The Offline Oriented (TOO)

An introduction presentation to TOO,

an offline available map in a ZIM file.

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The world has a connectivity problem

- The digital divide is still prevalent:
  - Only 53.6% of the world population has Internet access (source: ITU)
- Schools, community centres, etc. may provide Internet…
  - … but simple tasks such as homework upload or an article lookup have to be planned and require an extra trip.
- Even with internet access at home, the connection could be
  - Intermittent and unreliable
  - Slow
  - Metered
  - Shared with many others
  - Censored or limited to a single use case

Kiwix

- Kiwix is a non-profit organization that aims to bridge the digital divide.
- The Kiwix browser can read from ZIM files.
  - ZIM file examples: Wikipedia, Gutenberg books, TED talks, Phet, … etc.
  - Supported devices: PCs, Tablets, Smartphones, Browsers (Raspberry Pi Hotspot), … etc.
- Kiwix's approach integrates well with sneakernets.
  - Sneakernet: sharing files with storage devices.
- Access to knowledge is possible in areas without Internet
  - In rural areas
  - On the sea
  - Etc.
- Kiwix does not provide maps.

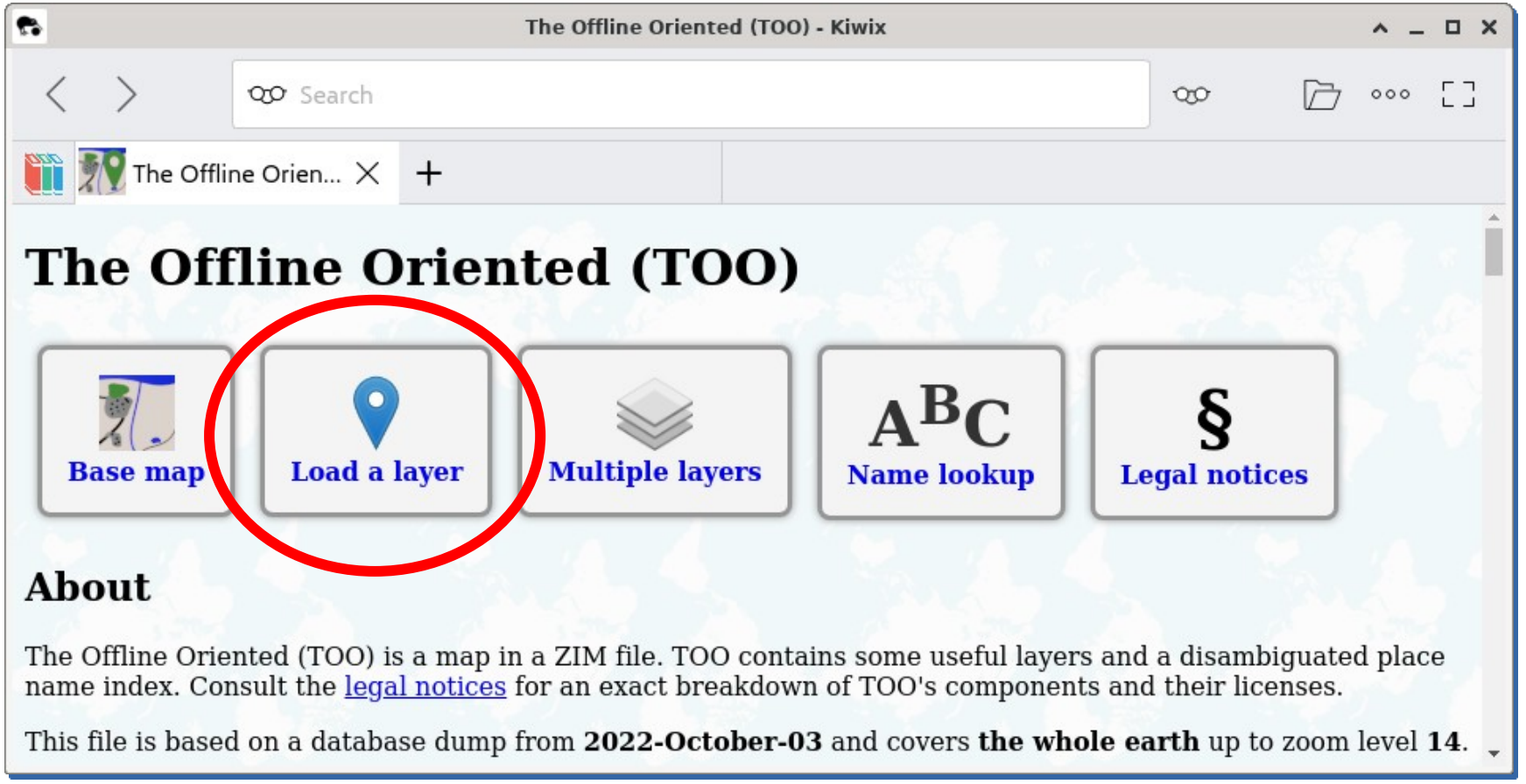
Spatial knowledge

- Spatial data is difficult to represent in textual encyclopedic articles.
- Maps in general contain many helpful, useful and very relevant information pieces.
- But: looking up the nearest hospital, for example, isn't exactly easy.
  - This holds true **with Internet** ...
  - … but even more so **without Internet!**

The Offline Oriented (TOO)

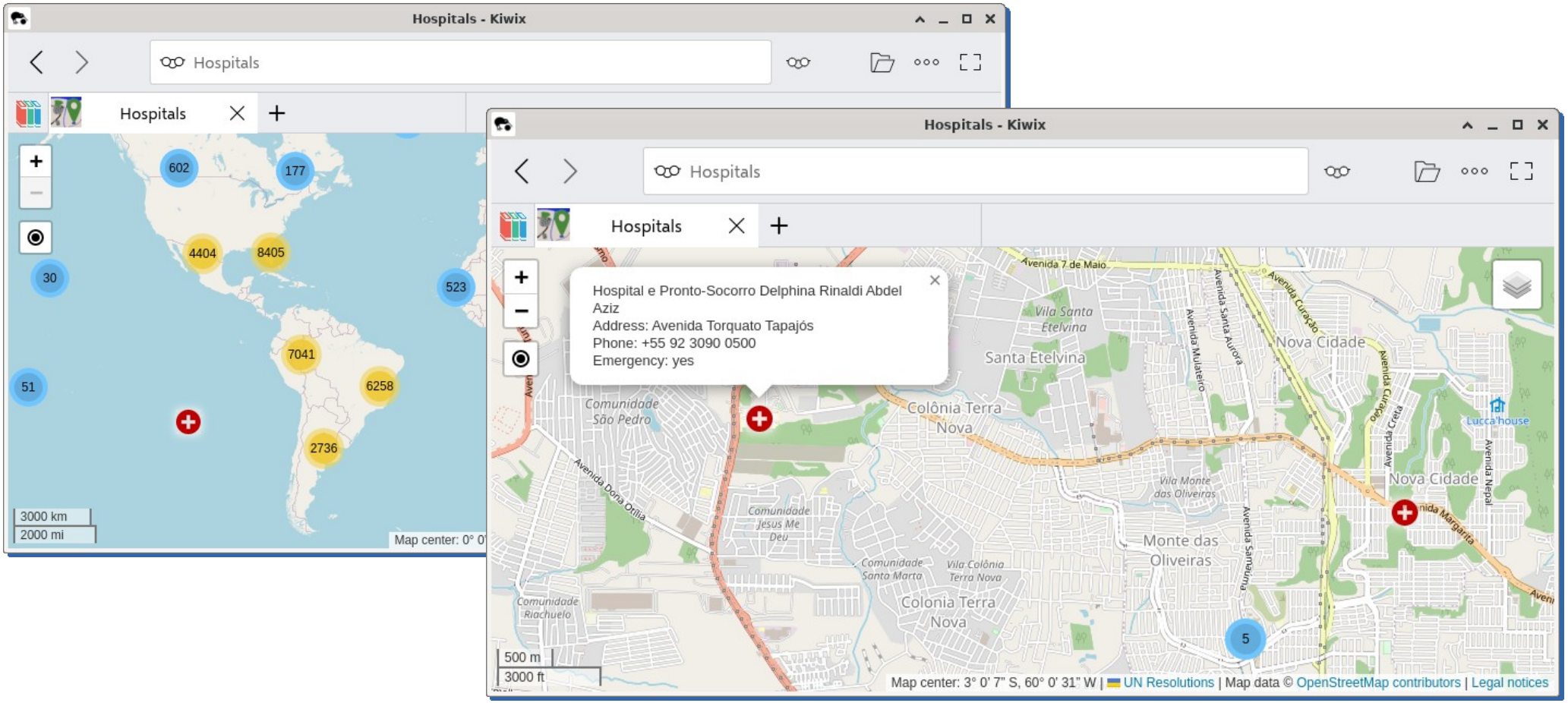
- TOO contains a rendered map in a ZIM file.
- SDG-oriented layers are included.
  - They allow for easy lookups of the nearest features.
  - They contain addresses, telephone numbers, opening hours, … etc.
  - They are searchable.
- Additionally, around 4.5 million place names are included.
  - Both the localized version and the English translation.
- TOO is tailored to old & low-end devices.

