Using QGIS to map Socio-Cultural Values of Ecosystem Services and Drivers of Change in the Kafue Flats- Zambia

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In collaboration with WWF Zambia

BACKGROUND AND PROBLEM STATEMENT

Ecosystem Services

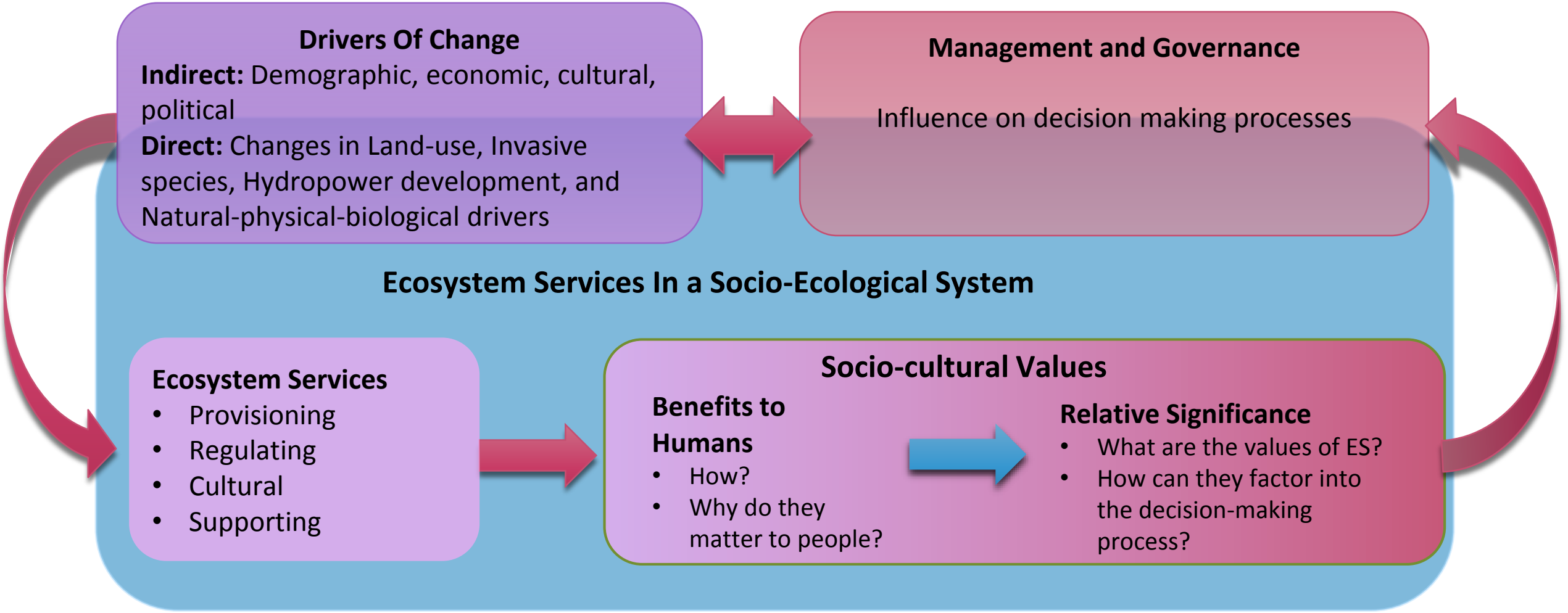
- **Provisioning Services**
  - Food, freshwater, fuel wood, and fiber

- **Regulating Services**
  - Climate regulation, disease regulation, water purification

