



**Western Cape
Government**
Environmental Affairs and
Development Planning

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ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING: INTERNATIONAL VISIT REPORT

**OFFICIAL VISIT TO THE GOVERNMENT OF CALIFORNIA FUNDED BY 'THE CLIMATE
GROUP –Under2 Coalition– FUTURE FUND' FROM 19-26 MAY 2018**
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1. PURPOSE

- 1.1 To provide The Climate Group –the Under2 Coalition- Future Fund with a brief overview of the official visit by Mr Goosain Isaacs and Ms Sarah Birch to the Government of California from the 19 – 26 may 2018. The intent of the learning exchange was to peer learn on climate change adaptation, resilience and risk response strategies between Western Cape Government (hereafter WCG) and the State of California.

2. BACKGROUND

- 2.1. Minister Bredell, and International Relations approved that Mr Goosain Isaacs and Ms Sarah Birch could travel to visit the Government of California, in order to benefit from the opportunity sourced through the WCG's membership to The Climate Group¹, and specifically the opportunity secured on application through the Future Fund.
- 2.2. Western Cape Government became a beneficiary of the Future Fund initiative of The Climate Group through an application for funding by the Climate Change Directorate in DEA&DP. The overall aim of the Future Fund is to empower subnational governments of the Under2 Coalition to accelerate climate action. This is achieved through financial contributions and in-kind resources to developing and emerging economy regions from peer member governments of the Coalition.
- 2.3. The purpose of the secondment and learning exchange was to visit California for 3 working days of meetings and exchange to share and learn about the State of California's climate change response programmes and find learnings and linkages to the Western Cape Climate Change Response Strategy. To understand how other regions like California have been setting both ambitious and realistic targets in responding to climate change including events such as drought, floods and fires.

3. OBJECTIVES

- 3.1. To learn from the Californian experience with regards to their leadership approach, programmes and policies, institutional arrangements, and financial mechanisms in moving towards a climate change resilient and less risk prone region. To share best-practices between the two regions.

¹ Western Cape Government became a member of 'The Climate Group – States and Regions Alliance' in November 2016. This is an international non-profit network of like-minded regional governments determined to contribute to the international response to climate change in order to keep the global average temperature increase below 2°C. As part of this, in April 2017 the WCG signed the Subnational Global Climate Leadership MOU 'Under2 MOU', a commitment to contribute to reducing global GHG emissions to net-zero by 2050.

- 3.2. To explore possible networking, collaboration and learning exchange opportunities with various officials from the State of California.
- 3.3. To collaborate and engage with the network of regional governments participating in the Under2 Coalition by undertaking peer-learning and sharing best practices. To report on the trip and its findings and share these with the network through The Climate Group website and media platforms and showcase findings at the Global Climate Action Summit.

4. STRUCTURE OF THIS REPORT

- 4.1 This report is structured to cover brief points from each of the meetings held. Followed by a more in-depth analysis of the lessons learnt, messages and way in which Western Cape Government can catalyse new vigour into the Western Cape Climate Change Response Strategy and its implementation as a Transversal policy dealing with all of the risks associated with climate change. It ends with recommendations to the Future Fund for similar programmes to consider in future.

5. Sacramento, California State Government Agencies

5.1 Meetings:

Please note a number of documents and websites might be referred to, and these can be requested if required.

5.1.1 California Governor's Office of Planning and Research (OPR)

Location: Governor's Office, State Capitol Building; Sutter Conference Room

Participants:

- *Nuin-Tara Key, Resilience Program Manager*
- *Greta Soos, Assistant Planner and Program Analyst*
- *Leah Fisher, Senior Intergovernmental Program Analyst*

Key points:

- This team is based in Governor Browns office, and is facilitated by a State Law: Bill 246. They provide vertical integration services on climate change adaptation planning. The programme is called: *Integrated climate change and resiliency programme – ICARP*. They focus on climate financing; the State Adaptation Clearing House (a website stocking all resources); and the Advisory Council for the State.
- The Bill 246 indicates that all investment plans must include climate change risk response. They, similar to WCG, are seeking ways to integrate climate change considerations into project designs, specifications and standard operations (i.e. it is not a standalone funded item, it is integral to engineers plans etc). They have documentation to share on this, particularly in the transport sector which will be helpful for WCG as we have a Transport Climate Change Response Strategy planned for 2018/19.

