

"We need to take a deep look at the dramatic effects of climate change on fisheries at all levels from the Western African community to the United Nations agencies. This is a priority for me".

*A conversation with Dawda F. Saine on the impact of climate change on small-scale fisheries in West Africa, mangroves and their role in coastal protection and how to create more climate justice*

*Mr Saine, you are a marine biologist and the Secretary-General of CAOPA. In the organization, the African Confederation of Professional Artisanal Fisheries, founded in 2010, 25 countries are represented. For years, you have been campaigning personally and as a representative of small-scale fishermen in Gambia and CAOPA for the rights and interests of small-scale fisheries and have warned of the effects of climate change on the fisheries sector. What concrete threats do you see?*

Dawda F. Saine: In my country, we founded The Gambia National Association of Artisanal Fisheries was founded as a lobby organization and is observing alarming developments I would like to explain briefly. These are the developments I would like to explain briefly. About 75 percent of the fish we consume in our country, which are as you know important for supplying the population with fish products, are pelagic species mainly anchovies and mackerel. But fishing is posing ever greater challenges for the sector concerned. The fishing grounds are overfished for various reasons but let us look at the climate factors here: We do not yet know exactly how ocean acidification will affect pelagic species. But we must be clear: If more carbon dioxide is released into seawater, carbon dioxide is produced, which has a negative impact on fish stocks. Swarms of small fish, whose habitat was once near the coast, are now migrating to deeper waters. Not only are the high catches from earlier times declining as part of this process. A worrying development is that in some countries more and more fish are caught that are not yet fully grown. In the long term this has harmful consequences. It is obvious: if you kill the juvenile fish today, you will not be able to catch any more fish tomorrow. Because the reproductive system is permanently disrupted.

In West Africa, the rainy season usually begins in June and ends in November, and due to climate change, storms are becoming more violent. It is dangerous to travel far out to sea with the small pirogues, even if they have outboard steering. Fishing days have therefore become much fewer than in the last twenty years. In short, fishing trips out at sea are becoming more difficult and the catches landed less. In Gambia, catches have fallen by at least 40 percent in recent years. Sometimes fishermen take a whole week and return to land with fewer fish than before. In economic terms, all

this is a risk because fishermen have less income but have to take on greater expenditure and loans. For small-scale fisheries this means additional costs that many can hardly afford: Fuel for the fishing vessels, wages, etc.

*Does climate change pose a real threat to food security?*

In recent years, we have done a number of studies together with the Food and Agriculture Organization of the United Nations. According to the study, the decline in fishing stocks is not only affecting fishing families but is affecting the whole population. The reduced supply is triggering rising prices, and for many this means increased costs. Half of the population lives on a dollar or less a day and for them, fish is an essential source of protein. In addition, the fishing sector in The Gambia provides direct and indirect employment for an estimated 200,000 people: fishermen, fish processors, boat builders, shippers, fish traders. There will be negative impacts here as well. Incidentally, this development does not only affect fishing from the sea. Fishing in the delta region of the Gambia River also threatens to become less profitable. One reason for this is the penetration of saltwater into the previously brackish water zones. More frequent flooding and rising sea levels are responsible for this. At the same time, the great Gambia River is drying up more and more because there is less rainfall in its catchment area. The river is one of the major streams flowing through West Africa.

*Mangroves line the tropical coasts of the world. The trees thrive best where the living conditions for common tree species are lethal. Why are mangroves so important for coastal protection?*

Healthy mangrove forests are very important for West Africa and the whole of Africa. They protect our coasts and human habitats from coastal erosion, tidal waves and seawater intrusion. If salinisation is occurring, for example in shallow coastal groundwater reservoirs, clean drinking water is also at risk in urban areas of cities. The mangrove forests are rooted at the transition between land and sea and are vulnerable to the tides. They are regularly flooded by salt water, but they are able to filter out high salt concentrations through a special filter system, thus transforming salt water into fresh water. In Gambia, mangroves have recently dried up due to the high salinity of the riverbanks caused by flooding due to rising sea levels and long periods of drought. This is also a consequence of climate change and is not good news, as the mangrove forest ecosystem is important for coastal protection, but also for fish survival and reproduction.

