

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 in 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 In many regions where MSF is active, geographical data are outdated or contain insufficient detail to quantify settlement size, population density, and accessibility.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.

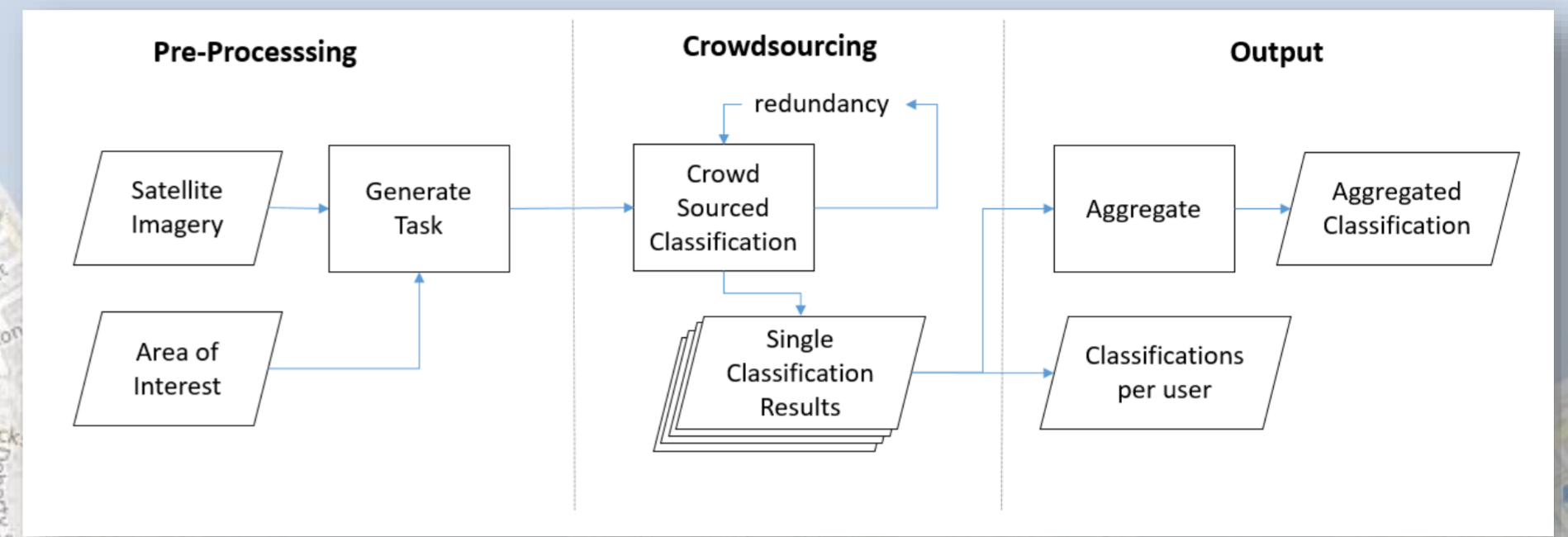


Figure 1. MapSwipe workflow

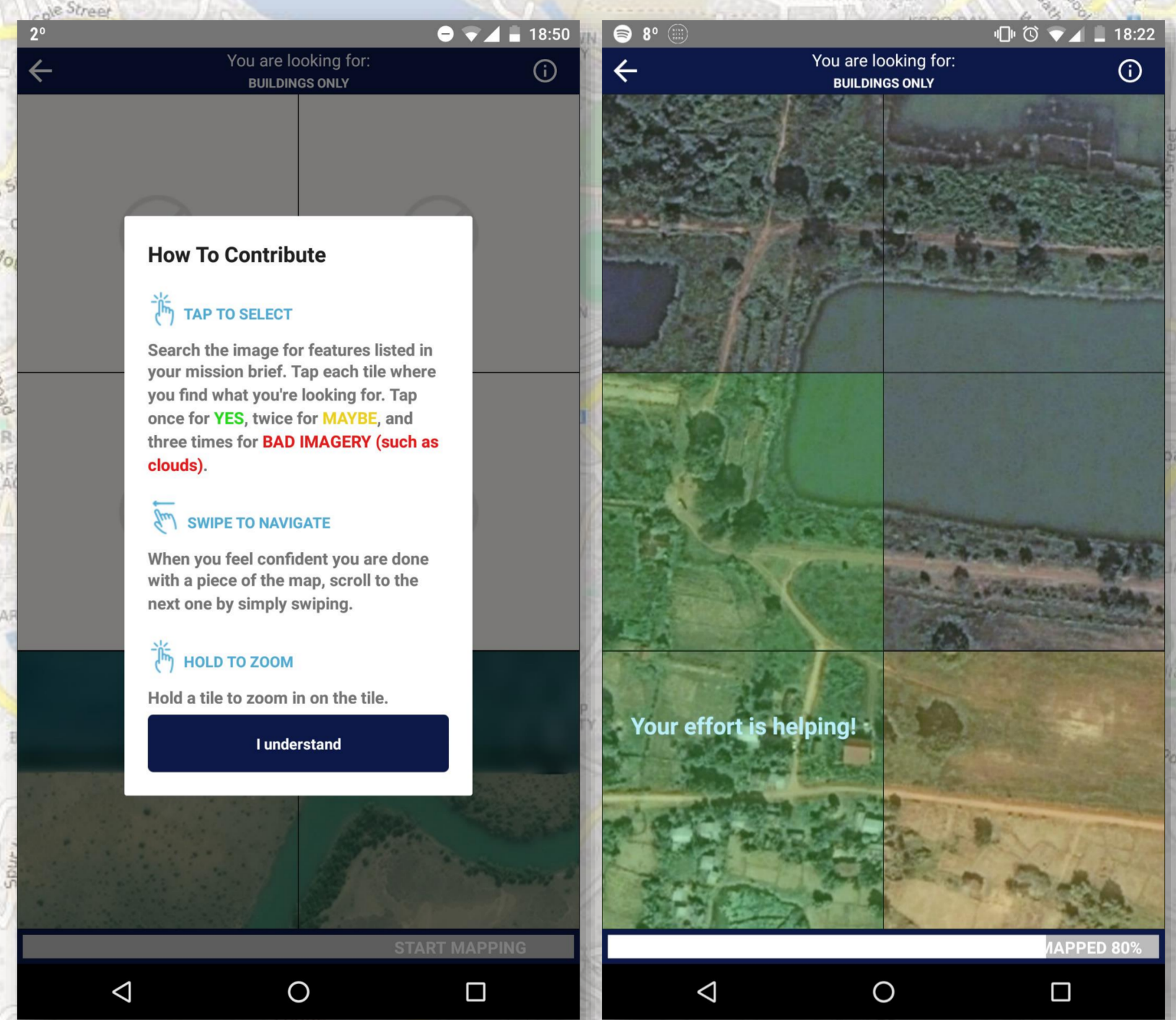


Figure 2. MapSwipe app interface

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.

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.

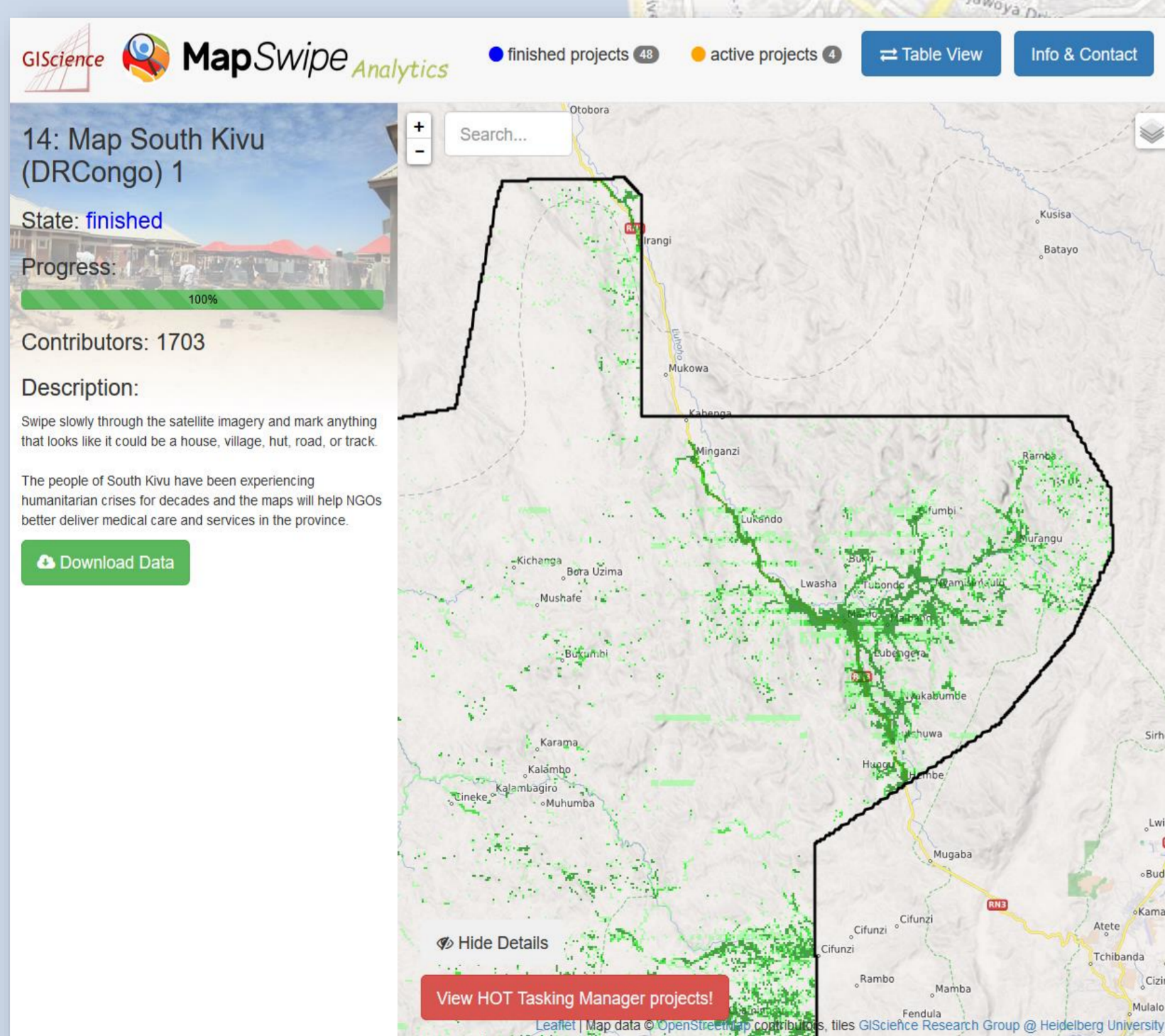


Figure 3. Settlement information from MapSwipe