- The work of the State is coordinated by the 'Safeguarding California Plan' which is similar although more detailed per sector than the Western Cape Climate Change Response Strategy. Their work is also split into Low Carbon focused work and Adaptation work, whereas in the Western cape (and SA context) we undertake both under the same strategy, and it is managed by the same team. The Safeguarding California Plan is for adaptation only.
- They utilize incentives – for example if a local government has included climate change risk and vulnerability adequately into their planning they qualify for special funding they can then utilize for climate change adaptation and resilience.
- They also have challenges with disaster funding whereby they build back to the same specifications, instead of building back to be more resilient.
- Insurance industries are pulling out of high risk fire regions in California.

5.1.2 California Environmental Protection Agency (CalEPA)

Location: 1001 I Street, Sacramento, CA 95812; Conference Room 2550

Participants:

- Ashley Conrad-Saydah, Deputy Secretary for Climate Policy
- Heather Hickson, Intergovernmental Relations

Key points:

- The history of California and its culture play a big role in how it is that California is now such a leading region on climate change – they had severe air pollution problems that led to social movements, and people live in the region for its natural beauty and are thus more engaged in being proactive about climate change. This for the Western Cape is similar in some respects, although not to such a large degree across all segments of society.
- The Deputy Secretary is a political appointee, and most of the high level government officials like herself that have driven the advancement of the climate change strategies and their implementation are all senior level and driving aggressive transformation agenda's which is what has contributed to the success of their programmes. Each department/state entity has a climate change champion at least, if not a unit.
- They are also able to raise their own taxes, and create innovative finance mechanisms such as the Cap and Trade system from which they use funds for adaptation and resilience programmes (<http://www.caclimateinvestments.ca.gov/>).
- In relation to the drought, many farmers have "grandfather rights" which allow them to use as much groundwater as they want. New farms do not have these rights, and so their water policy space is very challenging. As a result, they think that our SmartAgri plan and Agriculture's strong response to climate change here in the Western Cape is different to the sector in their region, and are quite surprised by the progress in this sector here.
- They have a 30-year cycle of 5 year droughts, but this might be getting worse; in addition, they also have the snow-melt issue (which slowly released water, but now water is not captured for as long in the snow and glaciers in the north of California where most of their water capture takes place).

- Their fire season is now all year round!
- Over abstraction of groundwater has caused 20-30 feet of subsidence in many places. They have passed the State Ground Water Monitoring Act to regulate groundwater abstraction and recharge.
- They are using Climate Change to breathe new life into industry, business etc – i.e. the challenge can be good, and bring new opportunities/workforce etc., this is evident in their booming economy, where they have decoupled GHG emissions from economic growth, aim to be a Zero Carbon State, and have become the 5th largest economy globally. They are the proof that we have shown can happen through the recently commissioned “Economic Risks and Opportunities of Climate Resilience in the Western Cape” reports just completed by DEA&DP
(https://www.westerncape.gov.za/eadp/files/atoms/files/Modelling%20Summary%20Report%20Dec%202017_0.pdf) – if you invest in climate change resilience early.
- The State of California is hosting the upcoming “Global Climate Action Summit”, and there will be a very strong water focus at the summit. They would welcome a political leadership representative from WCG.
- California has a Sea Level Rise Guidance Document which has just been updated
(http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf) it provides guidance based on best available science to determine state wide consistent approaches to dealing with the challenge.
- Part of the success of the climate programmes in California was starting with very strong monitoring and evaluation.
- California invested substantial amounts of money into ensuring the best most robust available science base is utilized in all the work, as well as in M&E.

5.1.3 California Air Resources Board (CARB)

Location: 1001 I Street, Sacramento, CA 95812; Chair’s Office Conference Room

Participants:

- Ryan McCarthy, Science & Technology Policy Advisor
- Emily Wimberger, Chief Economist

Key points:

- The CARB office is focused purely on the emissions reductions/low carbon mitigation work of the State. They undertake economic modeling, monitoring and evaluation, tracking, setting of science based standards and form a backbone to the Cap and Trade systems.
- The State is driving towards a Net Zero Carbon economy, and will instate even stronger and more ambitious targets if necessary if the global targets are not being met. They are showcasing some of the strongest leadership globally in terms of ambition, and undertaking more than a fair share of re-righting the global climate.
- The emissions reduction work has a legacy of being strongly grounded as a human health issue, and thus has lots of public support in California.

