



Figure S2. Flood maps of known events obtained using the presented method over the test area (green rectangle). Flooded pixels are identified by applying a threshold of 0.5 to the retrieved probability maps, for the dates closest to the events shown in Table 1, namely 14 March 2016 (panel a), 28 March 2018 (c), 24 October 2018 (e) and 29 March 2020 (g). Flooded pixels are coloured in red and draped over a satellite optical image from Google Earth. Zoom-in detailed maps on the areas mainly affected by the events, indicated by magenta

rectangles on the left maps, are shown on the right panels for each event (b,d,f,h, respectively), together with toponyms for easier identification.