»



Monica Magnussen
Head of the International Team. Programme Director, Meet Copenhagen City

Monica Maguessen holds a diploma of MA International Business Communication and after several years of experience in large structures, she is acting as head of the international Team in the Technical

and Environmental Department at the City of Copenhagen. Specifically, she oversees all international tasks, network and knowledge sharing. And she is at the same time inspiring other cities to look at Copenhagen solutions within sustainable urban development. She regularly does interventions for delegations, press and conferences within this area.



Jesper Elkjær
Team leader Water supply at HOFOR A/S

Specialist in water supply and prevention techniques against soil and groundwater pollution. Jesper is Currently working as a project manager for HOFOR's projects on water works, spring sites and height containers.

He Has previously worked as a developer in Copenhagen County and the Capital Region. He also was team coordinator for the Prevention Team that projects and implements prevention, as well as for the Operation Team, that is operating the region's prevention facilities and supervising the monitoring of known pollutants' development.



Carina Nilsson
Chairman of Malmö City Council

Born May 22, 1959 in Malmö, Carina Nelson began a political career in the 1980s at the Swedish Environmental Protection Agency and as a deputy on the Environmental Committee of the city of Malmö. After that, a series

of municipal political assignments followed, including chairman of the environment committee 1997-2006 and chairman of the culture committee 2007-2010. In the years 2008-2010, Carina Nilsson was a municipal councilor in Malmö in charge of cultural issues.



John Buur Christiansen
Adm. direktor for BIOFOS

John Buur Christiansen has many years of experience with municipal utility companies and has worked at director level since 2006. Since 2013, he has been managing director of BIOFOS,

which is owned by 15 municipalities in the capital area. BIOFOS transports and cleans the waste water from 1.2 million inhabitants and produces sustainable electricity, heat and biogas commercially for the supply network.

5. Copenhagen & Malmö at a glance

Copenhagen, Denmark

Copenhagen is one of the most sustainable cities in the world, and its reputation is very well deserved. For decades the city has been committed to building a “city for people”, and has become one of the world’s healthiest, happiest and most livable places to be.

Through strategic urban planning, large recreational areas, pedestrian streets, a highly integrated transport system, and a sustainable bike infrastructure have been created; these make the city both innovative and inclusive. With a population of 1.99 million, it has been recognised as one of the top ten wealthiest cities in the world not to rely on natural resource extraction. Before becoming a success,

Copenhagen faced unemployment as high as 17.5% and annual budget shortfalls. However, during the 1990s the city’s strategic planning plans focused on people-centered planning and sustainable solutions and on creating a foundation for creative businesses. During this time, they also focused on using public-private partnerships to accomplish their urban development goals, and developed the City & Port Corporation, an “urban development corporation” which has been the vehicle for much of the city’s urban regeneration and economic development. The delegation visited the new district of Nordhavn. Currently, the city has pledged to be the first carbon-neutral capital in the world by 2025, and it has emerged as an innovator in climate planning and investment in clean, renewable energy as well as carbon pollution abatement on both a metropolitan and district scale. Throughout this visit the participants learnt about the process of each of the solutions that has led to the city’s success and world-wide recognition.



Malmö, Sweden

Malmö is a city of 280,000 inhabitants in the greater metropolitan area. It is the third largest city in Sweden. Malmö is the fastest growing large city in Sweden and since declining as an industrial centre it has been going through a major transformation into a green and efficient city. It has won many awards for redevelopment projects which combine urban planning, energy efficient buildings, transport facilities, economic growth, waste management, and making neighborhoods more resilient to climate change.

The city aims to make all of its activities climate neutral by 2020, and the current plans call for the whole city to run completely on renewable energy by 2030. In Malmö the UN’s global goals are integrated into the city council goals. As they visited Malmö, the AfDB/UMDF tour participants saw for themselves the innovative use of renewable resources and how Malmö is becoming a leading ecocity.

6. Thematic focuses



6.1 Urban planning and new urban development: A people-centered prism

"We saw the impact of having good governance, which mean[t] the involvement of city owners and citizens," noted Kamel Ben Amara, Mayor of Bizerte.