- They are now focusing on the science and inventory in terms of carbon sequestration in living landscapes – trees, soils, wetlands, and coastal wetlands.
- They told us about how Quebec (in Canada) joined the Cap and Trade scheme – and that this is a smaller region with a much smaller team more equivalent to ours. WCG might look to how Quebec has implemented Cap and Trade.
- California has driven a strong economic and industrial programme of attracting venture capitalists, and electric vehicle companies etc., in order to rapidly change their economy. WCG GreenCape and Energy Game Changer programmes are in the initial phases of a similar approach, with a Special Green Economic Zone having just been proclaimed.

5.1.4 California State Water Resources Control Board

Location: 1001 I Street, Sacramento, CA 95812; Conference Room 1630

Participants:

- Jelena Hartman, Senior Scientist
- Kartiki Naik, Water Resource Control Engineer

Key points:

- They started the programmes around water with various initiatives, such as storm water capture, however have developed a more robust water plan based on a resolution in 2017.
- The water systems in California are very energy intensive (essentially pump all the water from north of the state, to the south where everyone lives – in the drier region).
- They rely on snowmelt, and on around 8 large rainfall events (atmospheric rivers) that occur each year. A loss of one or two of those events per year, and a change in how snowmelt occurs has a massive impact on their water supply management. Heat is also causing far more evapotranspiration than previously. Drought is exposing the economy in a dramatic way.
- In the middle of the drought they then focused very much on the urban water use. The Governor gave an executive order for voluntary water conservation of 9%, then in 2015 increased it 24% (almost met goal of 25%), the drought relieved a bit and this was reduced to 20%, then had a record wet year in 2017 – and reduced this more. Some of the investment into toilet efficiencies, and hardware etc., have shown that a change will remain. They need to make the measures permanent now though and to make certain practices prohibitive in perpetuity rather than it just being a behavior change during times of change.
- They are using tools that require investments/bonds etc., that are used by government to develop infrastructure – to include climate change. i.e. how will projects hold up in next 50-100 years in terms of flooding, sea level rise etc.,
- California has a new programme on fixing water leaks and tracking losses by measuring volumes of water lost rather than percentages.

5.1.5 California Natural Resources Agency (CNRA)

Location: 1416 Ninth Street, Suite 1311, Sacramento, CA 95814, Conference Room 1305

Participants:

- Undersecretary Thomas Gibson
- Keali'i Bright, Deputy Secretary for Climate and Energy
- Lisa Lien Mager, Communications

Key points:

- The drought in California was a big wake up call, and put water on the agenda like never before. Previously were doing quite a lot with regards water, but were not labelling as climate change related work. They are now really focusing on resilience of water supply. Permanence of solutions is critical for long term resilience.
- They have some innovative, citizen science projects related to sea level rise, king tides (exceptionally high tides), and the potential for ecosystem based coastal solutions.
- They have quite a number of urban green projects that include climate change reporting.
- They too have challenges around having separate climate change teams that are working outside of the teams that do actual implementation.
- A lot of focus on getting investments to be climate resilient – e.g. water bonds being spent on water storage etc., most describe how climate change is understood as a risk and responded too in the design.
- Some infrastructure is being moved further inland – e.g. a highway, and a waste-water treatment plant. Some active retreat around San Francisco is being planned already.
- There is a perverse incentive in the USA whereby Federal government is funding flood insurance – i.e. if it was private sector insurance many regions would not be insurable.
- The focus of moving from disaster response in relation to the drought – they are focusing on communicating that water conservation is now a part of life. They will also be “Stress Testing” systems under different water scenarios and contingency planning for future. They are also diversifying investments; creating new by-laws/regulations on landscaping requirements (they do not want AstroTurf and concrete, there is a need for lawns to be replaced with other water wise vegetation in order to maintain water recharge into aquifers, and reduce flood risks); building standards and banning certain behavior.
- Locals were supportive of increased water taxes – they can then ring-fence this for use back into water infrastructure.
- They have a “drought Surcharge” which kicks in when a certain level of rainfall threshold is reached.
- They are planning the sequence of events that would take place for future droughts, in order for better communicating to agriculture etc., up front.

