



# WATER AND CLIMATE

## The French Water Partnership at COP24

- The FWP's programme
- Keys to understanding water & climate issues
- French solutions

french  
water  
partnership



partenariat  
français  
pour l'eau



The French Water Partnership (FWP) is the only platform for all French stakeholders, both public and private, operating at international level. With over 170 members, the FWP consists of six panels made up of representatives from 1) the government and its public institutions; 2) NGOs, organizations and foundations; 3) regional authorities and parliamentarians; 4) economic players; 5) research and training organizations and 6) French and foreign individuals.

The FWP carries out collective messages and advocates in international bodies and networks to make water a priority in the global political agenda (implementation of the Paris Climate Agreement, the Sustainable Development Goals and the global framework on biodiversity). The FWP also promotes French know-how abroad and stands as a facilitator for exchanges between French and international stakeholders.

 @PFE\_FWP  
[www.partenariat-francais-eau.fr](http://www.partenariat-francais-eau.fr)

## EDITORIAL

This year again, the French Water Partnership is ensuring the visibility of the water sector in the discussions on climate change! One of the most important tasks of the countries gathered at this COP24 is to develop and adopt a set of decisions to ensure the full implementation of the Paris Climate Agreement in accordance with the decisions adopted at the time of the COP21.

In addition, this COP includes a “facilitative dialogue” to support the implementation of national commitments through exchanges between states and non-state actors.

The French Water Partnership secretariat and its members are committed to including all issues related to water resources and aquatic biodiversity in this dialogue. Indeed, the recent and alarming IPCC report on Global Warming of 1.5°C recalls that impacts on freshwater, coastal and underground waters will be major, thereby threatening food security, access to energy, drinking water etc. We have thus developed a set of tools for this COP that will allow everyone to learn about and discover the water and climate solutions developed by the French stakeholders.

We invite you to take a look at our video aiming at raising awareness on the impacts of an average global warming of 4°C, created in collaboration with Erik Orsenna, President of The Initiatives for the Future of Great Rivers (IFGR). It’s available online and will be broadcast daily on our booth. Feel free to share it widely within your networks!

We’ll also be happy to have a chat during the different side events we are organizing, of which you’ll find the program in this booklet. It’s up to us to find solutions at all levels; it’s up to us to act!

**Jean Launay**

President of the French Water Partnership



# COP24: what's at stake?

The COP24 at Katowice promises to be a major summit since COP21, as one of its objectives will be to adopt decisions guaranteeing the full implementation of the Paris Climate Agreement, which will enter into force in 2020. All decisions relating to the climate efforts of the international community (transparency, accountability, etc.) as well as the assessment and revision of national commitments (monitoring, reporting, etc.) will be compiled in a "**RULEBOOK**" or "**KATOWICE RULES**".

The most difficult points of negotiation promise to be those relating to **DIFFERENTIATION** (whereby each country is required to make efforts depending on its economic capacities and its responsibilities), to **ADAPTATION** and to **FUNDING**. At the COP21, the countries had committed to publish a new version of their **NATIONALLY DETERMINED CONTRIBUTIONS (NDCs)** every 5 years from 2020 onwards.

From 2023, to facilitate this revision, a global assessment of NDCs will be conducted every 5 years to assess whether the collective effort made is in line with the temperature goals of the Paris Agreement. A first prefiguration of this NDC review was launched in 2018 as part of the **FACILITATIVE DIALOGUE**.

The Fijian Presidency has renamed this process the **TALANOA DIALOGUE** at the COP23 in reference to a traditional Fijian discussion mode aiming at resolving tensions – with the objective to “share stories, build empathy to make wise decisions for the collective good.”

As part of this dialogue, throughout 2018 all state and non-state actors were invited to answer 3 questions: « where are we? Where do we want to go? And how to we get there?”. The answers provided should make it possible to agree at COP24 on first tangible steps to take stock of the progress made.

During COP24, the Polish Presidency plans to focus its attention on three key topics:

- **TECHNOLOGY** - to show that there are climate-friendly modern solutions, such as electromobility allowing for sustainable urban development, clean air and an opportunity for modern jobs,
- **HUMAN** - emphasizing the need to lead change together with people through the solidarity and fair transformation of regions and industrial sectors,
- **NATURE** - including multifunctional and sustainable forest management as part of climate neutrality and the role of forests as greenhouse gas sinks, and support for a synergic view of the three UN key conventions: on climate, on biodiversity and on desertification.



