

## Call for submission on human settlements and adaptation

According to the Vancouver Declaration on Human Settlements, human settlements can be defined as the totality of the human community – whether city, town or village – with all the social, material, organizational, spiritual and cultural elements that sustain it.<sup>1</sup> During SBSTA 44, Parties highlighted that those making submissions should “bear in mind the unique challenges and scale differences in urban, rural and remote settlements, in particular in small island developing States and least developed countries.”<sup>2</sup> During SBSTA 46, Parties further underscored their interest in collecting information related to rural and coastal settlements, particularly remote settlements.<sup>3</sup>

*We thank you in advance for filling out this template with concise, evidence-based information and for referencing all relevant sources. There are 5 sections in the template: please fill the sections that are relevant to the work of your government or organization. As you will see on the last page of the document, more detailed information on case studies, tools/methods and other knowledge resources for dissemination through the Adaptation Knowledge Portal is welcome, but optional.*

### Name of the organization or entity:

Government of South Australia

### Type of organization:

*Please choose as appropriate:*

- |  |  |
|--|--|
| <input type="checkbox"/> Local government/ municipal authority | <input checked="" type="checkbox"/> Regional center/network/initiative |
| <input type="checkbox"/> Intergovernmental organization (IGO)  | <input type="checkbox"/> Research institution                          |
| <input checked="" type="checkbox"/> National/public entity     | <input type="checkbox"/> UN and affiliated organization                |
| <input type="checkbox"/> Non-governmental organization (NGO)   | <input type="checkbox"/> University/education/training organization    |
| <input type="checkbox"/> Private sector                        |  |

### Location

City: Adelaide

Country: Australia

### Scale of operation:

- |                                   |  |
|-----------------------------------|--|
| <input type="checkbox"/> Global   | <input checked="" type="checkbox"/> Regional |
| <input type="checkbox"/> Local    | <input type="checkbox"/> Subregional         |
| <input type="checkbox"/> National | <input type="checkbox"/> Transboundary       |

<sup>1</sup> See: <https://unhabitat.org/the-vancouver-declaration-on-human-settlements-from-the-report-of-habitat-United-nations-conference-on-human-settlements-vancouver-canada-31-may-to-11-june-1976/>

<sup>2</sup> FCCC/SBSTA/2016/2, paragraph 15(b)(ii).

<sup>3</sup> FCCC/SBSTA/2017/L.7, paragraph 13.

**City(ies)/Country(ies) of operation (if appropriate):**

South Australia, Australia

**1. Assessing sensitivity and vulnerability to climate change**

**Description of relevant activities/processes or research:**

*Please describe the activities or processes that your entity has implemented to assess sensitivity and/or vulnerability to climate change in human settlements. In case your organization carried out research on such activities/processes, please describe them.*

*Initial Risk Assessments*

The South Australian Department of Environment, Water and Natural Resources (DEWNR) has undertaken an initial risk assessment of the potential impacts of climate change on water resources for all regions of South Australia. DEWNR has also undertaken analysis of the potential impacts of projected climate change on horticultural production in the region of the Northern Adelaide Plains, South Australia's most productive horticultural region. DEWNR has also completed a risk assessment of the vulnerability to climate change of aquatic ecosystems of SA's South East NRM region, and of the potential opportunities for the region's engineered drainage network to be used to mitigate wetland decline due to drying climate.

Risks have been assessed at regional scales pursuant to *Prospering in a Changing Climate: A Climate Change Adaptation Framework for South Australia (2012)*.

*Regional Adaptation Plans*

In 2012, our State's regions began preparing the Regional Adaptation Plans (Regional Plans) based on Integrated Vulnerability Assessments (see below for more detail).

**Description of relevant tools/methods:**

*Please describe the tools and/or methods that have been developed and/or used to assess sensitivity and/or vulnerability to climate change.*

*Regional Integrated Vulnerability Assessment Guidelines for South Australia*

Integrated Vulnerability Assessments (IVA) were undertaken for each State region.

An IVA is a tool that helps to identify areas of vulnerability to the impacts of climate change and assists with prioritising or identifying areas for focusing adaptation action. It differs from a standard vulnerability or risk assessment because it considers social, economic and environmental features of a system as opposed to any one of these in isolation. The IVA approach described in this report and used for regional adaptation planning in South Australia is consistent with the approach presented in the Local Government Association of South Australia's (LGA SA) Climate Adaptation Planning Guidelines.