*"The participation of the **beneficiary populations** in the elaboration of development projects is a key factor of success," pointed out Roger Mbassa Ndine, Mayor of Douala, who considers capacity-building in urban planning as an absolute priority.*

In Africa

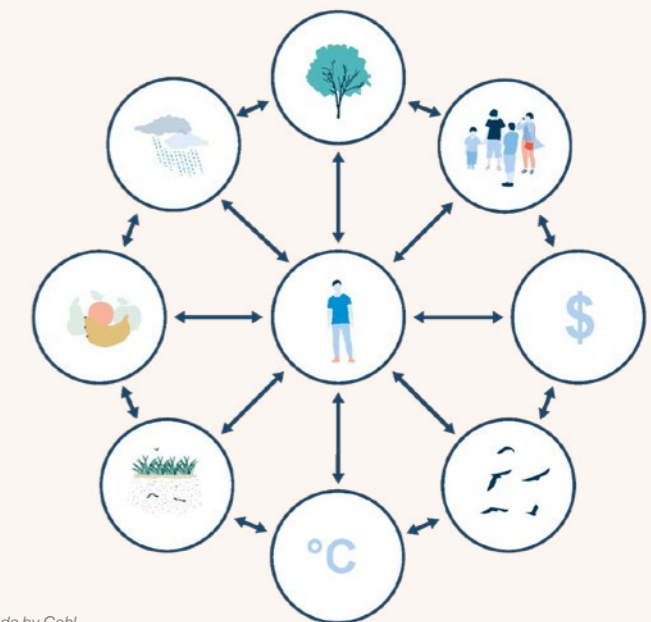
Urban planning can support sustainable urban development in African cities, but the sheer speed of urbanisation on the continent poses a severe challenge to city governments and managers. Inadequate urban planning and infrastructure for fast-growing populations, the need for more training of municipal authorities and local government agencies, rapid environmental degradation from uncontrolled population growth, and the effects of climate change, all these components are compounding these challenges. Africa's urban development financing gap is currently estimated at more than US\$ 90 B.

In Copenhagen

Copenhagen is often recognised as one of the most livable cities in the world. It is a city where growth and prosperity go hand in hand, but it also faces certain challenges. As in African cities, the growing city's population needs more space, more jobs and more mobility. Although growing slowly by the standards of some African cities, Copenhagen's population is still predicted to increase 18% by 2025 (equating to around 100,000 new residents). "The city of Copenhagen experienced a decline in the years 1990 followed by a real metamorphosis over the years through the restructuring of the architecture of the city by putting the well-being of the population first," explained Tina Saaby, City Architect, Citymaker and Placemaker, during the first day of the visit. "Urban life is all about inviting, high-quality spaces", went on Esben Neander Kristensen, Partner & Director at Gehl Architects, who participated in designing public spaces in Copenhagen. Esben pledged to design places with mixed uses, thinking on the "Human scale" with "experience and life as the starting point".

To a holistic and connected approach centered around life

Embracing complexity and reciprocal relationships



"To a holistic and connected approach centered around life" - from the presentation made by Gehl

Copenhagen and Malmö provide many examples of how cities can revitalise rundown areas, attract investment, and make projects at least partly self-financing through a mix of policy change, organisational development and financial tools.

Nordhavn: a planned city expansion prioritising quality of life

The transformation of Nordhavn (North Harbour) – the largest metropolitan development in northern Europe – continues Copenhagen’s historic strategy, which started in the seventeenth century, of step-by-step expansion onto land reclaimed from the surrounding sea. The newly developed area of Nordhavn is conceived as an urban archipelago or a series of dense neighborhoods on the water. Planning one island at a time, the Nordhavn master plan is not a vision of an ideal city, specifying every last detail, but rather, it is being developed based on robust and flexible guidelines intended to inspire future generations of urban planners. It is a way of addressing one of the great challenges of city planning: designing for the needs and demands of today while trying to predict and address the major environmental challenges shaping our future. As the first DGNB platinum-certified urban area in Denmark, Nordhavn takes a holistic approach to urban planning.