## DURING THE COP

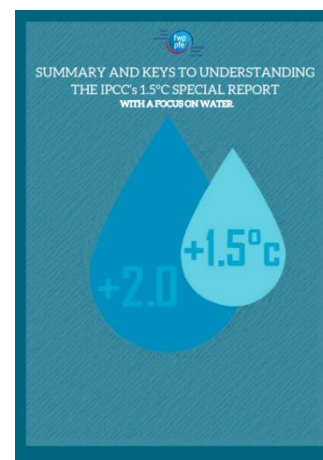
Discover more water & climate projects on the Water Expertise France portal accessible on the tablet available on the French Water Partnership's booth in the exhibition area at the COP24. The WeFrance portal is also accessible online: <https://www.partenariat-francais-eau.fr/en/>

# SUMMARY AND KEYS TO UNDERSTANDING THE IPCC's 1.5°C SPECIAL REPORT BY THE FWP

Discussions at COP24 will be held with the IPCC Special Report issued in October 2018.

In general, we can expect an increase in the average temperature of the land and oceans, heavy rainfall in numerous regions, and drought and insufficient rain in other regions as of +1,5°C. All these impacts on water resources and the consequences on agriculture, energy production, industry, water access and ecosystems, are details in an analysis realized by FWP.

Based on the IPCC report, major recommendations were identified by FWP for the water domain:



## Absolutely maintain global warming at 1.5°C

The report demonstrates the necessity of maintaining global warming at 1.5°C while the latest studies point to a clear increase in greenhouse gas emissions round the globe. This will mean significantly changing our current development patterns and mobilizing negative emission technologies, combined with reductions in carbon-based energy.

## Develop adaptation actions as fast as possible

Impacts on water will be substantial at 1.5°C, and even greater at 2°C. Adaptation efforts in addition to mitigation efforts thus appear crucial to tackle the challenges of water availability, excess water, and the decrease in aquatic biodiversity. It is however important to point out that the adaptive capacities of humans and ecosystems are limited and that some losses will be unavoidable from 1.5°C.

## Study the potential impacts of negative emissions on freshwater and help regional players strike a balance between mitigation, adaptation and development

The impacts of negative emissions technologies (i.e. CO2 capture for example through massive reforestation, bioenergy with carbon capture and storage, ocean fertilization etc.) are still difficult to measure. They might compete strongly with other sectors related to human development. If deployed on a wide scale, BECCS and afforestation/reforestation measures could impinge upon very important land and water resources. The demand for bioenergy could, for example, lead to a substantial increase in the demand for water for irrigation or an increase in the use of chemical inputs. This shows the importance of deepening our knowledge and of supporting regional players to develop an integrated approach to their policies on development and climate action.

## Build up knowledge on water resources, aquatic environments and their evolution to improve climate models and water management

For freshwater, the IPCC ranks most of its observations as "medium confidence". Knowledge on this subject has in fact progressed little since the fifth report. In addition, the report illustrates the difficulty of differentiating between climate-related and socio-economic causes. The water sector, for instance, is highly impacted by changes in lifestyle and usages, human demography and agricultural models. The expertise of the freshwater section therefore merits deeper analysis.

## DURING THE COP

All these recommendations will be discussed during a side-event organized by the FWP on the Francophonie Pavilion, on Tuesday 11 December, 13:00-14:30 (more information on the back of this document).

# IMAGINING A +4°C WORLD: WHAT ABOUT WATER?

While the objectives of the Paris Agreement set the limit of global temperature rise to below 2°C, the sum of the current commitments of the countries – if held – place the planet on a warming trajectory of +3°C to +3.2°C by the end of the 21st century. Some projections go even further.

Thus, according to the RCP 8.5 scenario (most pessimistic greenhouse gas emission scenario presented in the 5th IPCC report in 2014), we could face an average temperature of +3.7°C over the 2081-2100 period compared to the 1986-2005 period with a probable range of 2.6 to 4.8 °C..

In this context, the French Water Partnership gave thought to the major impacts of 4°C warming on water resources. A working group – of which many different actors were a part of, such as Météo-France – was involved in the process, resulting in the creation of a video presenting these major impacts in 3 different areas of the world: Paris, the Mekong Delta and California.

The issue of climate change has been superimposed on a series of human pressures, starting with the population explosion and inadequate management of natural resources (water withdrawal from increasingly large aquifers and rivers, pollution etc.). As a result, warming of 4°C will have major and irremediable consequences for water resources, thus for human societies and ecosystems.

Take a look at our video by going on the FWP's [youtube channel](#) or via this [link](#).



## DURING THE COP

This video will be broadcast during a side-event on the French Pavilion on Thursday, December 6th from 10 to 11:30 (more information on the back of this document).