6. TECHNICAL TOURS

The Technical Tours took place on Tuesday 22 May 2018, and entailed a trip from Sacramento to Sonoma County to undertake two distinct tours. The first being to meet

with the Sonoma County Water Agency at their offices to discuss drought responses and water management examples; the second being to visit fire affected areas in the county.

Location: 404 Aviation Blvd, Santa Rosa, CA 95403; Redwood A Conference Room

Participants:

- Michael McCormick – Senior Planner, OPR
- Debbie Franco – Community and Rural Affairs Advisor, OPR
- Greta Soos – Assistant Planner and Program Analyst, OPR
- Aleka Seville – Director of Climate Programs, Regional Climate Protection Authority
- Felicity Gasser, Sonoma County Community Development Commission
- Pamela Jeane, Assistant General Manager, Water and Wastewater Management, SCWA
- Carrie Pollard, Head of Water Use Efficiency, SCWA
- Jay Jasperse, Chief Engineer and Director of Groundwater Management, SCWA
- Grant Davis, General Manager, SCWA
- Molly Oshun, Programs Specialist, Community and Government Affairs, SCWA
- Neil Lassetre, PhD., Principle Environmental Specialist, SCWA
- David Manning, Environmental Resources Manager, SCWA

Key points related to Sonoma County Water Agency:

- SCWA is seen as one of the most progressive water boards in the country, and is becoming a zero GHG emissions water board. They are wholesale water suppliers that deliver water to counties/cities.
- A lot is done in the regions using water re-use for irrigation (not so much for human potable supply yet).
- The Groundwater is now starting to be monitored properly by the State, and are moving from basin to basin with plans. This is being done collaboratively with universities etc.,
- Much of the drought responses were incentivized or subsidized – e.g. pool cover rebates, programmes for lawn replacement etc.,
- They have new standards in place for hardware (toilets etc.).
- They have invested a lot of money into research and development, and a robust science base to their water management. Are continually updating and improving the science, climate risk analysis etc.,
- They are doing a full climate change Risk and vulnerability assessment now on all of their assets and infrastructure.
- They are now looking at the combined storage of surface and groundwater, and how to manage both together better. Groundwater is the bank for drought times, and cannot be drawn down without active recharge, and injection of water back into the bank.
- They have some quite "high tech projects" like the "Next Band Radars" project – which is a joint project between the 4 Bay Areas – to focus on detecting the atmospheric rivers that bring rainfall and weather to California – as a sort of an EWS – this radar as at a different height to normal radar systems already in place for air traffic etc.
- San Francisco has a combined storm-water and waste-water system – which means big problems when there are floods.

- “The Pacific Institute” is a voluntary group of CEOs that work on climate change around the world (international) (not sure if they would work in our region, but might include corporates in our region). They have a big initiative on agriculture around supply chains – and water efficiency.
- They initially had big problems encouraging “drip irrigation” but this actually reduced the amount of water and recharge into the ground, and are now moving back towards flood irrigation to “re-hydrate the landscape”. The premise here is you need water for your crops, but also some for your water bank underground too. It’s not just about minimum water for the crop.



Figure 1. Goosain Isaacs and Sarah Birch visiting the Sonoma County Water Agency.

Dry Creek Watershed trip:

- 3 salmonid species under Endangered Species Act. are found in this river.
- They have a restoration project really to look at how the water supply management of this system by Sonoma County Water Management Authority could be altered to reduce impact on the species. They created 'slowed down off ramp areas' from the main river channel for the fish species. Most tributaries in the drought dried up which impacted the fish, except this one area they had created – so it has also resulted in a unique refugia area for the fish in times of drought – acting as an adaptation for the biodiversity sector.
- However, interestingly it is not a climate change proofed response – as the whole restoration site gets “blown out” i.e. debris getting washed down takes out the dropped tree trunks in flood events, and they have to re-restore the area again at huge cost. This is not the kind of response that would be feasible or desired in a WC context. It is not an EBA response as it is not providing an adaptation response for any other sector, or community other than as a species specific conservation response measure. In the WC we are developing much more longer term, integrated and adaptive responses for multiple purposes. The reason they are doing this is because of the Endangered Species Act requirements – that if this was not an option, they would then have to build a pipeline to transport the water in order to reduce

management of the river flow, and that would orders of magnitude more expensive.



