ETHEKWINI MUNICIPALITY

dac | durban adaptation charter

DAC 2017 Annual Report

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Mayor Gumede's Foreword

The city's long term commitment towards its climate change work, which builds upon its achievements through the Durban Adaptation Charter (DAC) and related partnerships, has grown and strengthened over the years. As a result, eThekwini Municipality (Durban) is internationally recognized as a climate change adaptation leader in the Global South.

In 2017, eThekwini Municipality made a significant contribution towards the development of adaptation work streams in the C40 Cities Climate Leadership Group's Cities Networks. My new role as the C40 vice-Chair for the African Region has deepened climate change awareness within the eThekwini City Council. It has advanced our understanding of the underlying issues, deepen my passion for environmental justice and heightened the sense of urgency in responding to the issues of climate change. Through the opportunity of climate change, we hope to ensure a caring and livable city, especially for the most vulnerable communities.

"Africa is rising and we are growing in strength as we learn from each other. Durban hosted a number of learning exchanges during 2017, which culminated in the launch of a new climate change Compact in Northern Mozambique." Through our affiliation with the C40 Cities Network we hope to continue and extend our knowledge to other C40 African Cities.

In October, I made a commitment during the Paris C40 Steering Committee for Durban to take a strong lead in the region, and to build on the work of the DAC. This work should be well reflected in the C40 Deadline 2020 Project, which will assist us as one of the pilot cities to develop an ambitious action plan and enable the city to meet the Paris Agreement's 1.5˚C target.

It is Durban's mission to formally document this journey and allow for other African cities to learn with us.

During 2017, the Durban Climate Change Strategy Technical Task Team, comprising Senior City Administrative Leadership from line functions responsible for implementing the Strategy, and the eThekwini Municipality Climate Change Committee, chaired by myself, were established to drive and oversee the mainstreaming and the implementation of climate change work throughout the city. This has been an important milestone that we would like to advocate as an appropriate climate change governance framework for other cities.

I strongly believe in city to city capacity building. There is a need to build a strong regional climate change response with governance that will drive legislation and shape the development of our cities to bring sustainable service delivery to the vulnerable. These goals should therefore be driven through the continent's climate change compact partnerships as progressive platforms in supporting neighboring local cities in responding to climate change.

Honourable Councilor Zandile Ruth Gumede
EThekwini Municipality Mayor

Introduction

The Durban Adaptation Charter (DAC) was the historic outcome of the Durban Local Government Convention held in Durban, South Africa, in December 2011, during the course of the 17th Conference of the Parties (COP) of the United National Framework Convention on Climate Change (UNFCCC).

The Convention was organised by eThekwini Municipality (the local government responsible for the city of Durban), in partnership with the South African Local Government Association (SALGA), South African Cities Network (SACN), South African Department of Environmental Affairs (DEA), South African Department of Cooperative Governance and Traditional Affairs (COGTA), and ICLEI – Local Governments for

Sustainability. The Convention was attended by over 700 high-level delegates from around the world. After intense deliberation the delegates unanimously adopted the DAC, and it was presented at the High Level Plenary session of COP17. The DAC commits signatories to ten principles of best adaptation practice (see Appendix One), all of which align with the articles in the Paris Agreement.

Following the initiation of the DAC in 2011, a Secretariat managed a database of local government signatories from 45 countries around the world and mostly from local governments of developing countries. By December 2015, the DAC signatories' database had a total of 1069 signatories. For 728 of the signatories, a local government organisation had signed on their behalf. The remaining 341 were individual signatories resulting from their mayor or another duly assigned representative signing the DAC. The realisation of the Paris Agreement brought a change in focus from advocacy to implementation for the DAC Secretariat, which thereafter no longer sought to attract new signatories, but rather focussed efforts on implementation.

Following the Implementation Guidance Workshop, convened in March 2013, the DAC Secretariat has been developing an iterative implementation plan and progress in implementing this plan has been reported in a series of DAC annual reports. This Annual Report outlines the progress made in respect of DAC implementation during 2017.

Previous DAC Annual Reports can be found on the DAC website at: http://durbanadaptationcharter.org

DAC Implementation during 2017

During 2017, the DAC Secretariat continued to advance implementation of the DAC in three core areas of work. Firstly, implementation of the DAC Hub and Compact approach was advanced through continuing city to city exchange visits to build capacity and develop programmes for implementation within participating cities. Secondly, secretariat support was provided for the further development of the Central KwaZulu-Natal Climate Change Compact and the establishment of the Compact of Coastal Cities of Northern Mozambique, and thirdly, the development of a Knowledge Network, through the Urban Climate Change Research Network, to support implementation of the DAC Hub and Compact approach. A key part of establishing a Southern African Knowledge Network has been engaging with the Secretariat of the Educational Partnerships for Innovation in Communities Network (EPIC-N), whereby a global roadmap for the implementation of EPIC-N regionally was developed, and a first regional training completed in South Africa. The follow section provides a more detailed summary of DAC implementation during 2017.

Hub and Compact approach:

Development of the DAC Hub and Compact approach

The Hub and Compact approach essentially describes a network of networks engaging in collaborative climate change adaptation action. The development of the Hub and Compact approach started with the establishment of a partnership between Durban and Fort Lauderdale/ Broward County in Florida, USA. These two cities, already advanced in dealing with climate change adaptation, engaged in a series of city-to-city exchanges that enhanced peer-to-peer learning outcomes within areas of mutual adaptation interest. They formed the first two Hubs in the network. (see Figures 1 and 2).

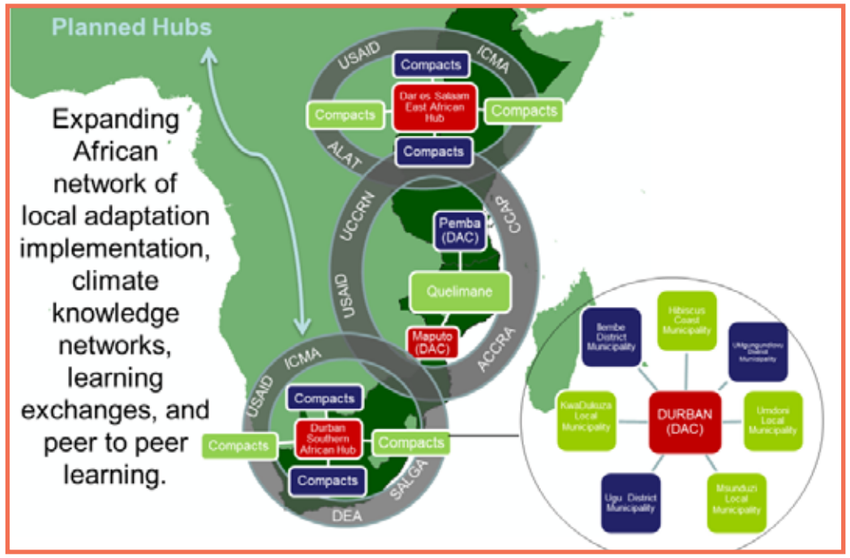


Figure 1: Schematic representation of the Hub and Compact approach in Africa

Figure 2: Hub and Compact approach in implementing the DAC

A direct outcome of the exchanges was Durban's adoption of a sub-national climate change Compact partnership model (hereafter referred to as a Compact), pioneered by the Florida Hub, who had previously developed the Southeast Florida Regional Climate Change Compact. The establishment of the partnership between these two Hubs, each with its own Compact, was the genesis of the development of the "Hub and Compact" approach. It was envisaged that a number of Hubs, each with its own Compact, would develop partnerships to effectively develop a network of networks across the globe to address climate change adaptation. Exchanges between Hubs through city to city partnerships have, as their intended outcome, the establishment of compacts for Hubs participating in exchanges. During 2017, a series of exchanges were concluded with Northern Mozambican Hubs, and the Compact of Coastal Cities of Mozambique emerged.

By entering into Compact partnerships with a Hub, local and district municipalities agree to work collaboratively in addressing climate change. This provides the opportunity for a coordinated climate change adaptation response that transcends local political boundaries. This allows for the sharing of skills and capacity within the Compact partnerships and the development of project proposals, which can be submitted for funding through National Implementing Agents for international funding mechanisms. Vertical integration of Compact implementation is advanced through partnership with national government counterparts of regional Compacts. For example, in South Africa, the Central KwaZulu-Natal Compact is supported by the national government's Cities Resilience Forum, chaired by the Department of Environmental Affairs.

