



Hon. Dr Mahendra Reddy
Minister for Waterways
(Ministerial response to written question number 140/2018)

Question No: 140/2018

In order to properly identify the flooding areas and find ways and means of controlling or minimizing flooding, does the Ministry take any aerial survey of flooded areas and compile data for future reference and whether that data be made available to the stakeholders and the general public.

Response

The Ministry of Waterways does not do aerial survey of flooded areas. Aerial survey of flood or any natural disasters are often **carried out by the National Disaster Management Office (NDMO) often known as reconnaissance survey** to assess the extent of disaster and plan for relief efforts. For any future use of aerial survey data it becomes essential that the aerial photographs are geo-referenced, so that the aerial pictures could be tagged to correct locations and hence would be of value in flood analysis. Furthermore, for such detail analysis there is a need to use high resolution cameras during aerial surveys.

What we are trying to do is to use **freely available satellite images** and remote sensing technique to demarcate the flood areas to map the flood inundation extents. Due to its capacity for temporal and spatial coverage, remote sensing has emerged as a powerful tool for mapping inundation. The satellite images provide spatial resolution of 10, 20 and 60m, temporal resolution of 5 days and has much wider swath width when compared to aerial surveys. While cloud cover is out of our control in both techniques, remote sensing for such analysis is preferred globally.

The Fiji Meteorological Services collects data on amount of rainfall at various locations around the country. These data are also very useful for analysis and study of the flooding areas. The flood plains are the lower end receiving the runoffs from the watershed areas that contributes to the flooding. The rainfall data within the watershed areas becomes so vital for the Engineers and researchers in identifying problems and providing recommendations.

The Ministry uses these flood inundation mappings, flood water level marks and rainfall data to carry out analysis of the flooding areas to identify the problems. Engineer's study these information's and provide recommendations on ways to minimize the impacts of flooding.

There is no point of collecting data and not disseminating it out to general public and stakeholders. Any flood inundation mapping done by the Ministry will be made available to the general public. This information will also be shared with the planning departments for reference during planning for development, would be essential for any development work in floodplains.