

# Department of Geography **GIScience Research Group**

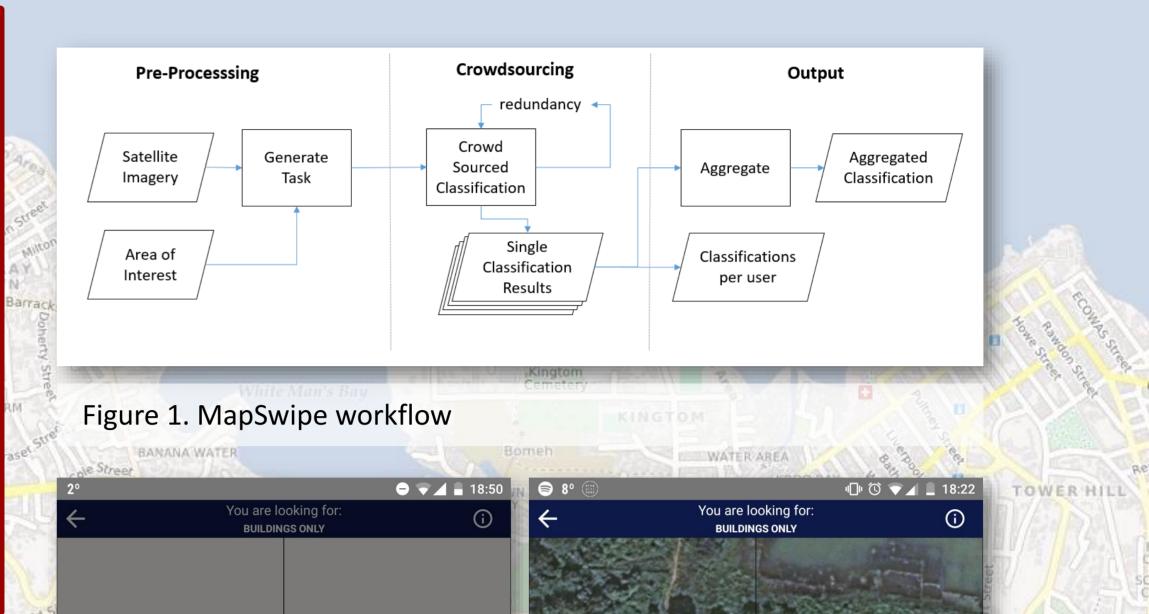


# The democratisation of humanitarian mapping: insights into the MapSwipe app and data quality

# **1 Map data is crucial**

Accessible, accurate map data have proven vital to MSF the planning and implementation of large-scale responses to several humanitarian emergencies. In many regions where MSF is active, geographical data are outdated or contain insufficient detail to quantify settlement size, population density, and accessibility.