Nordhavn © S-F/Shutterstock

“As a recent and planned city, Dodoma has a special potential to be green, by purchasing and setting aside land, planting trees and drilling [for] water. I see a particular potential in developing sustainable uses of Lake Hombolo and Swaswa Dam,” noted Davis Mwamfupe, Mayor of Dodoma.



Christine M’Ba N’Dutume, Mayor of Libreville, and the delegation visiting Nordhavn September 2022

Malmö: an original housing exhibition which brought urban recovery



Malmö © Wikimedia.org/wikipedia/commons/b/b3/Central_Malm%C3%B6.jpg

At the end of the 1990s, the city of Malmö began to recover from industrial decline that had led to unemployment for many inhabitants and an economy in poor shape as a result of the Swedish financial crisis. In 1996, Malmö was selected to organise a national housing exhibition, promoting sustainable construction.

The exhibition area was conceived as the first carbon-neutral residential area in the world, positioning Malmö as a sustainable city and creating a positive narrative.

The housing exhibition stimulates investment and construction, as well as contributing to the recovery of the Western Harbour area. The promoters’ ambition was to create a well-located compact city, which would serve as a planning model for future urban development, soil recovery, open-water rainwater management, and solid waste management.

“The visit to these neighborhoods sounded as an invitation to start testing smart-cities solutions in a specific neighborhood of our cities, and see if it is replicable. We will also share the learnings of the visit to our technical teams.”

Christine M’Ba N’Dutume,
Mayor of Libreville.

6.2

A global approach to energy



In Copenhagen & Malmö

"We haven't always been this green. It took 50 years of hard work! The green transition of Copenhagen took place by emphasising renewable energies such as wind, solar energy, bioenergy, to the detriment of fossil energies such as coal and how Copenhagen aims to become carbon neutral by 2025."
Mie Johnson, Senior Project Manager, State of Green.

By 2030 the whole of Malmö will be entirely powered by renewable energy. Nordic countries have adopted a global approach to energy, orienting both the production and consumption. Energy was a cross-cutting theme throughout the visit, from the promotion of renewable energies to soft mobility, waste-to-energy plants and energy-efficient buildings. The concept of a sustainable city, developed by John Buur Christiansen, Adm. direktor for BIOFOS, involves the implementation of smart and resilient solutions in energy systems. The participants were fascinated by the way in which energy exchanges take place (transformation of heat from the ground into heating, and a city cooling system, etc.) which contributes to making the city more livable.

"After the visit we started to consider street light replacement, to reduce energy consumption,"
reported Kamel Ben Amara, Mayor of Bizerte.

In Africa

A significant proportion of Africa's huge energy potential – particularly from renewables – remains untapped. African populations consume only 3.2% of the world's primary energy, which is the lowest per capita consumption per continent. In addition, the majority of African countries still rely mainly on traditional biomass to access basic energy. The rate of access to electricity remains low in most African countries, particularly in West Africa, which has the lowest rate in the world at 42% of the total population and only 8% for the rural population. To address this situation, the AfDB African Renewable Energy Initiative (IAER) was launched at the 21st Conference of the Parties on Climate Change in Paris in 2015.

The delegation visiting the Copenhill waste-to-energy plant.

6.3 Waste treatment as an opportunity

In African cities

Many cities and urban areas in Africa are struggling to ensure that residents have safe drinking water and sanitation. For example, in Kinshasa in 2018, drinking water was available to only 33% of its population and sanitation to only 31%.

Waste management also remains precarious in many African cities that do not have adequate infrastructure. In sub-Saharan Africa more than 70% of waste is dumped in open landfills. In 2019, to help African cities overcome all these difficulties, The AfDB created the Urban Department (PICU.2) and the UMDf. These organisations support municipalities in the preparation and financing of urban infrastructure development projects to improve sectors such as water, sanitation and electricity and to support responses to climate change.

The delegation members unanimously agreed that the waste management system implemented in Denmark was one of the most inspiring parts of the visit.

