

On the implementation of floodplain management plans on the Herbert and Johnstone rivers, Australia

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Abstract: The Herbert and Johnstone river catchments are located in tropical North Queensland in Australia, and have catchment areas of approximately 10 000 km² and 1600 km², respectively. Their floodplains are predominantly utilised for agricultural purposes, but there are also many townships that are subject to frequent flooding. Floodplain management plans for both river systems were completed in 2003. Average annual damages (AAD) for the Lower Herbert River were estimated to be AUD\$4.3 million, and for the Lower Johnstone River AUD\$3.0 million. Floodplain management plans were developed to reduce the flood damages in urban areas, and to reduce the risk to human life. Many of the recommendations of the plans have now been implemented, and subsequently there have been several floods on both rivers. The implementation of the management plans and the effectiveness of the management measures are reviewed, and recommendations are made for consideration in the development of floodplain management plans.

Key words flooding; floodplain management; flood risk; flood damage; levees; floodgates; Herbert River, Australia; Johnstone River, Australia; URBS, TUFLOW