Compact implementation is guided by the development of transdisciplinary research partnerships realising the co-generation of knowledge that will help cities make suitable development decisions appropriate for a climate change future. By way of example, the Central KwaZulu-Natal Climate Change Compact is supported by the Durban Research Action Partnership.

The Hub and Compact approach can also be used to ensure alignment in monitoring and evaluation reporting processes. Local government officials will be more likely to engage with reporting platforms like the carbonn Climate Registry (cCR) as it will provide them with useful products to help track progress with adaptation. A shared mitigation and adaptation reporting platform, like the cCR, will increase the efficiency of reporting, allowing more time to be focused on climate change adaptation action.

Effort during 2017 continued to be focussed towards the development of the partnership between the Hubs of Durban and the Mozambican cities of Pemba, Quelimane and Nacala. The return exchange visit of the Global Adaptation Network-funded (GAN) regional knowledge exchange by the Mozambican cities to Durban was completed from 6th to 8th March. This was followed by a UNISDR-funded exchange between the cities of Durban and Nacala in August and September. Details of these exchanges can be found in the City to City Exchange section below.

The exchanges were aligned with the USAID-funded Coastal Cities and Climate Change Programme (CCAP) in Mozambique, and supported the development of climate change action in the participating cities. In the case of Nacala, Mayor Rui Saw agreed to commit Nacala to the ten principles of disaster risk reduction

by signing the Making My City Resilient pledge. A detailed implementation plan to address erosion and development challenges was agreed and this will be submitted as part of a funding proposal within the CCAP programme. A key achievement by the Mozambican cities during 2017 was the establishment of the Compact of Coastal Cities in Northern Mozambique (CCCNM), which was launched on 30th November, and included the cities of Emba, Nacala, Quelimane, Mocimboa da Praia and Ilha de Mocambique plus the district of Palma.

City -to– City Learning Exchanges:

Global Adaptation Network Regional Knowledge Exchange:

Councillor Zandile Gumede, Mayor of eThekwini Municipality, hosted a climate change knowledge exchange from 6th to 8th March for a delegation of mayors and city officials from the three Mozambican Cities of Quelimane, Pemba and Nacala. The exchange, funded by the Global Adaptation Network and organised by the Durban Adaptation Charter Secretariat (DAC) sought to build capacity and extend the deepening partnership between these four cities in order to advance climate change action in the region.

This second leg of the exchange followed on from a successful first leg where eThekwini Municipality officials visited Pemba to discuss sea level rise, catchment management and climate governance issues. The focus of the return trip was community-oriented biodiversity planning and water governance approaches, Community Ecosystem-based Adaptation (CEBA), environmentally-sensitive solid waste management systems and renewable energy. At the conclusion of this exchange the cities agreed to cooperate on the development of a climate change funding proposal for submission to international funding organisations.

Ravine-in-Triangulo

Mayor de Araujo of Quelimane also extended an invite to Her Worship, Mayor Gumede to visit these Mozambican cities in support of the development of this proposal. This was the eighth such exchange organised through the DAC Secretariat.

UNISDR-funded Nacala exchange:

A delegation of two senior officials from Durban visited the Mozambican city of Nacala from 21st to 25th August for a city to city learning exchange funded by the UNISDR (office for disaster risk reduction). The aim of the exchange was to share experience and build capacity in both cities, whilst identifying risk reduction measures to implement in Nacala's master plan. This exchange formed part of the broader partnership between these cities and other northern Mozambican cities including Pemba and Quelimane.

During the opening session of the exchange, Mr Momade Amade, special advisor to Mayor Rui Chong Saw in Nacala, provided an overview of Nacala's strengths and challenges in terms of risk reduction. Nacala's strengths include strong political support, its status as a special economic zone, high levels of investment, a firm industry base and a relatively well-capacitated municipal climate change team. The main challenge observed was uncontrolled development, especially in environmentally sensitive areas. The development, which includes hardening of surfaces, increases storm water flow and erosive capacity down the steep escarpment to the deep water port. The storm water flows through beach sand (Nacala is located on a historic sand dune) which is very easily eroded. The result is a series of deep ravines, the sedimentation of the deep water port (disrupting operations) and damage to critical regional infrastructure. Nacala's strategic importance as a regional transport hub and tourism destination is threatened by such erosion events.

In discussing solutions to these problems, it was clear that the city will need to establish some control of development while developing a multi-stakeholder engagement process, in partnership with the port authority, to identify solutions to these challenges. The port is very negatively impacted by the sedimentation of the deep water port as well as being regularly flooded by drainage from the city. Establishing a partnership with the city, the residents of Nacala and its industry will help the city to secure buy-in from the stakeholders to address the challenges. This is an action that can be taken immediately, and does not require any funding.

A solution that was proposed for the ravines was to develop community projects to grow and supply vetiver grass for the stabilization of the ravines. Vetiver grass is a very effective rehabilitation plant and is already being used extensively by residents in Nacala. It would therefore be relatively easy to organize communities to grow this grass in sufficient quantities for rehabilitation

purposes, and through partnership, communities can be entrusted to maintain rehabilitated areas. A project proposal mooting this community-based approach to risk reduction, as well as the instalment of gabion baskets (which is also employment intensive) in severe cases will be developed and submitted to UNISDR.

During the exchange, the Durban delegation and the UNSIDR observer, Ms Isabel Njihia, met with Mayor Saw to discuss taking this work forward. Mayor Saw agreed to commit Nacala to the ten principles of DRR by signing the Making My City Resilient pledge. Mayor Saw presented each delegate with a certificate of friendship from Nacala.

UNISDR-funded Durban exchange:

The return exchange by Nacala to Durban was concluded on 27 and 28th September, and was attended by Councillor Evaristo Simoco and Mr Momade Amade. During the exchange, the delegation focussed upon the partnership between Durban and its National Port Authority, community-based river rehabilitation projects and the establishment of transdisciplinary research partnerships. From this second exchange, a plan of action was developed for Nacala.

At the core of Nacala's climate change response will be the establishment of the multi-stakeholder forum with the Nacala-Porto local government and Porte du Norte (harbour authority) as initiators. The forum should include representation from Mozambican provincial and national government (given the strategic importance of Nacala), academia, local industry, relevant organisations and communities. The aim of the forum is to coordinate environmental management and ravine rehabilitation through community-based programmes to reduce vulnerability in communities and drive Nacala's adaptation agenda. The proposed Community Ravine Rehabilitation Programme (CRRP) is consistent with the DAC Hub and Compact approach and will realise multiple co-benefits as described above. Most importantly, it will provide a mechanism to engage communities around inappropriate development to prevent further degradation of sensitive environmental areas. This forum could effectively become a standing agenda item on the Compact of Coastal Cities in Northern Mozambique.

There already exists, within Nacala, the expertise to successfully complete ravine rehabilitation programmes, for example in Mucuaipa and Ontupaia. What is required, is funding support to enable the large scale rehabilitation programmes to be completed. The programme should be community-based, where adjacent communities are encouraged to grow plants that will be used for the stabilisation of ravine sides and floors, like vetiver grasses and trees, like those used in Mucuaipa. Where necessary, gabions should be deployed to slow flood waters and stabilise ravine floors. Retrofitting already developed areas with storm water control measures like rain water harvesting and

flow attenuation upstream through Sustainable Urban Drainage Systems (SUDS) and natural vegetation should be prioritised to mitigate the source of the problem. These actions should result in reduction of the erosion and sedimentation rates in the harbour, rehabilitation of the ravines, avoided loss of operational time in the port and benefits for the local community. There is opportunity for carbon sequestration co-benefits, as in Durban's Buffelsdraai programme. Rehabilitation could be followed by a self-funded maintenance programme where it could be shown that avoided losses (costs) from erosion and flooding are greater than the cost of recovering from events currently being experienced (and future increases in the severity of such events). This funding could be sourced from partners in the multi-stakeholder forum. The research programme should monitor and evaluate this process to provide learning outcomes to improve programme implementation, but also to be included in the global stocktake of 2023. In this way, the programme can contribute to Mozambique's Nationally Determine Contributions within the Paris Agreement.