The delegation was hosted by State of Green, an organisation whose work is based on international partnerships, solutions and knowledge in the fields of energy, water, cities and the circular economy. Several field visits contributed to a change of attitude among the delegation members in the area of waste, a challenge that needs to be met with a global approach, and as an opportunity to generate positive economic outcomes.

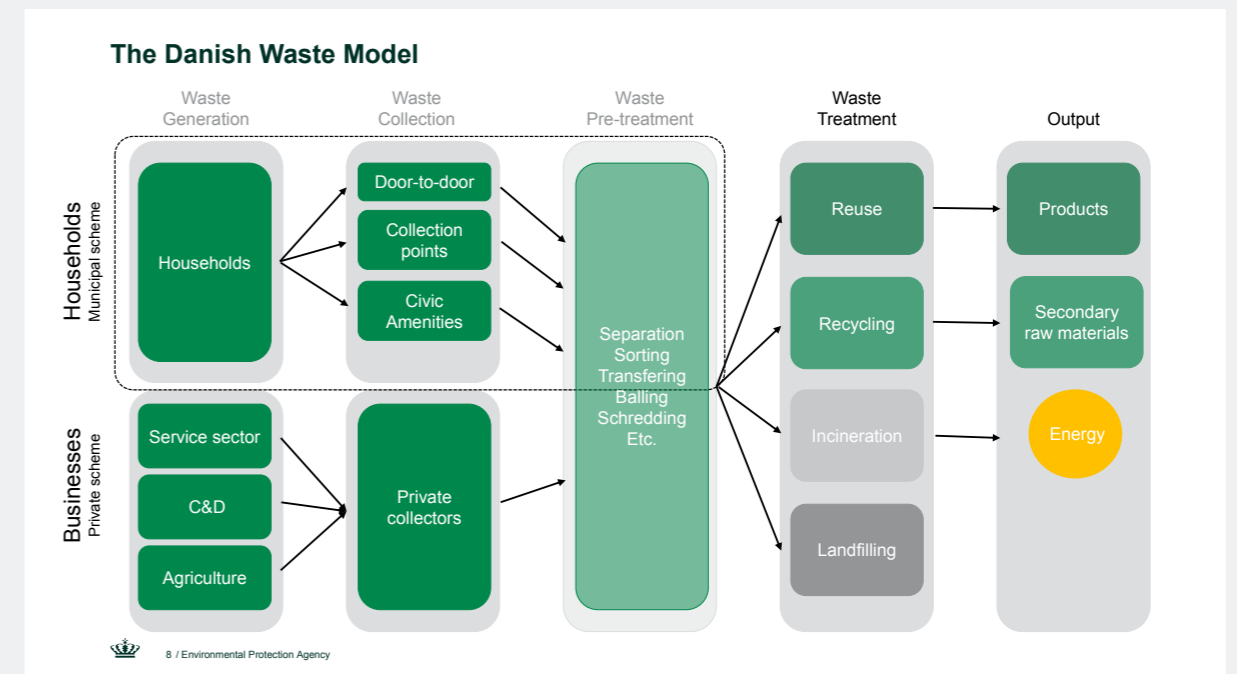
“The polluter pays” The Denmark model for waste

“The polluter pays” is our fundamental principle”, explained Rasmus Andreas Tønder, Waste Specialist for the Ministry of Environment of Denmark. This principle promotes a combination of administrative measures and regulations as well as economic measures such as taxes and duties.

In Denmark, the first regulations on street cleaning and the organisation of waste collection were put in place in the eighteenth century. In 1981, the first municipal facility for receiving recyclables was inaugurated. In 1994, the use of landfill disposal for waste suitable for incineration was banned, including organic waste.

Today, the Climate Plan for a Green Waste Sector presented by the Danish Environmental Protection Agency, promotes:

- ✓ Less incineration – reducing capacity
- ✓ More reuse/recycling – increasing the recycling industry
- ✓ Harmonised waste collection and sorting schemes on a national level
- ✓ Increased prevalence of Extended Producer Responsibility



In Copenhagen, partnering with the private sector to boost the circular economy

In the City of Copenhagen, wastewater from households and enterprises is discharged into closed pipes underground called “sewers”. Most of the city is covered by a system which channels stormwater from roofs, roads and household wastewater into central treatment plants – some powered by renewable energy (see photo below). Copenhagen has large, automated treatment plants which clean and treat a huge amount of waste.

