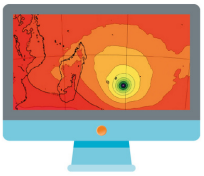

ALADIN and the future of Seychelles

Interview with Vincent Amelie
CEO of the Seychelles Meteorological Authority (SMA)

You are a climate expert. Which thought on climate is most meaningful for you today?
Since a young age I have always been fascinated with the wonders of climate and today more than ever I want to use my climate expertise to address the impact of climate change on the environment.

Seychelles suffers an average of $ 2.8 million in total direct losses from floods and tropical cyclones. What is our best defence?
Building resilience through adaptation measures must be an integral component of an effective strategy, along with mitigation.

ALADIN, is a « genie of the weather » 10 times more accurate than global models, how relevant is it for our islands?
Global models struggle to represent small areas like Seychelles and this makes it even more difficult to resolve smaller-scale climate features that contribute to the overall climate pattern. The high-resolution regional model, ALADIN, provides a better solution to this challenge. It is a very useful tool for downscaling climate simulations from global scale models.

For Seychelles ALADIN can capture the strong influence of high mountains on the climate pattern and contribute to the simulation of a more robust climate projection for the country.

ALADIN USERS: FROM POLICY MAKERS TO FARMERS

Through the ALADIN model, implemented by BRIO-Building Resilience in the Indian Ocean, which climate services will be available in Seychelles?
Tailored, science-based information that will help different users - from policy makers to farmers - make better decisions on how to adapt to the adverse impact of climate variability and change. In the sectors of water, coastal management, fisheries and tourism, the need for this precise information is particularly strong.

> ***People will know which aspects of the climate are going to change, when they are going to change and how much they are going to change.***

Indeed, water, fishing and tourism are the sectors most affected by climate change in Seychelles. How will they benefit?
People working in these sectors will know which aspects of the climate are going to change, when they are going to change and how much they are going to change.

This information is valuable to develop adaptation measures for survival, while at the same time it makes us more aware that we should all do our part to reduce the emission of greenhouse gases that cause global warning, otherwise we will reach a stage where we will not be able to adapt anymore.

CLIMATE KNOWLEDGE IS ESSENTIAL TO SURVIVE

> ***Knowing that the weather will change suddenly from too wet to too dry, will push people to invest in water harvesting systems .***

What can the average family do?

Knowing that there will be more instances when the weather will just change suddenly from being too wet to be too dry, or vice versa, to invest in what is most useful for them, for example rain water harvesting systems to cater for the dry spells.

Knowing that there will also be times of excessive precipitation will help educate policy-makers and the population at large to work together to prevent it, or if this is not possible, work to mitigate the impact of flooding (in particular flash floods) in low lying areas where they are more frequent.

What will users need to do to access the ALADIN data?

Contact the climate section of the Seychelles Meteorological Authority (SMA) www.meteo.gov.sc and also access the regional climate change portal hosted by the SMA.

FLASH FLOODS AND DROUGHT IN THE FUTURE OF SEYCHELLES

According to the first results of BRIO which scenarios are envisaged for Seychelles?

The amount of enhanced inter-annual precipitation is likely to increase in both frequency and intensity. Similarly, the year-to-year deficit in precipitation is also expected to increase and become more severe.

The inter-annual variation in precipitation will be triggered by abrupt transition from one event to the next. For example, a year of extremely wet condition can suddenly change to a year of extremely dry condition or vice versa and this will lead to flash flood as well as drought conditions.

Both maximum and minimum temperatures are increasing, the difference in the rate of increase indicates that the minimum temperature is warming much faster, leading to a decrease in diurnal temperature range and warmer nights in the years to come. Similar to precipitation, results also show strong inter-annual variation in the temperature extremes throughout the whole projected period till 21st century, although the variation in temperature appears to be more robust and consistent than in precipitation.

Vincent Amelie
CEO of the Seychelles Meteorological Authority (SMA) and national expert of the BRIO project in Seychelles. The BRIO project (Building Resilience in the Indian Ocean) is implemented by Météo France, with the support of the French Development Agency (AFD) Adapt'Action facility.