Given that Nacala has identified tourism as a key part of its master plan, effort should be put into avoiding environmental impacts in sensitive areas, and pollution generally. The Master plan should identify, through processes like systematic conservation planning, critical biodiversity and ecosystem provision areas, and appropriate land should be identified for conservation and environmentally sensitive development for an ecotourism industry. A community-based environmental reporting system should be established as a part of a citizen science programme. This can start simply by using smartphones to report incidents of pollution; including where and when they occur and what was observed. The ambition of this system can be increased to include the employment of smartphone social applications. Nacala should identify the appropriate official in the environmental department to drive this process. Once again, the research partnership should play a pivotal role here.

Broad and ongoing communication of the establishment and implementation of the multi-stakeholder forum is strongly encouraged. This will have the benefit of raising awareness about the issue of climate change, leverage political support, and help keep communities complying with maintenance programme objectives. Nacala should report its efforts through the Compact of Mayors and within its national and local reporting framework, as well as brief input into the DAC Annual Report.

Central KwaZulu-Natal Climate Change Compact:

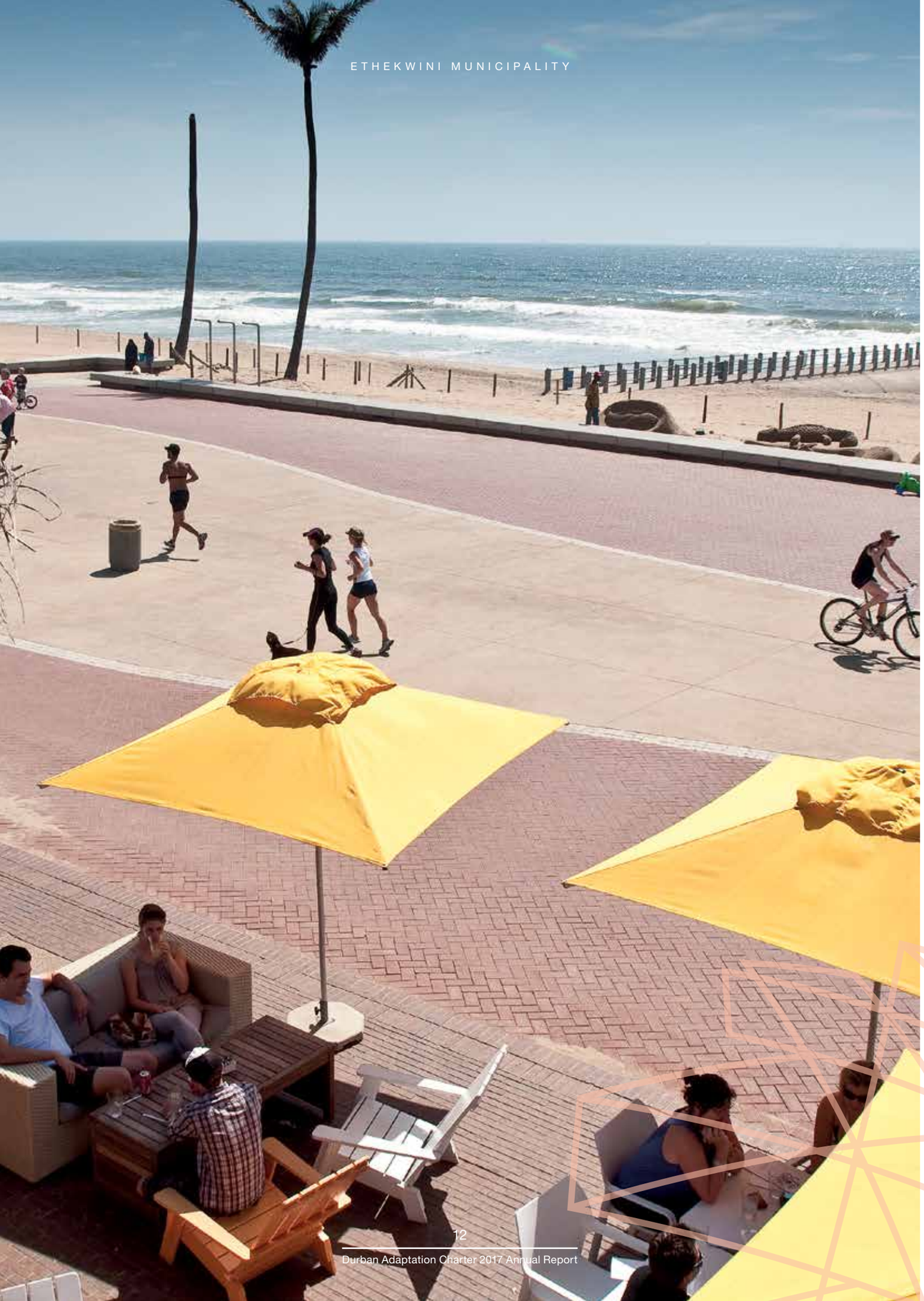
Governance:

Climate change does not happen in a vacuum and it cannot be isolated from the wider service delivery issues at a local to regional and national scale. Hence the CKZNCCC acknowledges the importance of cross boundary learning, provision of technical support and sharing of resources. The CKZNCCC has been adjusting itself in line with the needs of participating municipalities in order to establish a conducive and a sustainable way of keeping it functional, following the conclusion of contracted support for the secretariat.

In 2017 a CKZNCCC Steering Committee was established, consisting of eThekwini, uGu, uMgungundlovu, and iLembe District Municipalities and Msunduzi Local Municipality. This Steering Committee also includes the provincial Department of Economic Development, Tourism and Environmental Affairs (EDTEA) as well as South African Local Government Association (SALGA). The steering committee was constituted to work in a more inclusive mechanism that will facilitate the driving of the compact as well as collective decision-making. The CKZNCCC requires a governance framework that is generated from a shared vision to encourage participation from its members. Therefore, the development of the CKZNCCC implementation framework will be a collective effort from the steering committee members.

The CKZNCCC hosted three meetings and two steering committee meetings during 2017. The compact has played an important role in providing a platform for alignment and development of analogous methodologies of responding to climate change, especially where municipalities are sharing boundaries as well as common vulnerabilities.

The 11th CKZNCCC meeting was hosted by iLembe District Municipality in the presence of the Honourable Deputy Mayor, Councillor Dolly Shandu. During the meeting the compact portrayed itself as a platform where disadvantaged municipalities with low capacity could openly gain access to resources; where uMgungundlovu and eThekwini Municipalities offered to share technologies that could assist iLembe District Municipality with technical expertise on establishing an early warning system intended to reduce the impacts of adverse weather, particularly reducing deaths through lightning strikes. In response to Mayor Shandu's request



for assistance with the mitigation of serve impacts of lightning strikes, eThekwini Municipality invited the Provincial representatives and iLembe District Disaster Management practitioners to an Early Warning Systems Master Class from 1st – 3rd August 2017. During this master class, the Provincial Disaster Management Centre (PDMC) was requested to take a lead in driving this initiative. The municipalities considered that the PDMC will have relevant capacity to establish the system and integrate into other municipal communication systems. Furthermore, several engagements with the support of the Department of Cooperative Governance and Traditional Affairs (COGTA): Development Information Systems (DIS) and the UKZN were convened to facilitate inclusion of iLembe District into uMgungundlovu District's early warning system.

Compact Implementation Progress to date:

Ilembe Municipality:

The lightning early warning system has been installed at Swayimane High School and a comprehensive capacity building programme is being developed to ensure that the surrounding community is aware and understands the system and the different warnings that it will generate (lights and sirens). The early warning system component has been assigned to be the national pilot for the National Framework for Climate Services for South Africa (NFCS-SA). An NFCS-SA dissemination workshop was held in March 2017 with all the key stakeholders. A Steering Committee for the Early Warning Systems Component has also been established.

Climate vulnerability maps for two areas in Msunduzi and Richmond Municipalities have also been produced. The mapping of vulnerability of households and infrastructures to climate change risk were undertaken to produce a vulnerability hotspots map for each area. The Maintenance and Management Plan (MMP) for the Vulindlela wetland restoration work has been compiled as well as a Basic Assessment Report.