## TAKE A LOOK AT OUR WATER & CLIMATE RESOURCES



### Publications

- [Messages from members of the French Water Partnership for the COP24 \(November 2018\)](#)
- [Summary and keys to understanding the IPCC's 1.5°C special report – With a focus on water \(October 2018\)](#)
- [Better knowledge for better management – Water, climate and development \(October 2016\)](#)
- [Adapting to climate change in the field of water : typology & recommendations for action \(December 2015\)](#)
- [Water and climate, acting for the future \(April 2015\)](#)

### Vidéos

- [Imagine a world +4°C: what about water? \(November 2018\)](#)
- [Water and climate, it's a clear match! \(2015\)](#)



# FRENCH SOLUTIONS TO FIGHT CLIMATE CHANGE

*Water faces four major risks: floods and marine submersions, worsening droughts, degradation of its quality and changes in aquatic ecosystems. The FWP suggests solutions to reinforce capacity-building of policymakers to take action on climate change.*



## **Establishing adaptation strategies at the watershed level**

### **An adaptation strategy which promotes Nature-based Solutions**

The Seine Normandy Water Agency predicts an increase in surface water temperature of around 2°C, a rainfall reduction of around 12%, an increase in evapotranspiration of approximately 23%, a reduction in flow rates of 10 to 30% and a reduction in groundwater recharge of approximately 30%.

In this context, and in the spirit of COP21, it has launched a participatory approach that includes the scientific community, elected representatives, farmers, industry, associations and institutions to prepare a climate change adaptation strategy that responds to these challenges. The strategy was unanimously approved in December 2016 by the Seine-Normandy Basin Committee. It calls for commitment today to preserve water resources and ensure a healthy living environment and resilient ecosystems. Nature-based Solutions, such as the restoration of natural areas for flood expansion, the greening of cities or support for the development of freshwater, are at the heart of this strategy.

For more information: <http://www.eau-seine-normandie.fr/domaines-d-action/adaptation-au-changement-climatique>



## **Contributing to climate change mitigation**

### **Production of clean energy from wastewater in Valparaiso, Chile**

Aguas Andinas, the Chilean Subsidiary of the SUEZ group, has set itself the goal of transforming wastewater treatment plants in the city of Santiago de Chile into biofactories to convert wastewater into clean energy and secondary raw materials. The Group has set itself the goals of making three of its plants carbon neutral and zero waste by 2022 through the self-consumption of green energy produced by the energy recovery by sewage sludge. In case of energy surplus, the latter can be reinserted into the urban network. The remaining waste is cleaned and recycled for development in urban construction projects or as agricultural fertilizer. Once the water is treated, it is released into the natural environment and is a source of quality irrigation for farmers.

In 2017, the three plants produced 46 GWh of electricity for their own energy consumption, which reduced their indirect greenhouse gas emissions by more than 30 000 tons of CO<sub>2</sub>. They also reinvested a surplus of 3 GWh on the grid, thus helping to avoid more than 20 000 tons of CO<sub>2</sub> equivalent of greenhouse gases for the city's inhabitants.

The project will receive the United Nations Momentum for Change award in the Planetary Health category on December 11th 2018 at the COP24 in Katowice (<https://unfccc.int/climate-action/momentum-for-change/planetary-health/santiago-biofactory-chile>).

For more information: <https://www.biofactoria.cl/>



## **Improving meteorological forecasts, early alerts and climate services**

### **Sharing know-how in forecasting and climate services**

Météo France exports its know-how and solutions to help foreign national weather services (SMN) improve their meteorological forecasting, early warning systems and climate services. A large part of this activity involves the strengthening of observation networks. Météo France International (MFI), a subsidiary of Météo France, has worked in Africa and Indonesia, in India and many other countries, introducing and implementing technologies and competencies that have been proven effective in France.

Recent improvements in weather forecasting tools have enabled the provision of many climate-related services for the general public and professionals: climate change diagnosis at the regional or local level, anticipation of risks of marine submersion, drought warnings, storm and flood warnings, agricultural forecasts.

For more information: <http://www.meteofrance.fr> and <http://www.mfi.fr/fr/>

## Strengthening drinking water and sanitation services in the face of climate change



Publication of the guidebook « WASH services and climate change. What are the impacts? How can we act? »

Water and sanitation services are particularly vulnerable in the face of climate change. They are indeed dependent on the availability and the quality of water resources, which are themselves strongly impacted by climate change. In addition, climate hazards have consequences that can directly alter services and their viability over time.

In this context, the guidebook, will be launched by pS-Eau at the COP24 during a side-event on the Francophonie Pavilion (Friday December 7th from 11 to 12:30), aims at providing tools to better understand the impacts of climate change on water and sanitation services and at offering operational guidelines for adaptation of services in developing countries and mitigation. It integrates wider guidelines in link with other essential services such as water resource and rainwater management.

For more information: <https://www.pseau.org/en/wash-climate-change>

## Strengthening hydrometeorological networks



### Strengthening hydrometeorological networks

This project was developed in the Congo basin in partnership with CICOS (Commission Internationale du Bassin Congo-Oubangui-Sangha). It is funded by the French Development Agency and concerns capacity-building and knowledge of water resources. It will optimize the network for monitoring and sharing water data and information to facilitate the implementation of adaptation measures. Hydrometeorological monitoring will be improved through innovative global technology under the French-American satellite program SWOT, developed by the CNES (Centre National d'Etudes Spatiales) with the support of the Investments for the Future programs of the French government. This technology will be exploited for a better understanding of the impacts of climate change in the Congo Basin.