Figure 2. The Dry Creek Salmon management area, where tree trunks have been sunk and wedged into the river in order to slow its course and create micro-habitats needed for salmon. The site gets washed out in floods and needs active management in perpetuity. (this was not specifically a climate change adaptation programme).

Key points related to the fires in Sonoma County:

- They have many regulations/standards related to risks such as earthquakes, flooding areas, but fire is a new area they are working in terms of these.
- There are many homeless encampments and displaced people after the fires.
- After the fires, the County now has a Resiliency Office dealing with housing, alerting systems, natural resources (the watershed, reducing soil run-off etc.), economic recovery, safety nets (social), developing a plan for those with goals etc, community engagement (lots of listening).
- 53,000 houses were lost in this one fire in Sonoma County, and 24 people died. The fire started on October 8 (which is very late for a fire season, incidentally the Southern California fires were in December which is even later!).
- A lot of the areas burnt hot and for long time – the grass is not even coming back -i.e. the grass burnt into the ground.
- They have a “Watershed Collaborative” which is about living in a fire adaptive landscape – focused on protecting the creeks (streams) from siltation etc.
- Many people still are suffering post-traumatic stress disorders.
- They learnt they had underfunded DRM for fire responses (similar to WCG lessons) and that they need to manage fires better (had suppressed fires for decades in these forests creating a massive fuel load, along with many dead trees from the tree die off).



Figure 3. Above photos show the complete burn out of entire neighbourhoods and communities in essentially an urban area. Bottom left is a Resiliency Permit Center set up by the County to deal with rapid responses to community queries and to provide support and assistance to the affected communities. 53,000 houses were lost in this single fire event in Sonoma County.

7. ANALYSIS AND OVERALL IMPRESSIONS

There were two key areas of comparison we sought, the first being around the “how” of how climate change response is being implemented in California, which largely relates to governance and institutional arrangements and leadership. The second was around some of the approaches taken in their drought, and how they aim to increase resilience for future droughts.

Table 1, refers to the governance comparisons, and Table 2 refers to the drought responses comparisons.

Table 1. Comparison of California and Western Cape Government Climate Change Adaptation responses (focused largely on institutional process, mechanisms, governance, Internal observations for WCG).

Mechanism	California State Government	Western Cape Government
Contextual comment	<i>The State of California, has over 40 million people, is a larger land area than the Western Cape, with multiple large sized cities, and is the 5th largest Economy in the world.</i>	<i>It's important to note that comparisons between WCG and California are more akin to comparing to our national government in terms of scale, so although the contrast below may paint a picture of WCG being at a different level to California, we are in fact in a good position for the budget and size of our government.</i>

<p>National/regional government legislation enforcing and creating accountability</p>	<p>National: Various, mostly emissions reduction focused not adaptation focussed.</p> <p>State: Bill 246 instructs the development of an Integrated Climate Adaptation and Resilience Programme in the Office of the Governor to coordinate and guide adaptation efforts.</p>	<p>National: Currently no national legislation above the White Paper policy; Climate Change Bill Draft has been gazetted for public comment</p> <p>Province: no equivalent, although the WCCCRS was endorsed by provincial cabinet it has not specifically created accountability or directives.</p> <p>The new Bosberaad directive to report on climate change in APPs, and associated elevation of Climate Change as Risk on the Enterprise Risk Management systems are the first two directives that may create accountability and catalyse a serious response from all sector departments.</p>
<p>Institutional capacity/staffing</p>	<p>CAL Office of the Governor – Office of Planning and Research (OPR): more than 3 people just focussed on website + Technical Advisory Committee + key research for vertical integration (i.e. support to Local government).</p> <p>CAP EPA: Multiple teams working on different aspects including international climate change relations; sector specific initiatives; the low carbon and emissions tracking systems (linked to their air quality team); they lead the Climate Action Task force (which has 10 climate change related sector working groups under these).</p> <p>CAL NRA: more than 5 people just on the coordination of the Safeguarding California Plan.</p> <p>Note: separate organisational structures, and teams are working on the drive to become a net Zero Carbon/emissions State, and their energy security work. except for one of the teams.</p>	<p>DEA&DP: Climate Change Directorate: 1 Director + 2 permanent staff focussed on Adaptation; 1 staff member on Mitigation (currently have 2 short term contracts till September 2018); Response Integration sub-directorate is vacant.</p> <p>Small team covers responsibilities of both Adaptation and low Carbon aspects, that span all of the teams covered by the different California teams, but as a result is spread thin and impact is challenging from a small sector department.</p>
<p>Institutional Arrangements</p>	<p>Technical Advisory Committee (TAC) for climate change (high level state secretaries/ministers and directors; local governments; and key organisations) to guide state wide coordination, led by the Governor's Office in order to provide a neutral and strongly led ambition for the State.</p> <p>They additionally have a Climate Action Team (CAT) which is led by a sector department – CAL: EPA with high level Secretaries/ministers and</p>	<p>We do not have an equivalent of this focussed on climate change adaptation. The level of this engagement would be similar to that in PSG4 Steering Committee – but would engage a much more multi-sectoral cross spectrum of all Ministers and high level staff from different departments. PSG4 SC also covers climate change adaptation as only one of many agenda items.</p> <p>We do not have an equivalent of this, although the PSG4 WG could be seen to be aiming towards this. PSG4 WG is not well attended by technical staff</p>