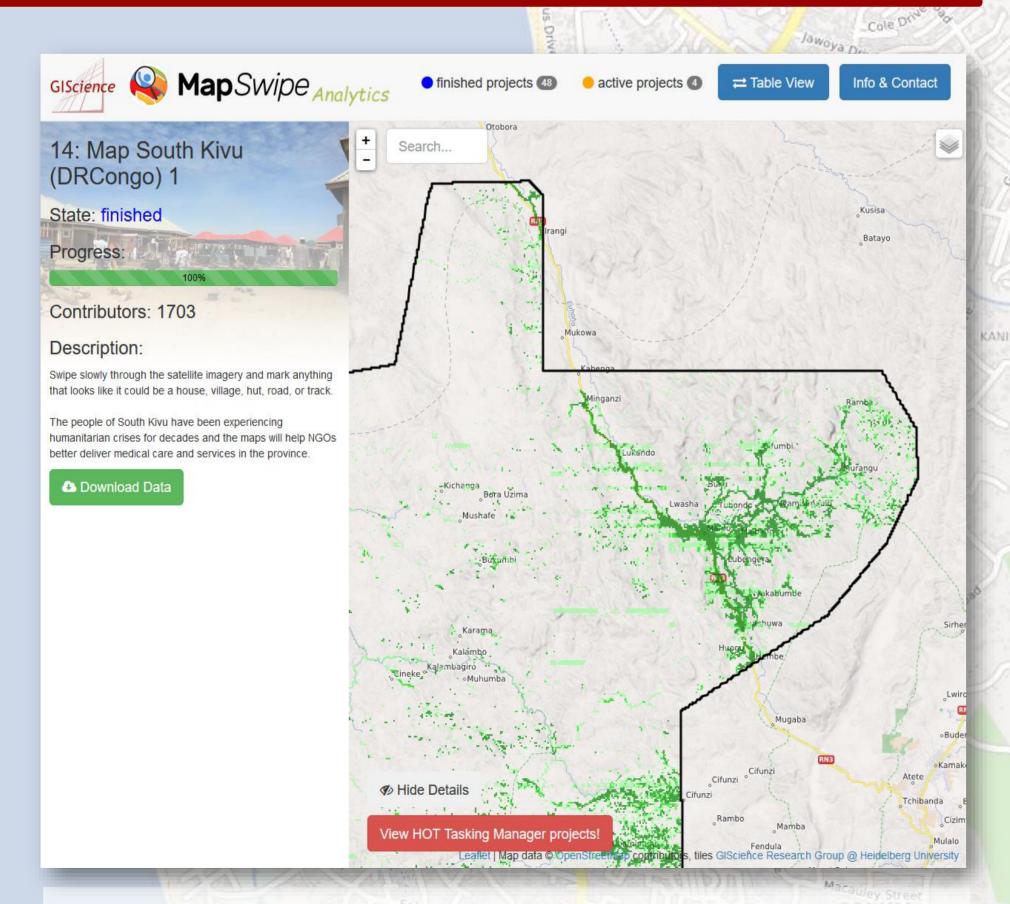
We developed the MapSwipe workflow to enable large-scale map data collection.



## **2** MapSwipe is fast and easy to learn

MapSwipe, a mobile app, allows for the classification of inhabited areas by volunteers without special mapping skills using only their smartphones. MapSwipe data support detailed mapping in OpenStreetMap and have previously been used by MSF and other organisations to map settlements in South Sudan, Nigeria, and Madagascar.

With MapSwipe we can map populated areas more efficient in comparison to traditional approaches.



#### **How To Contribute**

### TAP TO SELECT

Search the image for features listed in your mission brief. Tap each tile where you find what you're looking for. Tap once for YES, twice for MAYBE, and three times for BAD IMAGERY (such as clouds)

### SWIPE TO NAVIGATE

When you feel confident you are done with a piece of the map, scroll to the next one by simply swiping.

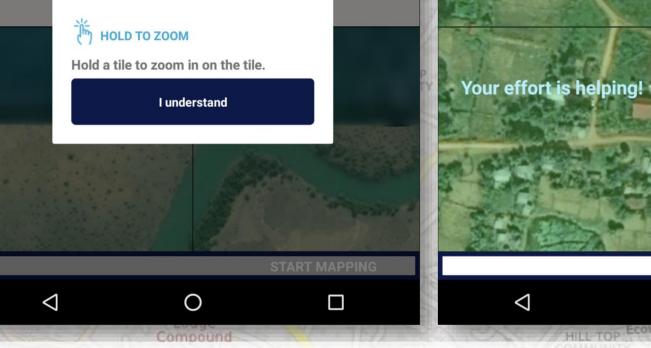


Figure 2. MapSwipe app interface

## **3 But: How good is it?**

However, because the volunteers generating these data are non-experts, there are concerns about data quality. Therefore, we present an initial analysis of MapSwipe data quality.

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Figure 3. Settlement information from MapSwipe

MapSwipe users produce reasonable information on human settlements.

There is, however, substantial disagreement between users on some specific features. We observed that clouds, missing satellite imagery, and the behavior of individual users were common causes of disagreement. Using this information we can improve the MapSwipe app and provide more accurate and accessible map data for use in the field.



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