The development of the Agriculture Climate Change Handbook for KwaZulu-Natal was completed through this project and is being finalised. This will be an important resource for scientists, managers, farmers and learners in KZN. The handbook will be officially launched later in 2018.

A Research Advisory Committee (RAC) was also established and two Masters and two PhD bursaries were awarded. Climate change capacity building activities have taken place in various schools, in partnership with the Provincial Department of Economic Development, Tourism and Environmental Affairs (EDTEA).

Further capacity building and public awareness and action on climate change adaptation and environmental sustainability have also been rolled out in various communities.

South African Local Government Association (SALGA) Councillor Climate Change Training Workshop:
The 2016 local government elections in South Africa brought in new political leadership in Compact member municipalities. In 2017, the compact did not only play a role of providing a learning exchange platform for practitioners and line functions, it also played a role in capacitating the newly elected political leadership following local government elections in 2016. SALGA partnered with the CKZNCCC on 20th June 2017 to host a climate change and environmental learning workshop for newly elected local councillors in the province as part of their induction to municipal life.

Local Government Climate Change Support Programme: DEA, SALGA and EDTEA:
In 2016 SALGA engaged the South African National Department of Environmental Affairs (DEA) to solicit possible funding mechanisms to support municipalities with the development of climate change strategies. It was in 2016 when DEA lobbied Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) whereby a service provider, Urban Earth was appointed to facilitate the process of climate change strategy development in district municipalities throughout South Africa. Under the leadership of DEA and SALGA, Urban Earth facilitated several climate change training workshops at a District level. The workshops focused on providing assistance to municipal officials on conducting climate change vulnerability assessments, developing climate change strategies, and incorporating climate change into strategic plans, like their Integrated Development Plans and Spatial Development Frameworks. Workshops were conducted in district municipalities across South Africa, including KZN Compact members: iLembe, uGu, uMgungundlovu, King Cetshwayo and Harry Gwala District Municipalities. In KZN, EDTEA played an important support and advisory role. As of 2018, all of the KZN Compact member district municipalities will have developed draft climate change response plans and are currently engaging with stakeholders to finalise these plans.

EDTEA:
Getting political leadership support from the districts was important in laying the foundation for climate change work. It helps assist district municipalities in terms of capacity to develop successful proposals.

Systematic Conservation Planning Workshop:
Planners and biodiversity practitioners under the jurisdiction of the CKZNCCC municipalities were invited to attend the Systematic Conservation Planning Workshop, which was convened under the Global Adaptation Network-funded DAC Mozambique-Durban learning exchange. Following a successful workshop with valuable learning outcomes for planning and biodiversity practitioners, a replica workshop on Systematic Conservation Planning was proposed by uMgungundlovu District Municipality. Through the CKZNCCC, uMgungundlovu hosted another successful workshop on 25th May 2017. The workshop was attended by 49 attendees representing various municipalities in the province. In this workshop, a gap in knowledge sharing in biodiversity planning was identified, as well as a need to convene an annual conference for planners and biodiversity practitioners. If municipalities create platforms for information exchange and governance to build uniform models of dealing with the issues, then impact from changes in the political landscape as well as those of climate change will bear less effects on neighbouring municipalities.

CSIR Coastal Climate Knowledge Workshop:
The Compact co-organised the Coastal Climate Knowledge Workshop with the Council for Scientific and Industrial Research. The international workshop was attended by coastal Compact members and city officials from Kenya. A detailed description of the event can be found in the DAC Participation in Local Events section below.

uMgungundlovu District Municipality:

Being part of the Compact provides an opportunity to network with officials from other municipalities (because of a lack of officials focussed on climate change within uMgungundlovu) and in terms of support and generating ideas for implementation approach. Training opportunities have been plentiful.

The overall objective of the uMngeni Resilience project is to reduce climate vulnerability and increase the resilience and adaptive capacity of vulnerable communities and small scale farmers in productive landscapes in the UMDM, which are threatened by climate variability and change. This will be achieved by combining traditional and scientific knowledge, through an integrated adaptation approach, specifically through implementing a suite of complementary project interventions, focussing on: i) early warning and ward-based disaster response systems; ii) a combination of ecological and engineering infrastructure solutions; iii) integrating the use of climate-resilient crops and climate-smart techniques into new and existing farming systems; and iv) disseminating adaptation lessons learned and policy recommendations, to facilitate upscaling and replication.

Msunduzi Local Municipality:
Access to information and capacity building has been significant. An example is Msunduzi in securing their green building council certification following a training event through the Compact. Benefits included access to training and leveraging funding. Capacity building has been a major activity. International benefits include

the Compact's good standing internationally and this has resulted in opportunities like the Mozambique learning exchange and locally with CSIR.

EThekwini Municipality (Durban):
Durban had another busy year in terms of its DAC and Durban Climate Change Strategy (DCCS) implementation activities. The City hosted three city to city international learning exchanges, one local learning exchange, two research symposia and Africa's first screening of the Climate Reality Project's "An Inconvenient Sequel". The DAC Secretariat also attended twelve international events including ICLEI's Resilient Cities Congress, the US National Adaptation Forum and the C40 African Adaptation Forum in Accra, Ghana.

Durban had a very successful year thanks to its engagement with the C40 Cities Climate Leadership group, whereby Mayor Gumede was elected as Vice-Chair representing the African continent. Mayor Gumede represented the City at the launch of Women in Climate Conference in New York and the C40 Steering Committee in Paris. Durban was selected as a pilot city for implementing the Deadline 2020 programme, and C40 has provided the City with technical expertise to ensure that the DCCS implementation plans that are currently being developed align with the 1.5 °C ambition within the Paris Agreement and South Africa's Nationally Determined Contributions. Durban was also selected to participate in C40 Cities Finance Facility whereby technical expertise will be provided to help Durban develop a business case to self-fund, at a city-wide scale, its community-based river management programme called Sihlanzimvelo. If successful, this could provide a template for African ecosystem management and development.

Compact of Coastal Cities of Northern Mozambique:

Following a successful year of implementation of the USAID-funded Coastal Cities Climate Adaptation Programme (CCAP), and a number of Global Adaptation Network (GAN) and UNISDR-funded learning exchange visits, the core group of three Northern Mozambican cities, Pemba, Quelimane and Nacala, formed their own northern Mozambique climate change compact. The Compact includes the new participants in the CCAP programme, Mocimboa da Praia and Ilha de Moçambique. The participation of the mayors of these new members at ICLEI's Resilient Cities 2017 has advanced the process of capacity building and developing political leadership support in these two cities.

The lead Compact hubs (Pemba, Nacala and Quelimane) are initiating learning exchanges where the new municipalities are being hosted. There is an evaluation forum that meets every six months to share good practice between the five cities. The lead hub officials are now sufficiently capacitated to train newly joining city officials. A Key strength of the northern Mozambique Compact partnership is the strong political leadership of its mayors. The new Compact members' mayors want to organise their own training events using Mozambican trainers. Provincial department officials and university researchers will be invited. The Compact partners have now agreed that they are ready to approach the other funding agencies in Mozambique to extend the Hub and Compact approach for other cities in Mozambique. This will be done through the ANAMM (National Association of Mozambican Municipalities). As president of this association, Mayor Tagir will propose the extension of the partnership to central and southern Mozambican cities at the next ANAMM national meeting.

The Compact partners, including Illha de Moçambique and Mocimboa do Praia do had a city to city learning exchange through the CCAP programme, where the new Compact partners learnt about city planning and techniques for capturing spatially located information. The new Compact partners are enthusiastic. CCAP are running a one week training in Maputo where consultants from Brazil will lead the development of a climate change proposal. The compact partners participated with a local association and university representative. The timeline for submitting a proposal will be: each municipality will send their final draft to CCAP by December, and the consultant will submit the funding proposal. Following the UNISDR-funded learning exchange, Nacala has been working on its funding proposal. Muconi will be the site of the community-based stream (donga) rehabilitation programme. The Mozambican railway authority and the port will be involved as part of the stakeholder forum.