The IVA method was based on the most up-to-date available climate projections to 2070 for the intermediate emissions scenario. This timeframe was chosen because many decisions made in relation to key sectors for the region were identified as having lifetimes of at least 50 years.

IVA assessments were underpinned by information derived from a combination of literature reviews and interviews, focus groups and workshops with subject matter experts.

The IVA results were used to develop “key areas of decision making” that became the focus of the regional adaptation plans.

### Key outcomes of the activities undertaken:

*Please provide information regarding the outcomes of the activities/processes described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.*

#### *Regional Adaptation Plans across South Australia*

Eleven Regional Plans were developed through partnerships between local government, Natural Resource Management Boards, Regional Development Australia, Local Government Authorities, with support from Federal and State Governments. To identify and prioritise the final actions, the process included:

- Sourcing of data from CSIRO and the Goyder Institute (local research institutions) on the current and projected future climate of a region;
- Involvement of the community in describing and identifying what is valued in a particular region and how they may be impacted by climate change;
- Undertaking an ‘Integrated Vulnerability Assessment’ of valued aspects and features of the region to determine their vulnerability to the impacts of climate change; and
- Analysis of Adaptation Pathways to provide a way of considering and visualising adaptation options, enabling decision-makers and communities to consider a range of possible actions, and determine the potential timescales (decision lifetimes) for their implementation.

The Regional Adaptation Plans identify adaptation actions that could reduce or address key vulnerabilities presented by climate change, and indicate areas in which to build resilience and take advantage of opportunities specific to a region.

#### *South Australian Adaptation Action Plan*

The South Australian Government is now preparing a state-wide level Adaptation Plan as a response to regions. The State Action Plan will provide a strategic outlook on current or planned adaptation work across State Government and to respond in some detail to the priority actions that the regions have identified, including to determine if they are already being supported by State government agencies, whether work is planned to occur in respect of the actions in the coming years, or how the State agencies can address the actions in the future (or at all). South Australia has made a commitment at UN Conference of the Parties in 2015 to develop a State Adaptation Action Plan and will present it at Conference of the Parties in November 2017.

### Description of lessons learned and good practices identified:

*Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).*

The regional and state adaptation planning processes have been a useful process to engage a large cross-section and number of stakeholders from local and state government agencies, industry, business, community, and non-government organisations. Both the regional and state adaptation planning processes have involved a number of workshops and significant consultation periods with stakeholders to reach a final outcome.

**Description of key challenges identified:**

*Please describe the key challenges associated with those activities/processes or the use of those tools/methods, that policy-makers, practitioners and other relevant stakeholders interested in assessing sensitivity and vulnerability to climate change should know about.*

**Planned next steps (as appropriate):**

*Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such activities/processes?*

The State regions and the Government of South Australia are now moving into the implementation phase of the identified adaptation actions and opportunities as well as continuing to consider climate change in everyday business.

**Relevant hyperlinks:**

*Please provide hyperlinks to sources of information*

[Climate Change and Greenhouse Emissions Reduction Act 2007](#)

[Regional Adaptation Plans for South Australia](#)

[Prospering in Changing Climate: A Climate Change Adaptation Framework for South Australia](#)

[South Australia's Climate Change Strategy 2015-2050 – Towards a low carbon economy](#)

[Carbon Neutral Adelaide](#)

[South Australia -Climate Ready](#)

[South Australian Local Government Association Climate Change Planning Guidelines](#)

## 2. Integrating both short-term and long-term climate considerations (including both extreme and slow onset events) into planning

According to UNFCCC decision 1.CP/16, slow onset events include sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification.<sup>4</sup>

### Description of relevant activities/processes or research:

*Please describe the activities or processes that your entity has implemented to integrate both short-term and long-term climate considerations (including both extreme and slow onset events) into planning. In case your organization carried out research on such activities/processes, please describe them.*

1. SA Government funded the development of an agreed set of climate change projections for South Australia. This including the funding of a considerable body of foundational research on the large-scale climatic drivers of rainfall in south eastern Australia, in addition to a comprehensive set of statistically downscaled climate change projections for the 21<sup>st</sup> century in South Australia.
2. The South Australian Government appointed a panel of experts to provide independent advice about climate change targets and objectives for the State to 2050. The Panel was also asked to recommend key strategies to meet these objectives and ensure that the SA economy is best placed to adjust to a carbon constrained future. The Panel members were Dr John Hewson, Anna Skarbek and Frank Jotzo.

The [Panel's final report](#) was released on 25 November 2015. The Panel found that it is feasible for South Australia to achieve a target of net zero emissions by 2050 and that a commitment to this target will position South Australia well in a low carbon world.