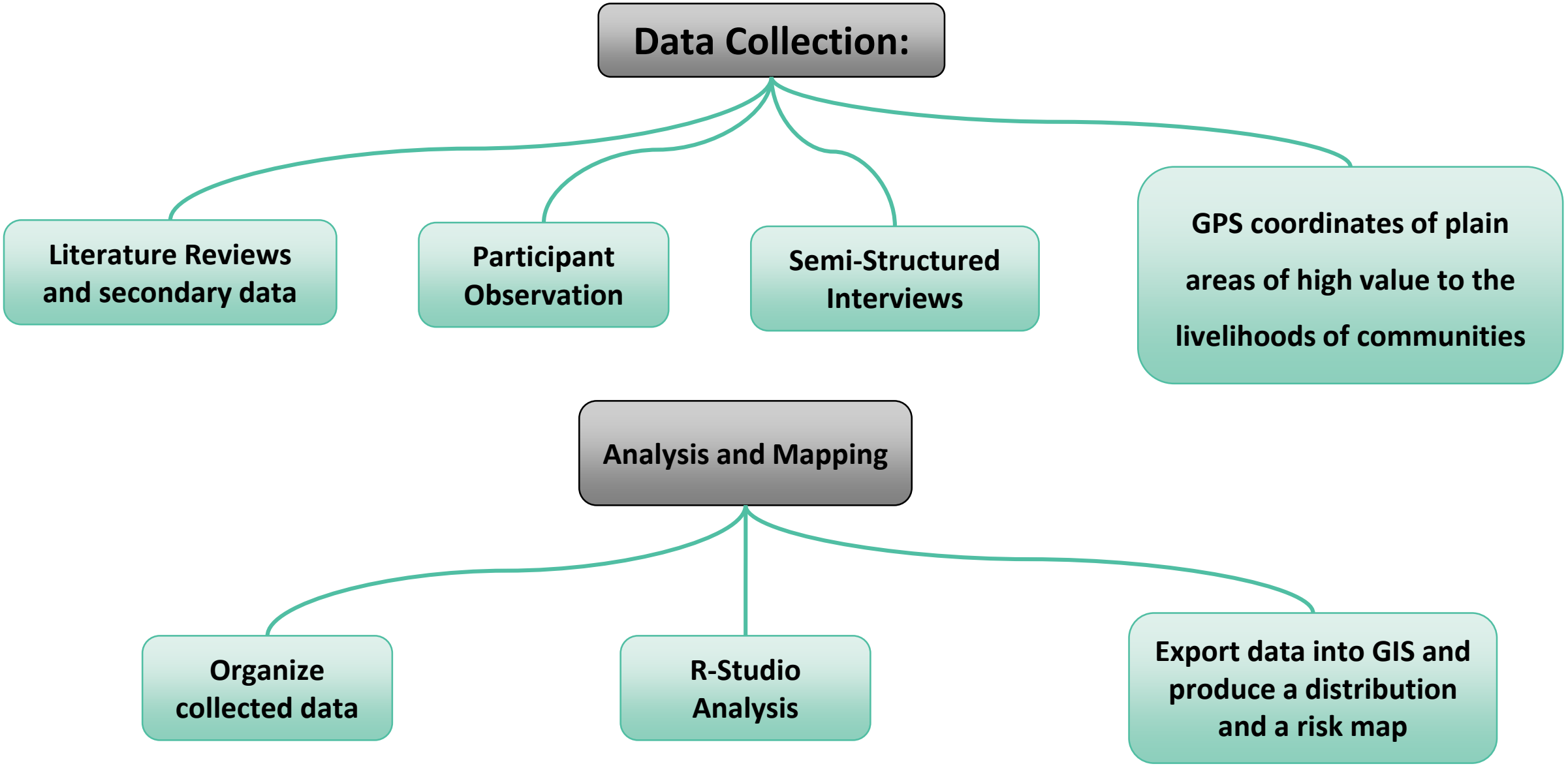
- **Cultural Services**
  - Spiritual and religious aspect, recreation and ecotourism, and cultural heritage

- **Supporting Services**
  - Soil formation, nutrient cycling and primary production