Quelimane and Pemba have registered for CDP. ICLEI Africa requested information from the cities. This was a list of documents including local adaptation documents, mitigation plans, GHG inventories and vulnerability maps. This is required and needs to be added to the partnership plan of action. An assessment is needed on what tools and platforms are available that meet the needs of the partners.

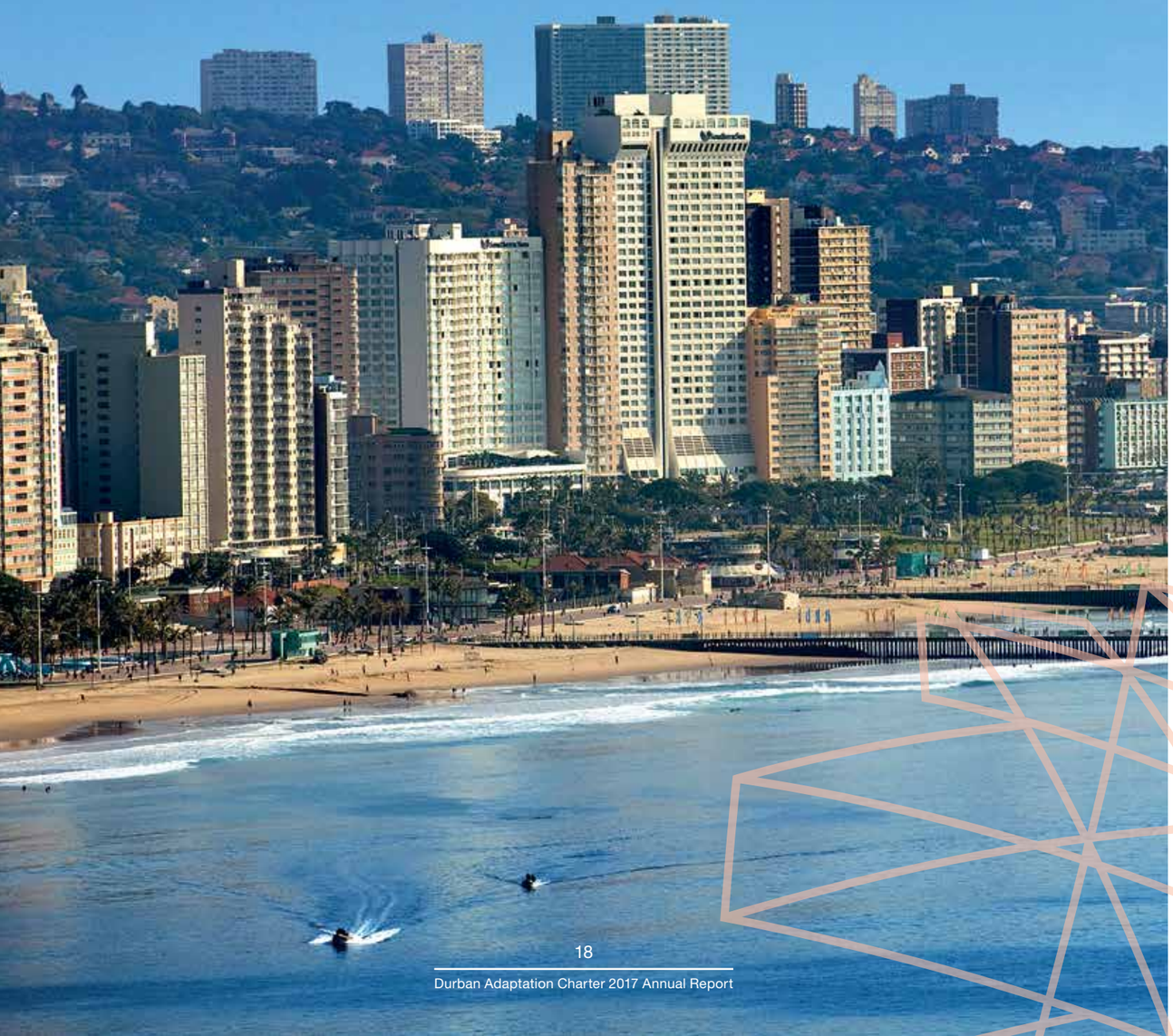
Nacala have made substantial progress with their Compact of Mayors commitment. City officials received a request for an update on their profile, which they have done. Discussions will begin around developing a work plan for the inventory conclusions. Currently, Nacala have completed their commitment and inventory, and now need to develop their plan. They have acquired their badge and Mayor Saw expressed pleasure at the progress the city is making.

Pemba has constructed twelve model resilient houses and resilience techniques have been communicated to their communities. Pemba is implementing projects for the restoration of green infrastructure along their coastal belt as wind protection and against soil erosion. Ecological latrines have been built in communities prone to sea water inundation. The rehabilitation of Paquitequete (an informal settlement located on a sandspit at the mouth of Pemba Bay) has started to delay sea water intrusion into the settlement. A project to enhance sea ecosystem sustainable management through seafood production (mexilhoes) is helping to diversify community diet and ensure balance and security.

DAC Partners Implementation:

Urban Climate Change Research Network:

The Urban Climate Change Research Network (UCCRN) signed a Memorandum of Understanding with the DAC Secretariat to cooperate in 2013. Since then, Durban researchers have contributed as co-authors of Chapter Four of the Second Assessment Report on Climate Change in Cities (ARC3-2) and Durban has established a Knowledge Hub as part of UCCRN's global Knowledge Network. Durban officials have been working with researchers and officials from Mozambique and Tanzania to submit a funding proposal for research support to establish a research network between these countries. The funding proposal, submitted to the International Council for Science's (ICSU) LIRA programme, to advance implementation of Sustainable Development Goal 11, has been short-listed for consideration for support, and a decision is expected in early 2018. The title of the submitted proposal is "Ecosystem-based adaptation to enhance cities' resilience to floods, erosion and windstorms".



In July, the UCCRN Paris Hub hosted a two day workshop aimed at advancing the implementation of the Knowledge Network and ARC3-2. Emerging from these discussions was a proposal to run an urban design lab in Durban as a side-event of the Adaptation Futures Conference, to be held in Cape Town, South Africa, in June 2018. A session proposal with the side-event has been accepted by the conference organisers, and the design lab is being planned for the first half of 2018.

Educational Partnerships for Innovation in Communities – Network:

Following a successful decade of implementing the Educational Partnerships for Innovation in Communities – Network (EPIC-N) in a growing number of USA cities and communities, organisers of EPIC-N, in partnership with the US National Science Foundation and the Global Adaptation Network, have developed a roadmap for the global implementation of EPIC-N.

EPIC-N systematically matches city and local government needs with the innovation of students and academics to address a broad spectrum of sustainability related issues, with lasting and sustainable impacts for all involved. Colleges and universities paired with local governments can be a powerful force in making cities sustainable, connecting students and faculty to real-world projects that address the pressing needs of local municipalities and communities as they contend with the challenges of becoming more sustainable and resilient and adapting to climate change.

Presently, there are nearly 30 universities in the U.S.A. that are implementing the EPIC model, which has shown itself to be elegantly simple yet powerful and effective in practice, that can be fully customizable to local circumstances around the world. Based on its success in the USA to date and emerging implementations of the model in certain southern African cities, the partners facilitating this training are excited to promote the adoption of this model regionally in urban/local governments and local universities from cities in southern Africa.

Following the first international training event held in Bonn, immediately before the ICLEI Resilient Cities

Congress, the EPIC-N determined that there was value in doing regional training events. A workshop was convened in September in Washington to map out a series of regional training events to introduce EPIC-N to cities around the world. In December, the first such regional training event was held in Cape Town, prior to the Future Resilience of African Cities and Lands (FRACTAL) annual meeting. The training event was well attended, and concluded with an agreement to form an EPIC-Africa network with Dr Gilbert Siame (University of Zambia) elected as its first Chair. Currently, Dr Siame is overseeing the development of a web presence with which participants to the network can coordinate.

DAC Communication:

Website:

During 2017, the DAC Secretariat continued to maintain the DAC website. During the first half of 2017, the Secretariat had support from a service provider for the posting of news articles, international event alerts and opportunities. Since July, when the contract for the service provider expired, the Secretariat has not been able to maintain the level of intensity as managed previously with the service provider support. As such, posting have been made when local resources have permitted. This included six news articles and 44 opportunities. Consideration on how to deal with maintenance of the website in 2018 is being given.

