



## **A surrogate climate change experiment with the RegT-Band to investigate the increase of Hydroclimatic Intensity**

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The RegT-band version of RegCM4.1 release is used in a surrogate climate change experiment. Ten years of RegT-band simulation have been completed from 1998 to 2007, using the ERA-interim as boundary condition. The same ten years have been completed with a modified version of the model with doubled greenhouse gas concentration and with an increase of 3 temperature degrees in the lateral and boundary conditions for both the atmosphere and the ocean.

Change in the hydrological cycle are investigated and in particular the changes in the hydroclimatic intensity are presented by mean of the analysis of the HY-INT index (Giorgi et al., 2011). By using this index both precipitation intensity and dry spell length are taken into account in the same time and the increase of hydroclimatic intensity is confirmed according to the Giorgi et al., 2011 results.