SOCIO-CULTURAL VALUE OF ECOSYSTEM SERVICES

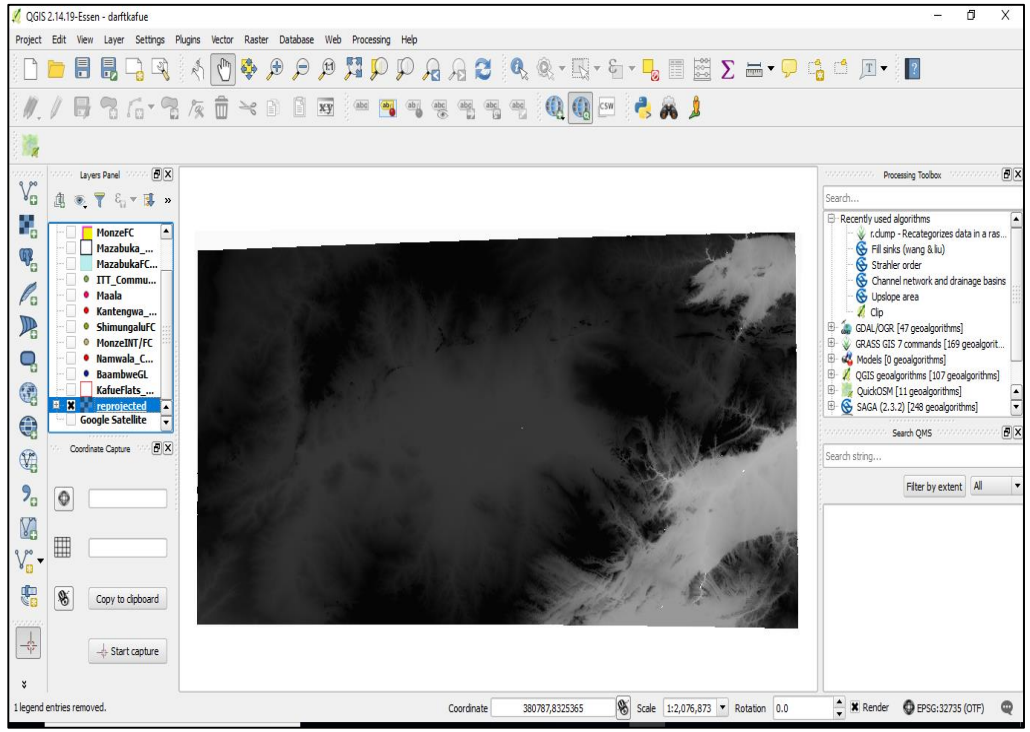


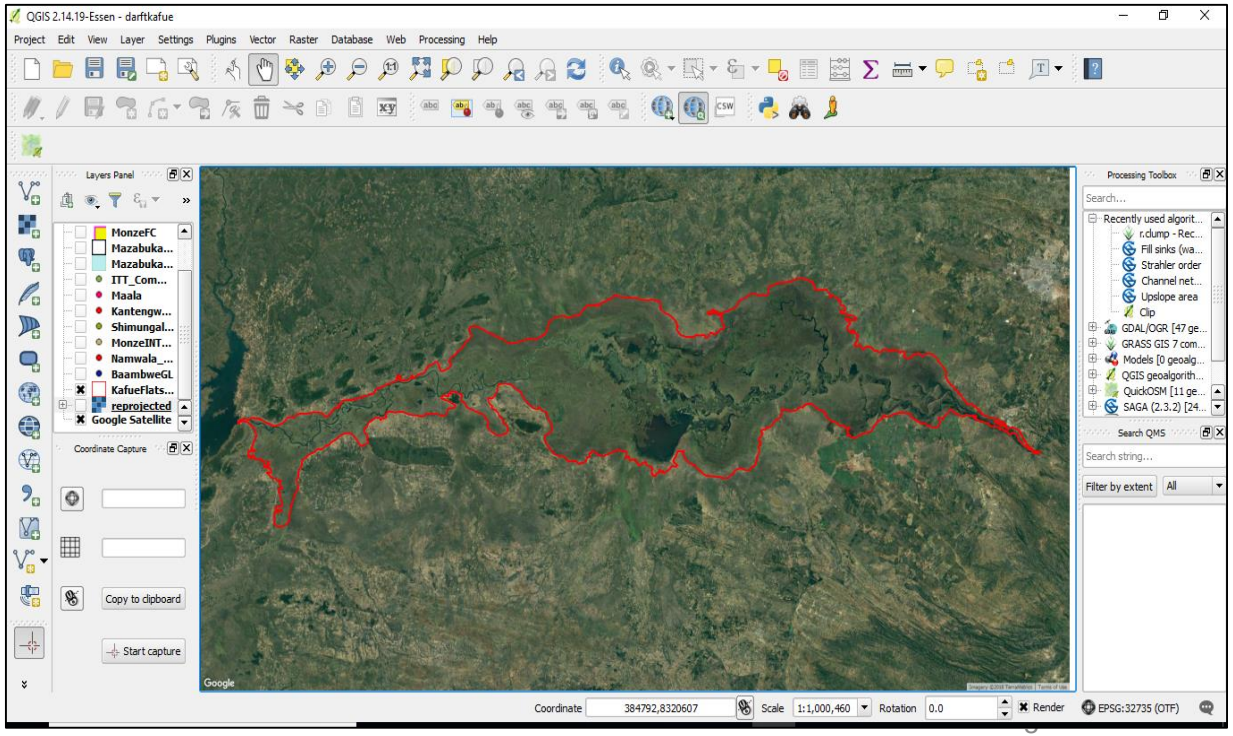
RESEARCH METHODS

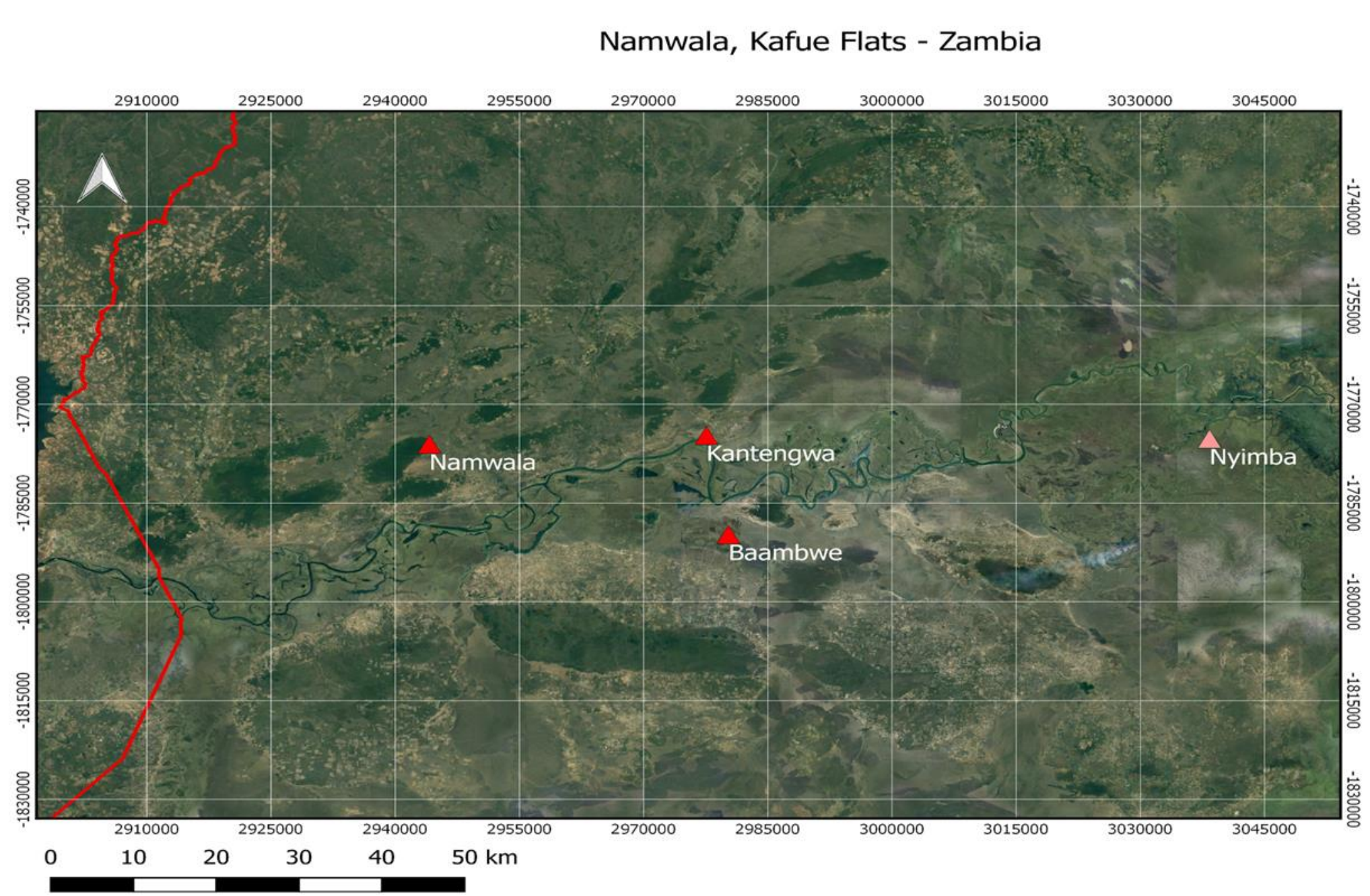


USE OF QGIS PRE-FIELD

- Acquire ***DEMs*** for the Kafue Flats area in Zambia (Source: USGS)
- Identify the proper projection
- Use tools in QGIS to delineate the Kafue catchment