DAC representation at international events:

Cities Fit for Climate Change (CFCC) workshop, 14th - 16th Feb

The GIZ-funded Cities Fit for Climate Change Project convened its first learning workshop in Durban from 6th – 8th June 2017. The partner cities include Chennai in India, Santiago in Chile, Durban in South Africa and a number of German cities. The aim of the project is to secure climate change planning and policy in the partner cities and the exchange provided an opportunity for the participating cities to learn from one another and advance their own climate change work.

UCCRN Urban Transitions in the Face of Climate Change Workshop:

From 6th to 7th July, Dr Sean O'Donoghue of the DAC Secretariat participated in the Urban Transitions in the Face of Climate Change workshop hosted by the Urban Climate Change Research Network European Hub at the Université Pierre et Marie Curie in Paris. UCCRN is a network of researchers working with cities to better understand and respond to the impacts of climate change at the local level. UCCRN have established a number of Hubs in their Knowledge Network to implement the findings of their Second Assessment Report for Cities and Climate Change (ARC 3-2), for which a summary for policy makers is currently available and can be downloaded here. The European Hub was the first to be established, and through UPMC, organised and hosted the workshop.

The Durban Hub was established in 2015, and provides support to the DAC Hub and Compact to guide adaptation implementation through co-generated applied research. Following a productive two days of parallel workshops, the participants agreed to focus on developing a model for implementing ARC 3-2 in cities; this model could be piloted within the Compacts through the development of GCF funding proposals. Following the workshop, a session proposal was successfully submitted to the Adaptation Futures 2018 Conference, to be held next year in June. The DAC Secretariat gratefully acknowledges the support of the Institute de Ecologie et Environnement for their support to attend this workshop.

Educational Partnerships for Innovation in Communities – Network (EPIC-N) events:

EPIC-N Bonn International Training event:

Further information about the roadmap for regional implementation of EPIC-N can be found in the DAC implementation section above. This section will report back specifically on the three EPIC-N-related events that the DAC Secretariat has attended.

On the 3rd May 2017, Dr Sean O'Donoghue was invited to participate in a training workshop to stimulate innovative transdisciplinary research partnerships in developing cities of the Global South. The Educational Partnerships for Innovation in Communities Network (EPIC-N) training workshop was funded by the Global Adaptation Network (GAN), who supported the travel and attendance at the ICLEI Resilient Cities Congress 2017 thereafter of twenty researcher/ city official pairs.

EPIC-N Strategic Planning Workshop:
Through the EPIC-N, and with the support of FRACTAL (Future Resilience for African Cities and Lands) members, a regional training on the EPIC model was planned for Saturday, November 18th and Sunday, November 19th, in Cape Town, South Africa, immediately preceding the formal start of the FRACTAL annual meeting.

To prepare for this event, and to develop a global roadmap for EPIC-N implementation, a two day planning workshop was convened from 13th to 14th September in Washington D.C. by the funders and organisers of the regional training event. Emerging from this discussion was a roadmap of support for the establishment of a network of EPIC partnerships in Southern Africa following the training. Dr O'Donoghue attended as the lead of the Durban Adaptation Charter Hub and Compact approach.

EPIC-N Regional Training Event:
Following the Washington workshop, an EPIC-N African regional training event was held on 18th and 19th November in Cape Town, South Africa. This training provided a unique opportunity for collaborating pairs of individuals representing municipal governments and nearby universities from cities in southern African countries, to receive training on the EPIC-N model and its implementation. Support provided to selected applicant pairs covered transportation to and from the training event, accommodation and subsistence. Upon completion of the training, participants were awarded a certificate of training on the EPIC model.

ICLEI Local Climate Solutions for Africa Congress 2017:
ICLEI – Local Governments for Sustainability Africa proudly hosted the Local Climate Solutions for Africa (LoCS4Africa) 2017 Congress from 22nd to 24th March in

Ekurhuleni Municipality in South Africa. The Congress focused on urban water and sanitation in African cities in the context of the global crisis of climate change. Water is a fundamental resource for the survival of human life and urban development and so this conference explored solutions for African cities in coping with water challenges.

The DAC Secretariat attended LoCS4Africa 2017 to learn and contribute towards discussions on restoring and preserving water resources. As the previous hosts of LoCS 2015, Durban's Mayor Zandile Gumede, represented by Councillor Mondli Mthembu, handed over the ceremonial baton of African climate change leadership to the Ekurhuleni Municipality.

World Water Day Celebration:
South Africa has experienced severe drought and extreme flood events in recent years, which is linked to the change in climate. Water is a critical natural resource that we depend on and World Water Day brings about an opportunity to advocate for the sustainable use of water from households, industries and other sectors.

World Water Day is celebrated annually on 22nd of March and was declared an international day by the United Nations General Assembly in 1992. World Water Week is now celebrated annually from 22nd to 26th March and aims to highlight the value of water. The 2017 theme focused on wastewater. The United Nations Environment Programme celebrated World Water week with an international meeting at the Durban iNkhosi Albert Luthuli Conference Centre, and Durban's Climate Protection Scientist, Ms Zama Khuzwayo presented the City's Palmiet Catchment Rehabilitation Project in the Wastewater and Environment session.

Durban participated in this session consisting of different panellists with various approaches towards water security. However, the integrated trans-disciplinary approach to water resources management through the development of a governance model, resulting in the establishment of a community based working relationship became a one of the key learnings. This was summarised in a presentation on Durban's Palmiet Catchment Rehabilitation Project, where the inclusive governance model through a Community of Innovators, was considered inspirational.

ICLEI Resilient Cities Congress:
ICLEI's Resilient Cities Congress 2017, held from 4th to 6th May in Bonn, Germany, had a strong partnership-focussed theme, especially transdisciplinary research partnerships, building upon the EPIC-N training. As with every annual Congress, there was emphasis on capacity building and increasing climate change knowledge.

During the event, Dr Sean O'Donoghue participated as a panellist in two sessions, and facilitated a third. The two sessions were on violence and climate change, where

the panel explored the impacts of climate change on violence, including domestic and xenophobic violence. An increase in temperatures, especially during extreme heat events can result in a measurable increase in violence in cities. The second panel was in respect of the Global Platform for Sustainable Cities. This is a new multi-million dollar platform that connects with cities to drive global sustainability. Currently, the only South African city accessing the platform is Johannesburg.

Dr Tony Socci, of the USEPA and Dr O'Donoghue were programme steering committee members for RC2017. The committee was responsible for driving the programme for the Congress, and for choosing which presentation submissions were included. The final role was to attend the post-Congress Steering committee debriefing session, where plans for the 2018 Congress were initiated.

United States National Adaptation Forum:
Dr O'Donoghue, at the invitation of the Global Adaptation Network, attended the United States National Adaptation Forum, held in Minneapolis, Minnesota from 9th to 11th May 2017, where he participated in a GAN panel on regional city to city adaptation learning exchanges.

The panel was very well received, and Dr O'Donoghue was invited to participate in planning for a similar exchange with the city of Toronto, Canada. An initial discussion explored the potential for conducting an exchange that focusses on indigenous knowledge and creating narratives couched with cultural beliefs, leveraging traditional knowledge, to advance understanding of the issue of climate change in indigenous populations of these participating cities. This would align closely with the climate change work being done in the Palmiet Catchment Rehabilitation Project where youth are developed into Eco Champions

to address community challenges relating to water and climate change in that catchment.

14th International Water Association Specialists Conference:
Utilities providing water for their cities need to work hand in hand with basin stakeholders to ensure water security for their cities. The International Water Association (IWA) is developing a Basin Action Agenda which will provide guidance pathways to influence and activate utilities, cities and their industries to become water stewards working with basin and catchment organisations, as well as other water management stakeholders (e.g. agriculture and mining). The workshop is part of a series at IWA events in developing the Action Agenda, and will be finalised for the 2018 IWA World Water Congress in Tokyo. This workshop will focus on sharing experiences and identifying approaches to develop guidance for urban stakeholders to better manage water quantity and quality through actions at the catchment level.