The municipality is partnering with private sector or regulated structures to provide these essential services. *“Our utilities are regulated by law”* and *“Our revenue and expenditure must balance out over time,”* explained the representative of Høfor, Denmark’s largest utility company (one million customers in Greater Copenhagen). Høfor is a municipally owned company.

During fruitful exchanges with certain companies in the private sector, such as COWI, Skikkerhed i industriens, EVIK and a representative of the Nordic Global Investment Foundation, our interlocutors expressed their interest in future collaboration with the Bank in the area of investing in and supporting Africa.

“The importance of public and private collaboration towards circular economics in our cities is fundamental.”
 Davis MWAMFUPE,
 Mayor of Dodoma.



Visit to Sydhavn Genbrugscenter

Recycling and circular economy are the basic principles behind the new Sydhavn Recycling Center, which is part of Copenhagen Municipality’s climate plan for 2025. Sydhavn Genbrugscenter is more than an ordinary recycling station.

The center developed a series of activities that support recycling and sustainability, like workshops and training, a shop where the public can find used doors, used windows, tiles, floorboards and much more... The recycling station also created a laboratory where entrepreneurs find new ways to recycle waste.



Visit to Copenhil

CopenHill (Amager Bakke) is Denmark’s newest and cleanest combined heat and power waste-to-energy plant. It is located close to the city center and successfully realises an ambitious vision to combine a green waste-to-energy plant with a recreational area. Amager Resource Center (ARC) has produced district heating since 1970 and electricity since 1990. In 1991 the center began to operate

recycling stations in the capital area. A total of 435,000 tons of waste is converted into electricity and district heating, supplying approximately 140,000 households. This visit in particular caught the attention of the participants, because most African cities do not have a municipal waste treatment system. Most waste is stored in landfills in the open air which are then filled in, making it a source of pollution for the surrounding population.



Visit to Lynetten

BIOFOS is Denmark’s largest wastewater utility, treating the wastewater of 1.2 million inhabitants in the Copenhagen metropolitan area at three treatment plants: Lynetten, Avedøre, and Damhusåen. The organisation recovers resources from wastewater and produces climate-friendly energy in the

form of electricity, biogas, and district heating supplied to the grid. Lynetten, the largest sewage treatment plant in Denmark, treats the industrial and municipal wastewater of 1.1 million PE, corresponding to 3.2 million litres of wastewater every day. Lynetten opened in 1980 offering biological treatment and sludge incineration with two multiple-hearth furnaces.