For more information: <https://www.iowater.org/>

## Managing the risk of heavy rainfall episodes



### MAGES: an effluent management support model of the SIAAP

MAGES is a powerful decision-support system that helps prevent, in particular, the discharge of untreated water into the natural environment. It collects all data from actors in the field (water flow, network status, sewage plant operation) 24 hours a day and also integrates weather forecasts from Météo France. The system analyses this information in real time and suggests the most suitable scenarios in the case of heavy storms, maintenance work on the network, etc. This data, in addition to its main use for real-time operations, can also be used for studies.

For more information: <http://www.siaap.fr/>

## Managing flood risk



### A double watch system to prevent flooding in

On 2 July 2011 in Copenhagen, a storm of extraordinary intensity caused severe flooding, the cost of which will be estimated at nearly 700M€. The rainwater drainage system was unable to cope with this extreme weather phenomenon. To prevent the consequences of the eventual occurrence of new episodes, the strengthening of monitoring systems for retention basins and weather warnings has been favored by the city on the recommendation of Krüger, a Veolia subsidiary in charge of technologies for the treatment of waters in Scandinavia, Finland, Poland and the Baltic States. A set of intelligent and scalable software solutions through the deployment of a smart grid (an intelligent and connected network), combined with a strategy of anticipation by weather monitoring, enables action on the existing infrastructures in order to channel the water in and out of the storage basins. This arbitration also allowed a 93% reduction of the investment compared to the choice of equipment in additional basins. The 90% reduction in the number of wastewater overflows between 2013 and 2014 demonstrates the effectiveness of the systems implemented in Copenhagen.

For more information: <https://www.veolia.com/en>

# The French Water Partnership's program at COP24



DATE AND TIME	EVENT TITLE	LOCATION	ORGANIZERS	DESCRIPTION	SPEAKERS
Thursday 6 December 10:00-11:30	<b>Imagining a +4°C world: what about water?</b> (bilingual English-French)	French Pavilion	FWP	On the occasion of the launch of the video « Imagining a +4°C world », this event will present the impacts an average warming of +4°C in 2100 could have on water resources as well as the socio-economic and geopolitical consequences it could entail.	IFRG, FWP, Office de l'Eau de la Martinique, CICOS, Bangladesh (tbc)
Friday 7 December 11:30-13:00	<b>Water and climate challenges: time to finance actions!</b> (English only)	Pieniny Room	FWP, OSS, INBO	Climate change has a strong impact on the water cycle: droughts, floods and desertification threaten access to water, food and energy. The event will present adaptation solutions in the water sector (information, governance and financing) to address these issues.	OSS, FWP, INBO, CILLS, Lake Victoria Basin Commission, Environmental Monitoring Group (South Africa), World Bank
Friday 7 December 15:00-18:00	<i>Global Climate Action event</i> <b>Water-wise climate solutions to mitigate, adapt and thrive</b> (bilingual English-French)	Pomorze Climate Action Room 1	FWP, AGWA, SIWI, GafWaC, IUCN, SIWI, FAO, UNESCO-HIP, WWC	This session aims to bring together water stakeholders and specialists from other fields to facilitate the dissemination of good practices in the field of water and climate. It will be divided into two sessions: the first session will highlight "no regrets" solutions put in place by states, cities and companies. The second session will focus on water-climate-SDG12 linkages (production and sustainable consumption).	See detailed program online
Saturday 8 December 14:00-15:00	<b>Ecosystem-based adaptation: coming together for water!</b> (English only)	Action Hub	FWP, GafWaC	This event will encourage discussions around examples of Nature-based Solutions for adaptation to climate change, promote the International Nature-based Solutions Declaration launched at COP23 and present the nature4water platform.	FWP, GafWaC, Jeunes Volontaires pour l'Environnement (JVE) International
Tuesday 11 December 13:00-14:30	<b>Décryptage du rapport 1,5°C du GIEC : quel bilan pour les ressources en eau?</b> (French only)	Francophonie Pavilion	FWP	This event will present and discuss the IPCC's analysis of the IPCC Special Report on 1.5°C. The expected impacts on water resources and their uses in the case of 1.5°C and 2°C warming, with a focus on the issues in French-speaking Africa, will be presented. After that, there will be a debate with the audience and the speakers on the French Water Partnership's recommendations.	PFE, IFDD/OIF, Réseau Climat & Développement/OPED-Togo

On our website's [live page](#), you'll find the list of events of interest selected by the FWP.