The importance of partnerships in implementing sound water-management community-governed projects was a key feature emerging from this event. Whilst Dr O'Donoghue, of the DAC Secretariat was presenting in the first of his two panels (on 10th Oct), an extreme storm event was hitting Durban, and Dr O'Donoghue was able to use WhatsApp during his presentation to refer to real-time messages of damage and injury from the City's Palmiet Rehabilitation Project WhatsApp emergency group for the Palmiet Project (the topic of my presentation) and able to show that no loss of lives was reported, partly because of the efficacy of the early warning WhatsApp group.

C40 Africa Adaptation Forum
The C40 Adaptation Programme brings together C40 cities to share best practices, experiences, tools and resources with the aim of building more resilient cities. The African Adaptation Forum, hosted by Accra, Ghana from 6th to 7th December, convened city officials from ten African C40 cities who are currently engaged in C40 Adaptation networks, including Climate Change Risk Assessment and Cool Cities. The topics were defined by the participating cities based on their interests and key priority areas in climate change adaptation and resilience through a consultation process conducted by the C40 Network Managers.

Additionally, there was a third day, on 5th December dedicated to a Policy Dialogue to discuss the urgency of Climate Change Adaptation in Global South cities - with a focus on Africa; the impacts of climate change in our cities and communities, and strategies to communicate these impacts; and the need for financing mechanisms for adaptation in cities. In the policy dialogue, city officials exchanged ideas with private sector utility providers, other international organisations working on resilience and community leaders.

A parallel side event, Impact 2020 was convened on 6th December. During this event city participants were invited to provide reflection upon the aims of knowledge provision and communication for Impact 2020. The importance of developing communication specific for city mayors was agreed, especially three key, strong points about climate change that Mayors could begin climate change-related speeches with.

Future Resilience of African Cities and Lands (FRACTAL) annual workshop:
The FRACTAL annual workshop was held in Cape Town, from 20th November to 24th November 2017. During the annual events, partners interrogate the knowledge that FRACTAL has produced and also to spark thinking onto how it can be mainstreamed into decision making. During the four days' workshop the following issues were discussed: learning from the experiences and challenges on the work that has been done in different cities; introduction to system thinking approach: how can the city use climate change data or how different cities include climate change data in city planning; and the Climate Capacity Diagnosis & Development (CaDD) tool (the tool which provide organisations with approaches for measuring and improving their ability to mitigate climate change risks and opportunities).

FRACTAL aims to advance scientific knowledge on regional climate responses to global change and mainstream it into decision making. It is designed to work across multiple disciplines within the scientific community and to foster strong collaboration between academic researchers, government officials and key decision makers. This addresses the challenge of providing accessible, scientific and updated climate information that is needed by decision makers operating in the city level.

DAC representation in local events:

Municipal Institute of Learning (MILE) Research Symposium:

EThekwini Municipality, through its Municipal Institute of Learning, hosted its annual research symposium from 1st to 2nd June in the Albert Luthuli International Convention Centre in Durban. The symposium provides an opportunity for researchers from KwaZulu-Natal academic institutions to present their research findings to city officials from the province, including members of the Central KZN Climate Change Compact. Dr O'Donoghue presented the DAC Hub and Compact approach, and focussed specifically on knowledge outcomes from research programmes, like the Durban Research Action Partnership and the UCCRN Knowledge Network, to support adaptation implementation.

Climate Reality Project Africa - African premiere of "An Inconvenient Sequel":

During 2017, Durban began implementing its Climate Change Strategy governance framework with the inaugural reconvening of the eThekwini Municipality Climate Change Committee (a political committee providing oversight of implementation of the climate change strategy) following local government elections in 2016. This was followed by the inaugural convening of the DCCS Technical Task Team, a coordinating body of Heads of Units responsible for implementing the ten themes of the Strategy and for reducing silos in the City. At both of these inaugural meetings, former USA Vice-President, Mr Al Gore's "An Inconvenient Sequel" was screened, and the Climate Reality Project Africa are sincerely thanked. City officials from the Environmental Planning and Climate Protection (EPCPD) and Spatial Development Framework (SDF) Departments were also given an opportunity to view the movie. Numerous reviews about the movie were collated from the officials. The motivational impact of this movie was substantial.

Some of the movie reviews:

"The documentary is a wakeup call to society on how vulnerable people indeed are to climate change. The documentary not only provides scientific facts on how rapidly climate change is occurring but also visual lived experiences of people throughout the world"…

"This documentary should be shown to city officials and/or councillors in order to provide a realistic projection of the future if daily operations within the city do not change. Not only is the documentary informative but it also brings an element of fear of the possibilities of not doing anything to address climate change"…

"The movie was a huge eye-opener and I strongly believe it should be shown to other sister departments and to our government officials, even to our parliamentarians"…

"As countries of the world, it is our differences and our unwillingness to change, learn and work together towards a common goal that puts us at more risk than the climate change itself"…

"I hope that subsequent to the recent Paris Agreement on climate change mitigation, our government has reviewed some of its decisions around the reliance on fossil fuels"…

"Taking the movie to schools will make a difference, with the hope of instilling the idea of studying towards saving the environment and the future of the upcoming ones"…

"The fate of the world rests in the hands of the VERY few. We need to make sure those 'very few' are well informed and supported to make the right decisions. How we do that is the question"…

CSIR Knowledge Needs of Coastal Municipalities in a Changing Climate Workshop:

The Council for Scientific and Industrial Research (CSIR), in conjunction with the CKZNCCC and ICLEI, hosted a Coastal and Climate Knowledge Workshop for coastal municipalities to give voice to the real and pragmatic issues that are experienced in implementing integrated coastal management, and responding to climate change at the local level. The workshop, which was convened on the 29th-30th August 2017 formed part of the work plan of the Western Indian Ocean Marine Science Association (WIOMSA) project entitled "Emerging Knowledge for Local Adaptation". The workshop was primarily organised for the benefit of the coastal municipalities with knowledge required to make better and wiser decisions. The workshop provided a platform for municipalities like UGu District Municipality and the City of Mombasa, Kenya to share real-world issues, good practice and management challenges relating to the use of all types of knowledge to empower practitioners when making decisions on matters relating to coastal development, ocean hazards to the coastal communities and implementing legislation such as the Integrated Coastal Management and Disaster Management Amendment Acts.

Wetlands Indaba 2017:

On 19th October, Dr O'Donoghue attended the South African Wetlands Indaba 2017 at the Wild Coast Sun in Bizana, Eastern Cape. The event focusses on wetlands understanding and preservation, and Dr O'Donoghue participated in a panel discussing policy developments around wetland management in South Africa. Discussion focussed on the development of partnerships to support wetland conservation like the uMngeni Ecological Infrastructure Partnership and the Central KwaZulu-Natal Climate Change Compact.

DAC Implementation during 2018:

The challenge for 2018 will be to maintain the substantial website input generated over the past few years without the support of a service provider for the Secretariat. This will require some institutional realignment in terms of responsibilities and programmes within Durban.

Durban will continue to drive the Hub and Compact approach to implementation in Africa. Following the interest expressed by Accra officials during the C40 African Adaptation Forum, the DAC Secretariat is planning to secure an Accra – Durban exchange. To begin the year, Durban will host a delegation from the City of Lusaka for a city-to-city learning exchange around the topics of applying Community- Ecosystem-Based Adaptation (CEBA) responses for climate change, including implementing a Sihlanzimvelo type approach to river and waste management. This delegation will visit Durban from 6th – 9th February.

Responsibility for oversight of implementation of the Central KZN Climate Change Compact will move from Durban's Climate Protection Branch to the Mayor's Parlour. It is hoped that, through this move, political support for Compact members will be strengthened to facilitate implementation of Compact activities throughout its members. Work will proceed with the development of an integrated concept note for climate change adaptation. This is being overseen by the Compact Steering Committee. The Compact of Coastal Cities of Northern Mozambique members will continue to develop their work programmes and submit their funding proposals, with support from the Coastal Cities Adaptation Programme (CCAP), funded by USAID.

