Submission of views on concrete opportunities for strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions

SUEZ welcomes the opportunity provided by the **Decision 1/CP.21, paragraph 133** to submit views on concrete opportunities for strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions.

Considering the field of expertise of SUEZ, the present document focuses on solutions for adapting to the consequences of climate change on **water resources**.

Based on the 5th assessment report of the Intergovernmental Panel on Climate Change, it is now scientifically acknowledged that freshwater-related risks of climate change intensify significantly with increasing greenhouse gas emissions:

- For each degree of global warming, approximately 7% of the global population is projected to be exposed to a decrease of renewable water resources of at least 20%;
- The fraction of the world population exposed to a 20th century 100-year flood is projected to be, at the end of the 21st century, three times higher per year for the high emissions scenario than for the low emission scenario;

Climate change is thus expected to have **direct negative impacts on the availability and quality** of water resources such as:

- Reducing renewable surface water and groundwater resources significantly in most dry subtropical regions. This will induce competition for water among agriculture, ecosystems, settlements, industry and energy production, affecting regional water, energy and food security;
- Increasing the frequency of meteorological and agricultural droughts in presently dry regions by the end of this century;
- Affecting negatively freshwater ecosystems by changing streamflow and water quality;
- Reducing raw water quality, posing risks to drinking water quality even with conventional treatment.

SUEZ
Siège social – Tour CB21 – 16 place de l'iris, 92040 Paris La Défense Cedex, France – Tél : +33 (0)1 58 81 20 00 - www.suez-environnement.fr
SAS au capital de 3 323 457 083 euros – Siren 410 118 608 RCS NANTERRE – TVA FR 76410 118 608

We also noticed the awareness raising of Parties to the UNFCCC with regards to the consequences of climate change on water: several countries including China, India, Indonesia, Jordan and Morocco have included measures dedicated to the sustainable management of water resources in their Intended Nationally Determined Contributions. For instance, Morocco's National Liquid Sanitation and Wastewater treatment programme is considered as a key priority for adapting to climate change, and integrates several targets: reaching an overall urban sewerage connection rate of 75% by 2016, 80% by 2020 and 100% by 2030; reaching a 50% volume of treated wastewater by 2016 and 100% by 2030; expanding wastewater management to services and reusing 50% of wastewater by 2020.

SUEZ brings to the attention of the UNFCCC the following recommendations, for consideration at SB 44:

1) **Encourage all actors to preserve and manage water resources in order to anticipate the consequences of climate change**

We recommend to incentivize all actors (industry, agriculture, cities, and water operators) to implement environmental performance plans in order to assess the impacts of their activities on drinking water and sanitation. These assessments would help identifying priorities in terms of sustainable urban planning, developing stakeholders' dialogue around water basins and elaborating environmental performance indicators adapted to each sectorial activity. Various technologies can be put at the service of these actors to monitor and control their water consumption amongst which smart metering, leak detection systems for water distribution networks or drop irrigation systems. Smart policies can also contribute to reducing water consumption, as for progressive tariffs.

SUEZ launched the Business Alliance for Water and Climate during the Resilience Day of the Lima-Paris Action Agenda on December 2nd, together with CDP (former Carbon Disclosure Project), WBCSD (World Business Council for Sustainable Development) and the CEO Water Mandate of the Global Compact. This initiative incentivizes the industry to measure and reduce its water footprint; it is aimed to be developed and strengthened by COP22.

2) **Support the production of alternative water resources to face water scarcity**

Water scarcity is becoming a challenge in a growing number of countries vulnerable to the consequences of climate change. At the same time, the availability of water resources is threatened by urbanization and industrialization. The production of alternative water resources through desalination, treated wastewater reuse and injection of treated wastewater into groundwater tables should be further explored. These solutions have to be developed within a clear legal framework, with the support of public authorities.

3) **Guarantee the continuity of drinking water and wastewater services during extreme or recurring climate events**

Climate change will also provoke a growth in extreme climate events. Measures have to be undertaken so to guarantee and ensure the continuity of drinking water and sanitation services. Indeed, in case of such events, restoring or maintaining the supply in drinking water and wastewater treatment services appears necessary to avoid any health and humanitarian risk. Smart technologies for real-time monitoring and management of rainwater and stormwater should be further developed.