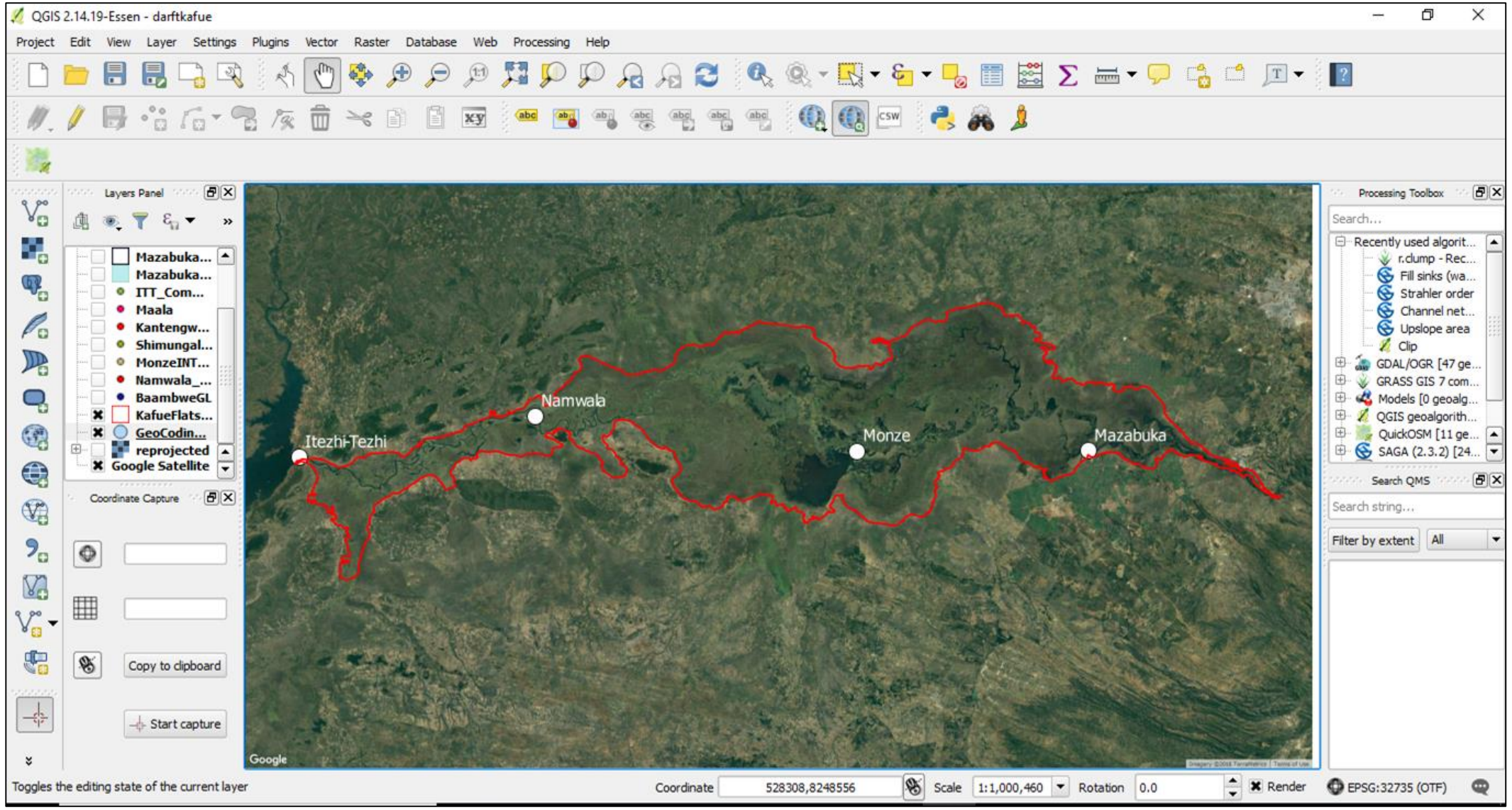




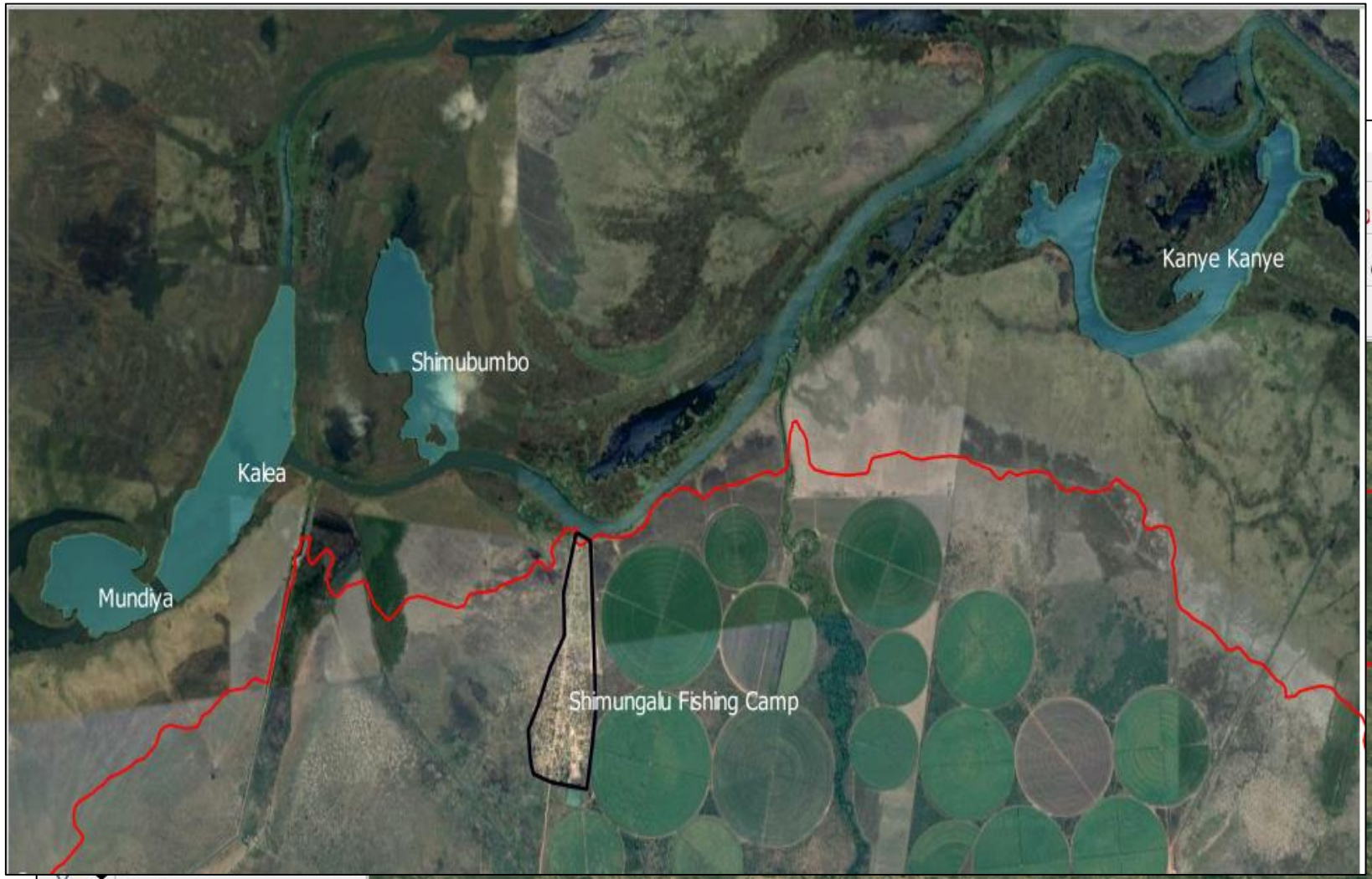


Due to lack in data regarding the Kafue Flats, trying to identify specific study areas was extremely difficult, so based on a previous study done by WWF Zambia in 2015, the following communities were initially chosen

USE OF QGIS POST-FIELD



- **Upload the GPS waypoints into QGIS**
- **Convert the proper projection**
- **Map out the Fieldwork**


Kanye Kanye
Shimubumbo
Kalea
Mundiya
Shimungalu Fishing Camp

USE OF QGIS POST-FIELD

Challenges in the field:

- **Getting access to specific locations was hindered due to some areas being flooded**
- **Feedback from the interviews shows that setting a valuation system based on the importance of certain location is not possible since ALL locations hold a function that is beneficial to the communities which eventually leads to shifting objectives**

USE OF QGIS FOR THE FINAL OUTPUT

- **The raw qualitative data is classified**
- **Analyzed through R-studio to obtain a quantitative format (Excel table)**
- **Export to QGIS and create distribution maps**
- **Water quality and flood extent studies by colleagues regarding the same project will be used to create a risk map that highlights potential future changes to the availability of ES in the Kafue Flats**