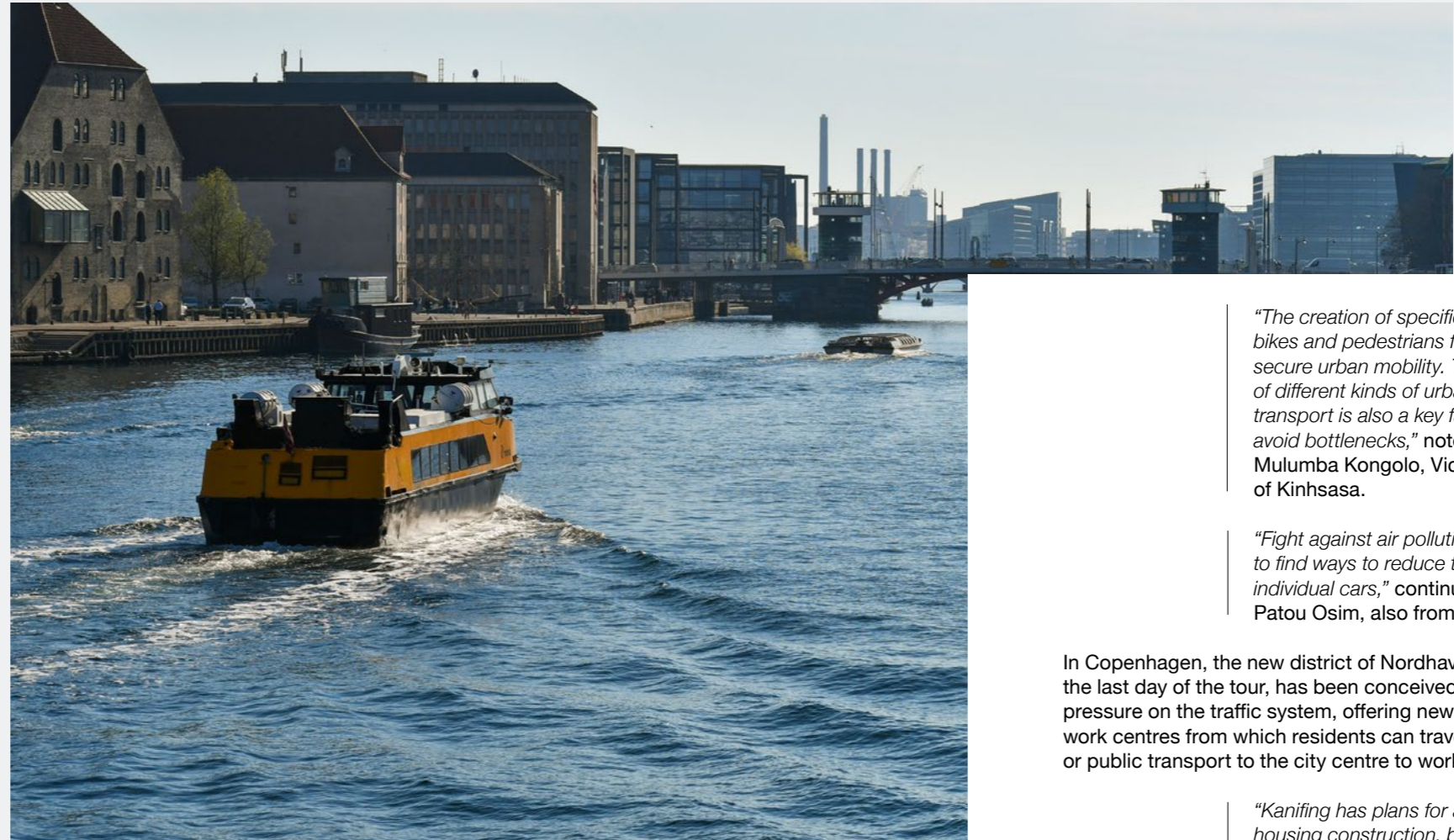
African mayors who face challenges with wastewater management, but also severe challenges with the availability of energy, were deeply interested in this solution, as most cities in Africa still do not have universal access to energy.

“Waste leads to energy dependency: nothing should be thrown away.”
 Christine M’BA N’DUTUME,
 Mayor of Libreville.

“Reduction of urban pollution is possible through the recovery of waste and wastewater.”
 Roger MBASSA NDINE,
 Mayor of Douala.

6.4

Mobility, ensuring city cohesion through integrated & green transport systems



Canal tour - Copenhagen boat © S-F/Shutterstock

Mobility was a cross-cutting theme during the visit, discussed through various prisms, like logistics and urban productivity, quality of life, pollution and carbon emissions.

Copenhagen boosts low-carbon mobility

Copenhagen has set a target to become carbon neutral by 2025, which is a huge challenge, especially in the area of transportation emissions.

One of the main goals in the development plan for the city is to have no more than one third of all trips that start and/or stop in Copenhagen undertaken by car, with bikes and public transport accounting for the rest. With pedestrians included in the goal, the target is for 75% of all trips to be done by foot, by bike or via public transport. To facilitate this, the City of Copenhagen is putting considerable effort into providing an integrated, efficient and green transportation network.

“The creation of specific lines for bikes and pedestrians facilitate and secure urban mobility. The integration of different kinds of urban public transport is also a key factor to avoid bottlenecks,” noted Gerard Mulumba Kongolo, Vice-governor of Kinshasa.

“Fight against air pollution means to find ways to reduce the use of individual cars,” continued Tabu Patou Osim, also from Kinshasa.