	directors; this has 10 Working Groups for sectors.	<p>across sector departments, with little accountability, and is delegated down to junior staff.</p> <p>There is one very focussed work group by one sector: SmartAgri SC. Other sector WGs such as Health are focussed on sustainability not on responding to climate change as a risk.</p>
Adaptation Strategy	<p>The first California Adaptation Strategy was developed in 2009 (covering health, biodiversity, coast, water, agriculture, forestry, transport and health).</p> <p>This later evolved into a more in-depth 'Safeguarding California Plan 2013' (this is more focussed on adaptation, and is also focussed on the State agencies implementation)</p> <p>With an updated Safeguarding California Plan 2018</p>	<p>WCG similarly put out the first western Cape Climate Change Strategy and Action Plan 2008 (was mostly focussed on adaptation).</p> <p>Followed by the Western Cape Climate Change Response Strategy (2014) (integrated approach of both adaptation and mitigation, and is for the provincial landscape rather than directing provincial departments)</p> <p>With an updated WCCCRS under development in 2018/19.</p>
Sector Approaches	<p>California is well advanced in multiple sectors in mainstreaming and integrating and responding to climate change as a core risk to sectors service delivery and operations. Water, Biodiversity, Energy, Transport etc.... all developing their own specialised work, research, and implementation; this is in addition to what is undertaken by the coordinator teams mentioned above.</p>	<p>One sector has fully and systematically analysed climate risk and developed a climate change response strategy: Agriculture. Other sectors have parts of a systematic analysis undertaken but have not done a robust process.</p>
Knowledge exchange	<p>OPR undertake extensive stakeholder consultations.</p>	<p>PSG4 Stakeholder Forum – quarterly meeting, is a knowledge sharing platform with a variety of stakeholders, it is not intended or appropriate as a coordination or advisory group in current format.</p>

Table 2. Brief comparison of drought related efforts between California State Government and Western Cape Government (noting that this is based on the secondment and other information may be unknown by the writers of the report).

Drought response	California State Government	Western Cape Government
Communications	<p><i>Innovative and creative communication campaigns. Door to door campaigns. Set up "drive through's" where community members could drive through and pick up hardware to change out for. Many of the campaigns were set up and undertaken in a matter of weeks.</i></p>	<p><i>WCG with CoCT undertake a fair amount of communications efforts. A substantive communication effort has been undertaken with private sector companies. The fact that water demand was reduced by half on the previous year, is an indication that the communications efforts must have been successful.</i></p>
Fiscal policy: Incentives and taxes	<p>They are using tools that require investments/bonds etc., that are used by government to develop infrastructure – to include climate</p>	<p>WCG is not in a position to raise taxes, and provide incentives at present. Although innovative mechanisms should still be explored e.g.</p>