3. The Goyder Institute is a partnership model that brings together South Australia's leading water research capabilities through collaboration with the South Australian Government, CSIRO, Flinders University, the University of Adelaide, UniSA and the International Centre of Excellence in Water Resources Management (ICE WaRM). The following portfolio of applied climate action research projects are now getting underway via the Goyder Institute, with additional detail available at <http://www.goyderinstitute.org/research/climate-action/> :
  - Climate Resilience Analysis Framework and Tools
  - Coastal Carbon Opportunities: demonstrating additionality and potential for future offsets in South Australia
  - From Salt to C; carbon sequestration through ecological restoration at the Dry Creek Salt Field
  - Knowledge gap analysis and model testing for offsetting greenhouse gas emissions through increasing soil organic carbon and improving nitrogen efficiency in South Australian agricultural systems
  - Developing an economic framework and business model for optimizing carbon sequestration and co-benefit investments in South Australia

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<sup>4</sup> FCCC/CP/2010/7/Add.1, para 25, footnote 3.

4. South Australia has recognised sea level rise from climate change and the impacts on coastal development by introducing the 'Policy on Coast Protection and New Coastal Development' in 1991. The Coast Protection Board took the best advice available in resolving to use the Intergovernmental Panel on Climate Change (IPCC) median sea level predictions as part of its hazard policy. This policy has since been integrated into South Australia's State Planning Policies.

#### Description of relevant tools/methods:

*Please describe the tools and/or methods that have been developed and/or used to integrate both short-term and long-term climate considerations (including both extreme and slow onset events) into planning.*

#### Key outcomes of the activities undertaken:

*Please provide information regarding the outcomes of the activities/processes described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.*

The *South Australian Climate Change and Greenhouse Emissions Reduction Act 2007* commits the Government to greenhouse gas emissions reduction and renewable energy targets. Under the Act, statutory progress reviews on the objects of the legislation and the operation of the Act against the specified emissions reduction and renewable energy targets are conducted every two years.

The Act establishes the *Premier's Climate Change Council* which is tasked with providing independent advice to the Government regarding matters associated with reducing greenhouse gas emissions and adapting to climate change. The Council takes a leadership role in consulting with business, the environment and conservation movement and the wider community about issues associated with climate change and to assist in dissemination information to business and other groups.

South Australia's *Climate Change Strategy 2015-2050: Towards a low carbon economy*, released in November 2015, sets out the Government's long term strategic direction for action on climate change. A Governance Framework consisting of a Cabinet Task Force and a supporting Executive Committee within Government oversees the implementation of the initiatives.

The *Prospering in a Changing Climate: A Climate Change Adaptation Framework for South Australia (2012)* sets out the approach to local and regional climate change adaptation planning across the state.

The South Australian Government has announced the goal of making Adelaide the world's first carbon neutral city. This ambitious target is designed not only to respond to the critical issue of climate change, but also to reinvigorate the Adelaide and South Australian economy, building its competitiveness and resilience in an increasingly carbon-constrained global economy. The *Carbon Neutral Adelaide* strategy will offer short term benefits, such as energy cost savings and enhancements to the liveability of the city, but will also help create a sustainable long term basis for future employment and wellbeing.

Eleven Regional Adaptation Plans (see above) have been developed across the State and feed into local government planning processes.

**Description of lessons learned and good practices identified:**

*Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).*

**Description of key challenges identified:**

*Please describe the key challenges associated with those activities/processes or the use of those tools/methods, that policy-makers, practitioners and other relevant stakeholders interested in integrating both short-term and long-term climate considerations into planning should know about.*

**Planned next steps (as appropriate):**

*Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such activities/processes?*

**Relevant hyperlinks:**

*Please provide hyperlinks to sources of information.*

[Climate Change and Greenhouse Emissions Reduction Act 2007](#)

[Regional Adaptation Plans for South Australia](#)

[Prospering in Changing Climate: A Climate Change Adaptation Framework for South Australia](#)

[South Australia's Climate Change Strategy 2015-2050 – Towards a low carbon economy](#)

[Coastal Protection Policy 1991](#)

### 3. The role of national governments in supporting adaptation at the local level

#### Description of relevant activities/processes or research:

*Please describe activities or processes that your entity took part in, or studied, and that illustrate the role of national government(s) in supporting adaptation at the local level.*

##### *Coastal Adaptation*

Key coastal adaptation initiatives undertaken at the national level include the national first pass risk assessment – ‘Climate change risks to Australia’s coasts’ and the formulation of decision support systems such as CoastAdapt which was developed by the National Climate Change Adaptation Research Facility (NCCARF) with funding from the Australian Government through the Department of the Environment and Energy. The South Australian government provided input into these processes.