In Copenhagen, the new district of Nordhavn, visited on the last day of the tour, has been conceived to minimise pressure on the traffic system, offering new homes and work centres from which residents can travel by bicycle or public transport to the city centre to work or shop.

“Kanifing has plans for affordable housing construction, but the visit is pushing us to re-shape this plan to better consider transport issues. We want to reduce transport distance, encourage non-car transport and while we’re at it making it water and energy efficient.”

Andy Empson, advisor at the Kanifing Municipal Council.

During the trip, the delegation experimented with boats as a means of urban public transport. In Copenhagen there are three routes served by fully electric public water bus ferries, which are reducing the CO2 pollution from public transportation via utilisation of innovative environmentally friendly technology. The Harbour Buses are integrated in the Copenhagen public transport system with the same payment system as buses, the Metro or DSB trains.

“We have to adopt sustainable urban e-mobility models, in line with integrated sustainable inclusive urban plans,” pointed out, Dr Charles K’Onyango, National Director for Urban Development at Nairobi.

In Malmö, public transport paves the way for city expansion

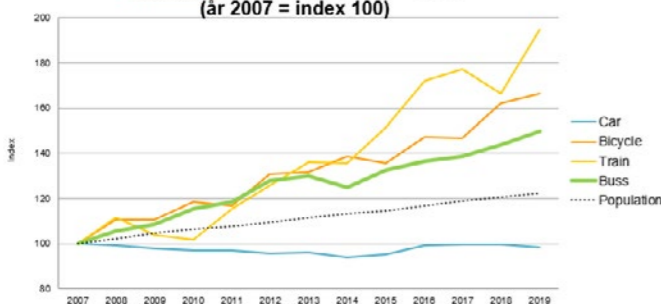
In Malmö, a Swedish city, our participants learned about issues related to mobility, in particular the BRT



(2)

system, which is highly developed, in a city which has managed to gradually reduce the use of personal cars and implement a performing public transport system. The Malmö-Expressen BRT design focuses “not only on the infra-

Mobility och population 2007 - 2019 (år 2007 = index 100)



(1)

(1) Mobility modes and population growth in Malmö. Source: Malena Möller, Traffic Planner at the Property Management and Streets and Parks Department/ City of Malmö

(2) The Malmö-Expressen Bus

What is UMDF?

AfDB's flagship urban program through which the Bank engages with Cities under a programmatic and yet tailored approach. Through its Cities Program, UMDF provides in-depth support to African cities to bring concrete investments for resilient infrastructure and essential services to their citizens. UMDF will support a city by:

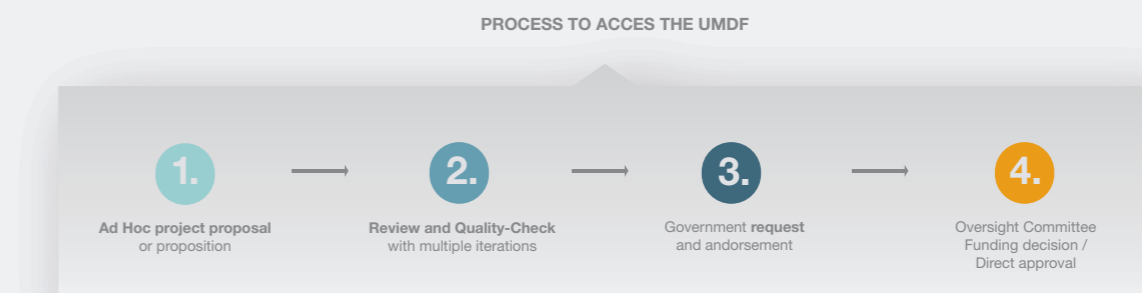
- ✓ Assessing its current development status
- ✓ Analysing the key challenges (including climate risks) and suggesting development strategies
- ✓ Identifying and doing initial costing and initial structuring on key projects to improve their bankability
- ✓ Linking them to appropriate AfDB teams for loan processing and to other prospective sources of investment finance

7 African Cities Program

What can UMDF Offer Your City?



How Can You Access UMDF Support for Your City?



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