	change. i.e. how will projects hold up in next 50-100 years in terms of flooding, sea level rise etc., California has new programme on fixing water leaks and tracking losses by measuring volumes of water lost rather than percentages.	GreenBank, Insurance related mechanisms (some of these are already being undertaken by the climate change directorate, and other teams, but stronger focus needs to be placed here with support from treasury).
Groundwater Management	Were faced with complete over abstraction in some regions, with land subsidence and stranded infrastructure. Act regulating drilling, management of boreholes and abstraction and active recharge. Encouraging agricultural land users to allow water back into the landscape (i.e. drip irrigation is not good for groundwater recharge)	Groundwater largely unregulated in SA at present. The way forward is still being chartered, but the California example is a clear warning about how not to manage groundwater resources. The role of WCG is also challenging given the water mandates lie largely with other tiers of government. WCG does however have the mandate to manage the sources of both surface water, and groundwater recharge ability through CapeNature management, and through interaction with the Agriculture sector.
Supply management	Complicated by the changes in snowmelt, and what can be expected from the "atmospheric river" events. They have water boards that manage the supply, in a semi-private sector arrangement which is easier for the State to intervene within, and regulate.	Largely outside of control of WCG. Although, policy can drive various changes for example in relation to groundwater, and water source areas etc.
Demand management	California has new programme on fixing water leaks and tracking losses by measuring volumes of water lost rather than percentages.	WC has been tracking Non-revenue losses for some time under the WC Sustainable Water Management Plan.

8. RECOMMENDATIONS (To WCG – internal messages)

As the Western Cape Government has elevated the risk of climate change to the Enterprise Risk Management system, and issued a directive for all departments to report on their climate change response in forthcoming Annual Performance Plans, the province is now at a turning point. Policies can now be leveraged into a deeper understanding of the risk of climate change, and the need to rapidly upscale technical implementation across all sectors. Lessons from California indicate that strong leadership, and stronger coordination mechanisms are required in order to move from a policy space to strong implementation and in order to leverage and create the finance mechanisms required for implementation.

The Western Cape is well positioned to become a leading developing region government in climate change response, particularly in adapting to climate change if we continue to catalyse our policies into fast-tracked implementation. The recent drought we have been experiencing is a stark reminder and warning sign of, events that we need to proactively plan for across all sectors and departments of Western Cape Government. Unprecedented and creative efforts are required, particularly as we are a developing country province in a fiscally austere environment. There are

multiple opportunities for Western Cape Government to enhance our leadership, to reach out and source financing from other regions and international agencies, but this requires that a concerted effort is undertaken by senior leadership to grasp such opportunities. Many of the opportunities of The Climate Group are designed for political representation, senior engagement that cannot always be taken up or delegated down to the Climate Change Directorate staff. The secondment has reiterated from the Climate Change Directorate, however, that the involvement of WCG in The Climate Group is critical for creating this leadership, and we hope that our findings will inspire increased interest and response to future opportunities that we leverage.

Lessons from the exchange particularly around governance mechanisms, leadership and finance will be taken up as key areas to investigate under the current evaluation of the climate change programme to be undertaken in the 2018/19 financial year, as well as the Western Cape Climate Change Response Strategy review process being undertaken simultaneously.

9. RECOMMENDATIONS (To Future Fund)

The overall experience of the Western Cape Government in our secondment and exchange with California was very positive. The exchange allowed us time out to reflect on our programmes, and engage with peers in a way that cannot be replicated easily through other forms of communication or exchange. The in-person exchanges were extremely valuable to create a sense of depth of discussion and learning. A few minor recommendations may be of assistance to the funders for the future, and include the following:

- 1) Encourage and assist the two governments to potentially have a prior skype or teleconference to just introduce the general contexts and key policies. This will allow some time to then undertake some prior "homework" before going on the trip.
- 2) Support the two governments to come up with some key questions/areas of investigation to cover prior to attending. Whilst also allowing the scope to have that free form of learning – where we learn unexpected things across a range of sectors.
- 3) The above two would be helpful, because government officials like ourselves are so often just moving from one deadline to the next, that creating the space to prepare well for such a learning exchange can be very challenging. Creating some structure to support the government employees, and nudge them a bit to get well prepared may add extra value to the meetings once they arrive at their destination.

Other than the above recommendation we were very happy with the experience, and gained a tremendous amount from our time in California. We would certainly recommend the experience to other members of the Under2 Coalition .

10. ACKNOWLEDGEMENTS

We would like to thank the Minister Local Government, Department of Environmental Affairs and Development Planning for supporting our application to accept the opportunity provided by The Climate Group –Under2 Coalition Future Fund. We are very grateful to our kind hosts in California, across multiple institutions and departments during our stay. In particular, we have extended our gratitude and thanks to the Future Fund for the opportunity afforded to us as a developing country region to participate in receiving funding to enhance our programme development.