



PUBLIC POLICY BLOG

Lessons that can be drawn from king tides in Papua New Guinea

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A king tide, which is an unusual high tide, does not only bring negative impacts to coastal environments and communities but also important lessons to be learnt, predictions of what the average sea level might look like in the future, and their consequences. Tides are controlled by the gravitational pull of the moon and the earth, pulling the ocean back and forth. When the moon and the sun happen to be on the same side of the earth, their gravitational pull pull the ocean in the same direction, creating strong tides which results in high tides.

The 2021 king tides

According to Herve Damlamian, the Ocean Monitoring and Prediction team leader at the South Pacific Commission (SPC), the recent king tides which started on 3 December 2021 were caused by a combination of three different phenomena: gravitational pull of the earth by the sun and the moon, the La Nina period which will continue into the coming months of 2022, and storms in the North Pacific that are creating huge waves.

These king tides have caused much damage to coastal areas and islands of the Western Pacific Region. They have affected coastal communities from as far as the Federated States of Micronesia and Marshall Islands, to Papua New Guinea (PNG) and Solomon Islands. The king tides are expected to continue through to January 2022.

Coastal areas in PNG affected by the king tides

According to the media, the king tides have eroded beachfronts and coastlines, and have even gone some meters into the land resulting in some coastal areas and islands going underwater. Damages were caused to houses, roads, cemeteries, tradestores, schools, hospitals, etc. The

most affected were the small island communities whose water sources have been contaminated, livestock affected, food gardens and homes gone underwater. Since land on the islands is scarce, there is limited options on where to get safe-drinking water and food.

The affected areas include:

- the islands of Manus Province;
- the Carteret Islands in the Autonomous Region of Bougainville (AROB);
- the islands of Milne Bay Province;
- the islands of East Sepik Province and some coastal areas on the mainland;
- the islands of New Ireland Province and some coastal areas on the mainland; and,
- some coastal communities along the mainland of PNG.



The king tides caused coastal flooding at Lessau Village on Manus Island.– Image by Nadu Bwe

Responses to this event

This natural phenomenon has caused some of the affected coastal communities to start building sea walls to prevent

high tides from destroying their homes, food gardens and water sources.



The king tides cut road access from Moem Barracks to Boram Airport in Wewak, East Sepik Province. – Image by Post Courier

Assistance to the affected coastal communities was delayed for a week after the king tides struck. There was a national disaster management team set up by the National Disaster Office to assist the affected coastal communities, however, they had to wait for the impact assessment reports from Provincial Disaster Offices of the affected provinces, before they responded.

Lessons that can be drawn from king tides

King tides bring along the following lessons to be learnt:

- King tides project what the sea level would be like and the destruction it would cause if climate change continues, and the sea level continues to rise. This, therefore, brings a message out to developed countries to seriously honour their commitments and agreements towards tackling climate change, such as the agreements made during the 2021 COP26 meet in Glasgow.
- The recent king tides have awakened some coastal communities to start building sea walls along their beaches which did not seem important to them

before.

- King tides have sounded alarm bells for the relevant authorities to act fast and to address the impacts of sea level rise in terms of relocation of affected people and construction of sea walls, before it is too late.
- The slow response to such natural disasters by Provincial Disaster Officers and other relevant authorities calls for higher authorities to investigate the challenges that are hindering quick responses to disasters and therefore, deal with these challenges accordingly.
- The recent king tides have highlighted the need for high-tech weather instruments and tide gauges, so the weather office can predict well in advance such natural phenomena and warn people in advance.

Conclusion

Whether we believe it or not, climate change is real and king tides are a proof of it. King tides have therefore brought about a lot of lessons that should be taken aboard by PNG as a nation and by the international community.

To sum up this blog, nature does not need us, we need nature, therefore we must look after nature in order for nature to look after us.

About the Author

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