

HSC024-03

Room:201A

Time:May 24 09:15-09:30

## Practical use of DEM model by the comparison between figure of inundation disaster

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A tsunami or the storm surge are models of the inundation disaster with the rises of the surface of the sea. In the degree of the damage with this, the meters above the sea level from the surface of the sea makes a decisive factor. Therefore, I can make use for the prediction of the future damage by analyzing detailed meters above the sea level data. On the other hand, as for the flooding and the inland waters disaster of the river by the concentrated downpour, only a pitch difference does not necessarily control the degree of the damage. Some area encounter the disaster is various factors are connected with each other complicatedly, for example, the scale of the old back swamp, total precipitation from the beginning, direction of tilt and an angle of the ground, having soil and vegetation or not, an artificial structure or so. This report, the typhoon disaster that hit in succession to win on a large scale of 2004 to an example. An study area is the various places in Kagawa facing Setonaikai inland Sea. There is partly the area that underwent high tide and both river floods. The hazard map is made every management area by the kind of the disaster. Therefore I am totally worthless when plural disasters occur frequently at the same time. I put a map and the real one which I generated from a DEM model on top of one another on a GIS. DEM can survey a wide area quickly, and the remarkable local update of the artificial change is comparatively easy again. And I want to make use of a DEM model by a future disaster prediction. Furthermore, higher precision is practical and wants to make plain hazard map.

Keywords: DEM, flood, storm surge, GIS, micro-topography