*How does this ecosystem work? Could you please describe it?*

The so-called stilts and aerial roots retain the sediment in the soil and prevent it from being washed out. Enormous amounts of organic material accumulate in the silt: fallen leaves, dead wood and roots, excrements from fish and crabs, and washed up material from rivers and tides. They are an ideal habitat for a variety of fish, crabs and shrimps. And offer good conditions for their larvae and juveniles. Mangrove forests are crucial for healthy fish stocks and are therefore also of great importance for food security. Besides fish, lobsters and other marine animals, they also provide algae, fruit, salt and leaves for animal feed. And do you know that mangrove bees serve as food source? The best white honey that I know comes from the mangroves.

We are also aware that mangrove forests help with climate change mitigation. They are highly efficient carbon stores. There are studies that say that on average over 1000 tons of carbon are stored per hectare of mangrove forest. If the forests are destroyed, the CO<sub>2</sub> and also other greenhouse gases such as methane and nitrogen escape into the atmosphere. In recent years, we have done a lot to reforest for this reason.

*What is being done to protect the mangrove forests?*

We have developed various effective programs to stop the dying of the mangrove forests and have planted new trees instead of cutting down more. Taking care of this complex ecosystem requires a lot of knowledge. One must know in which waters a particular plant thrives and maintain a careful approach to the root system. In The Gambia, mostly women harvest the oysters that cling to the mangrove roots. To do this, they now no longer use machetes or axes to simply cut down the roots as they did in the past. The oysters are now carefully detached from the roots with knives. This is just one example of how we are trying to protect the mangrove forests from further destruction in everyday life as well.

*What are the West African states doing about climate change and what are CAOPA's demands with regard to climate change and fisheries policy?*

Combating climate change is an enormous challenge. As far as the African continent is concerned, we don't have the technical know-how, the scientific expertise or the financial resources to take effective measures against climate change, for example to stop sea levels rising. We are trying to convince our governments to take more effective action and invest in infrastructure to protect

coastal places. We can no longer wait for external support. In a way, we are also getting tired of depending always on whether donors will support us. What do we do when there is no outside help?

*Would compensation for declining catches be an option for more climate justice?*

We are strongly affected by climate change in Africa. But if you look at who has caused climate change, Africa's part in it is minimal. There are not heavy industries and industrial growth on the African continent to the extent that you have, which contribute to pollution. We do need some kind of compensation, but before we start talking about compensation, we should start looking at certain mechanisms. I strongly believe in that. What I mean is that we need to think about new grievances and grievance mechanisms on the African continent, insofar as they relate to climate change. As I have already said, fishermen are severely affected by climate change and the negative consequences for our societies have long been evident. But there is no complaint-based mechanism to deal with their legitimate concerns because these problems are not documented or raised anywhere. We need to look at the dramatic impact of climate change on fisheries at all levels, from the community to the United Nations agencies. This is a priority for me. Then we can talk about compensation.

And I would like to add something else: The whole world is in a period of transition, but this is something different from change. The transition process is psychological. Change is situational.

*What do you mean?*

We will not experience real change unless we change the situations on the ground. I distinguish between three phases. In the first phase things go their way as they always have. In the second phase we are confronted with things we do not know yet, things that are new to us, that are uncertain. The third phase means a new beginning.

*Do you believe in a new beginning?*

Yes, we are experiencing a new beginning in the sense that we are looking for the right path for a deep change. Moving the chairs in your room, you have changed the arrangement, but that does not mean a new beginning in the real sense, does it? The consultations for a reorganisation of the fisheries sector are in such a state of transition right now.

*Mr Saine, you are responsible for coordinating the activities of your association for young people in your many roles as Secretary General of CAOPA.*

There is a mantra to say that today's youth are tomorrow's leaders. If you look at small-scale fishing in general, you can see at first glance that it is the elderly who are in charge, and who will soon retire. When they retire, who will take over that job? Will young people be interested in taking up the small-scale fishing profession? They may take over their parents' and grandparents' fishing boats or take them out of service. They will have to continue the fight for sustainable fisheries. For me, the most important word is capacity. That young people have the skills and tools they need to see a future for themselves in the fishing sector. They must be empowered to influence policy decisions at national and international level. At the 9th General Assembly of CAOPA, the delegates from our member countries followed suit by setting up a youth association within our organization. With this program we want to help stop the migration of young people to Europe and show them ways in which they could earn a living in the fish sector. This is an important step towards empowering the next generation.

*And this is where the circle closes. Because of them we have to do all we can to stop the negative effects of climate change on our societies.*

*Mr Saine, thank you very much for your time!*

*The interview was led by Cornelia Wilß for Fair Oceans and Brot für die Welt.*