Durban will continue to drive implementation of the Southern African Urban Climate Change Research Network's Knowledge Hub. A decision on a funding proposal submitted to LIRA to support a UCCRN research network between the Central KZN Climate Change Compact, the Compact of Coastal Cities in Northern Mozambique and Dar es Salaam is expected by the end of January. Durban is also planning to host the UCCRN Urban Design Lab team in early June to work on what will likely be Africa's first climate change-designed urban renewal project. Outcomes from this UDL workshop will be presented at a UCCRN session at the Adaptation Futures 2018 Conference in Cape Town later in June. In March, the DAC will be represented at an IPCC Cities and Climate Change Conference side-event, hosted by the City of Edmonton and UCCRN, for the launch of the latter's Second Assessment Report on Climate Change and Cities (ARC3-2).

Following the commitment of African city-university pairs to establish an EPIC-African network, the DAC Secretariat will work to support the establishment of this network through Lusaka's launch of an EPIC-A website. Durban will continue to work on implementing its own pilot EIPC programme in preparation for full scale roll-out. It is hoped that leaders of EPIC-A will be able to attend ICLEI's Resilient Cities Congress in April 2018 to highlight progress that has been made.

Acronyms

ARC	Assessment Report for Cities and Climate Change
CEBA	Community Ecosystems-Based Adaptation
cCR	carbonn Climate Registry
CKZNCCC	Central KwaZulu-Natal Climate Change Compact
COGTA	South African National Department of Cooperative Governance and Traditional Affairs
COP	Conference of Parties
DAC	Durban Adaptation Charter
DEA	South African National Department of Environmental Affairs
EPCPD	Environmental Planning and Climate Protection Department
EPIC-N	Educational Partnerships for Innovation in Communities Network
GAN	Global Adaptation Network
GHG	Greenhouse Gas
ICLEI	Local Governments for Sustainability
ICMA	International City/County Management Association
IIED	International Institute for Environment and Development
IPCC	Intergovernmental Panel on Climate Change
LEDS	Low Emission Development Strategies
NGO	Non-Governmental Organisation
SACN	South African Cities Network
SALGA	South African Local Government Association
UCCRN	Urban Climate Change Research Network
UNEP	United Nations Environment Programme
UNFCCC	United National Framework Convention on Climate Change
USEPA	United States Environmental Protection Agency
USAID	United States Agency for International Development

Appendix One: The Durban Adaptation Charter

Clauses

We the signatories to the Durban Adaptation Charter, call upon local and sub-national governments to commit and upscale action to accelerate their adaptation efforts by committing to the following:

1. ***Mainstream adaptation as a key informant of all local government development planning***
   We commit to climate change adaptation as a key consideration in all key local government development strategies and spatial development frameworks. Institutionally climate change should be located in a high level integrating office such as the Executive Mayor or City Manager's office of the local authority.

2. ***Understand climate risks through conducting impact and vulnerability assessments***
   We will undertake local level impact and vulnerability assessments todetermine the exposure, sensitivity and adaptive capacity of human and natural systems as guided by best available science and traditional knowledge.

3. ***Prepare and implement integrated, inclusive and long-term local adaptation strategies designed to reduce vulnerability***
   We will prepare evidence-based, locally relevant adaptation strategies and will develop and adopt measures to ensure that the objectives of these strategies are implemented, monitored, evaluated and mainstreamed into statutory government planning processes. This planning will guide the development of infrastructure and investments that are climate-smart and environmentally sustainable, and that ensure that urban and rural development provide opportunities for adaptive, sustainable development.

4. ***Ensure that adaptation strategies are aligned with mitigation strategies***
   We will ensure that adaptation actions taken are in synergy with mitigation actions in order to promote cost-effective and sustainable solutions, and limit increases in the production and release of greenhouse gases. Similarly, we will ensure that mitigation activities do not increase vulnerability or result in mal-adaptation.

5. ***Promote the use of adaptation that recognises the needs of vulnerable communities and ensures sustainable local economic development***
   We will ensure that the use of Community Based Adaptation (CBA) is prioritised in order to improve the quality of life in our communities, including the urban and rural poor, who are vulnerable to the harmful impacts of climate change, especially vulnerable groups such as women, children, youth, the elderly, the physically and mentally challenged, disadvantaged minorities and indigenous populations. We will engage our citizens in our actions to address climate change, and will support proposals from civil society that efficiently and cost-effectively encourage changes in lifestyles that contribute to our local climate actions. We will assess climate adaptation strategies for compatibility with local economic development strategies.

6. ***Prioritise the role of functioning ecosystems as core municipal green infrastructure***
   We will ensure that sustainable management, conservation and restoration of ecosystems and the related ecosystem services are used to enable citizens to adapt to the impacts of climate change, which is known as Ecosystem-Based Adaptation (EBA). We will strive to maintain and enhance resilience and reduce the vulnerability of ecosystems and people to the adverse impacts of climate change.

7. ***Seek the creation of direct access to funding opportunities***
   We will build our climate financing through generating funds internally and through seeking the development of innovative financing mechanisms that enable direct access to national and international funding for our registered adaptation actions. We support the creation of a local adaptation thematic window in the Green Climate Fund, and in so doing we will seek the support of national governments and multilateral funding institutions.

8. ***To develop an acceptable, robust, transparent, measurable, reportable and verifiable (MRV) register***
   MRV systems should reflect the local context in which adaptation takes place.

9. ***Promote multi-level and integrated governance and advocate for partnerships with sub-national and national governments on local climate action***
   We will ensure cooperation with all levels of government to implement plans and measures at the local level that harness and strengthen approaches to multi-level governance and improve interdepartmental co-operation in order to more effectively address factors reaching beyond local government boundaries, including climate change hazards, trends like urbanisation and migration, and institutional and legal frameworks. In this regard we would support the appropriate representation of local governmental stakeholders with relevant experience, on the Adaptation Committee of the Cancun Adaptation Framework.

10. ***Promote partnerships at all levels and city-to-city cooperation and knowledge exchange***
    We agree to seek active partnerships and promote city-to-city cooperation at regional and global levels, including information and knowledge sharing, capacity development and technology transfer in all areas relevant to adaptation; and encourage and invite other leaders of local and sub-national governments to join our climate actions.

Appendix Two: List of DAC Signatory Countries

The number of cities that personally signed the DAC are reflected for each country below as well as those signed on by Local Government Associations

1.	Argentina	(1)	
2.	Bangladesh	(3)	
3.	Bhutan	(3)	
4.	Botswana	(1)	
5.	Brazil	(1)	
6.	Cameroon	(1)	
7.	Canada	(3)	
8.	Chile	(2)	
9.	Colombia	(1)	
10.	Denmark	(1)	
11.	Ecuador	(1)	
12.	Germany	(1)	
13.	India	(7)	
14.	Indonesia	(3)	
15.	Israel	(1)	
16.	Kenya	(2)	
17.	La Reunion (France)	(1)	
18.	Malaysia	(1)	
19.	Mauritania	(1)	
20.	Mauritius	(10)	
21.	Mexico	(1)	
22.	Mozambique	(1)	
23.	Namibia	(32)	
24.	Nepal	(1)	
25.	Nigeria	(59)	
26.	Norway	(430)	
27.	Pakistan	(1)	
28.	Philippines	(53)	
29.	Republic of Maldives	(1)	
30.	Senegal	(4)	
31.	Solomon Islands	(1)	
32.	South Africa	(280)	
33.	South Korea (Republic of Korea)	(2)	
34.	Sri Lanka	(2)	
35.	Sweden	(1)	
36.	Taiwan (R.O.C)	(2)	
37.	Tanzania	(134)	
38.	Thailand	(2)	
39.	The Gambia	(1)	
40.	Turkey	(1)	
41.	Uganda	(1)	
42.	United States of America	(2)	
43.	Vanuatu	(1)	
44.	Zambia	(4)	
45.	Zimbabwe	(1)	
	Total	1064	

The DAC Partnership

City Partners

Implementing Partners

Funding Partners

dac | durban adaptation charter

Climate Protection Branch
Environmental Planning & Climate Protection Department
eThekwini Municipality, City Engineers' Complex

166 KE Masinga Road, Durban, 4000, South Africa

Tel +27 31 311 7920 | Fax +27 31 311 7134
Email Sean.O'Donoghue@durban.gov.za.