#### Description of relevant national-level policies, programmes or projects:

*Please describe relevant policies, programmes, projects (or other relevant initiatives) implemented by national government(s) to support adaptation action at the local level. Information on the implementing partners and financial mechanisms established would be particularly helpful.*

#### Description of relevant tools/methods:

*Please describe specific tools and/or methods that have been developed and/or used by national government(s) to support adaptation at the local level.*

CoastAdapt is an information delivery and decision support framework and contains information and guidance to understand climate change coastal impacts and responses. CoastAdapt also includes state-specific information on regulatory and legislative requirements as well as data availability, including for South Australia.

CoastAdapt includes:

- Information manuals
- Infographics
- Case studies
- Impact assessment sheets
- Risk assessment templates

- Coastal climate change data

#### Key outcomes of the action undertaken:

*Please provide information regarding the outcomes of the actions described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.*

#### Description of lessons learned and good practices identified:

*Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes, national-level policies, programmes or projects (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).*

#### Description of key challenges identified:

*Please describe the key challenges associated with those actions, that policy-makers, practitioners and other relevant stakeholders working either at the national or at the local level should know about.*

#### Planned next steps (as appropriate):

*Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such actions.*

#### Relevant hyperlinks:

*Please provide hyperlinks to sources of information.*

<https://coastadapt.com.au/>

[Climate Change risks to Australia's Coasts](#)

#### 4. Cross-cutting issues and linkages to the process to formulate and implement national adaptation plans (NAPs)<sup>5</sup>

##### **Description of relevant activities/processes or research:**

*Please describe activities or processes that your entity took part in, or studied, and that illustrate cross-cutting issues and/or linkages to the process to formulate and implement NAPs.*

##### **Description of relevant national-level policies, programmes or projects:**

*Please describe relevant policies, programmes, projects (or other relevant initiatives) implemented by national government(s) that integrate local-level adaptation action into the process to formulate and implement NAPs. Information on the implementing partners and financial mechanisms established would be particularly helpful.*

##### **Description of relevant national-level policies, programmes or projects:**

*Please describe specific tools and/or methods that have been developed and/or used by national government(s) to address cross-cutting issues and/or foster linkages with the process to formulate and implement NAPs.*

##### **Key outcomes of the action undertaken:**

*Please provide information regarding the outcomes of the actions described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.*

##### **Description of lessons learned and good practices identified:**

*Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes, national-level policies, programmes or projects (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).*

##### **Description of key challenges identified:**

*Please describe the key challenges associated with those actions, that policy-makers, practitioners and other relevant stakeholders working either at the national or at the local level should know about*

##### **Planned next steps (as appropriate):**

*Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such actions?*

##### **Relevant hyperlinks:**

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<sup>5</sup> For additional information on NAPs, see: <http://www4.unfccc.int/nap/Pages/Home.aspx>

*Please provide hyperlinks to sources of information.*

## 5. City-to-city partnerships on climate change adaptation

### **Description of relevant activities/processes or research:**

*Please describe activities or processes that your entity took part in, or studied, and that contributed to fostering city-to-city partnerships on climate change adaptation.*

### **Description of relevant tools/methods:**

*Please describe specific tools and/or methods that have been developed and/or used to foster city-to-city partnerships on climate change adaptation.*

### **Key outcomes of the action undertaken:**

*Please provide information regarding the outcomes of the actions described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.*

### **Description of lessons learned and good practices identified:**

*Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).*

### **Description of key challenges identified:**

*Please describe the key challenges associated with those actions, that policy-makers, practitioners and other relevant stakeholders should know about.*

### **Planned next steps (as appropriate):**

*Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such actions?*

### **Relevant hyperlinks:**

*Please provide hyperlinks to sources of information.*

### **Further information:**

Please do not hesitate to submit more detailed information on case study(ies), tool(s)/method(s) and/or other relevant knowledge resource(s) that are relevant to adaptation in human settlements. The latter will be shared through the [Adaptation Knowledge Portal](#):

- [Case study\(ies\)](#)
- [Tool\(s\)/method\(s\)](#)

- [Other knowledge resource\(s\)](#) (online portals, policy briefs, training material, multimedia material, technical reports and scientific publications)