Example: Medical emergency (1)

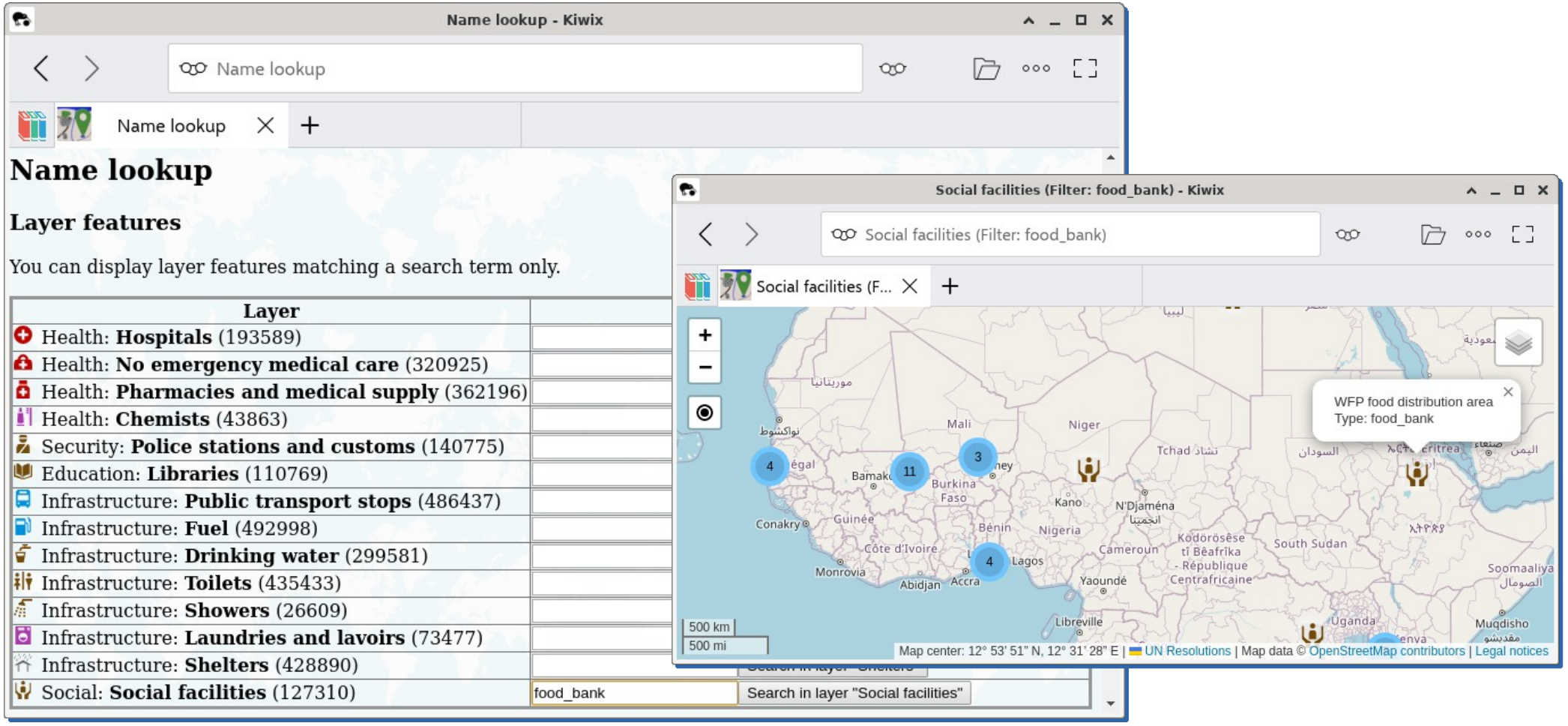


Example: Medical emergency (2)

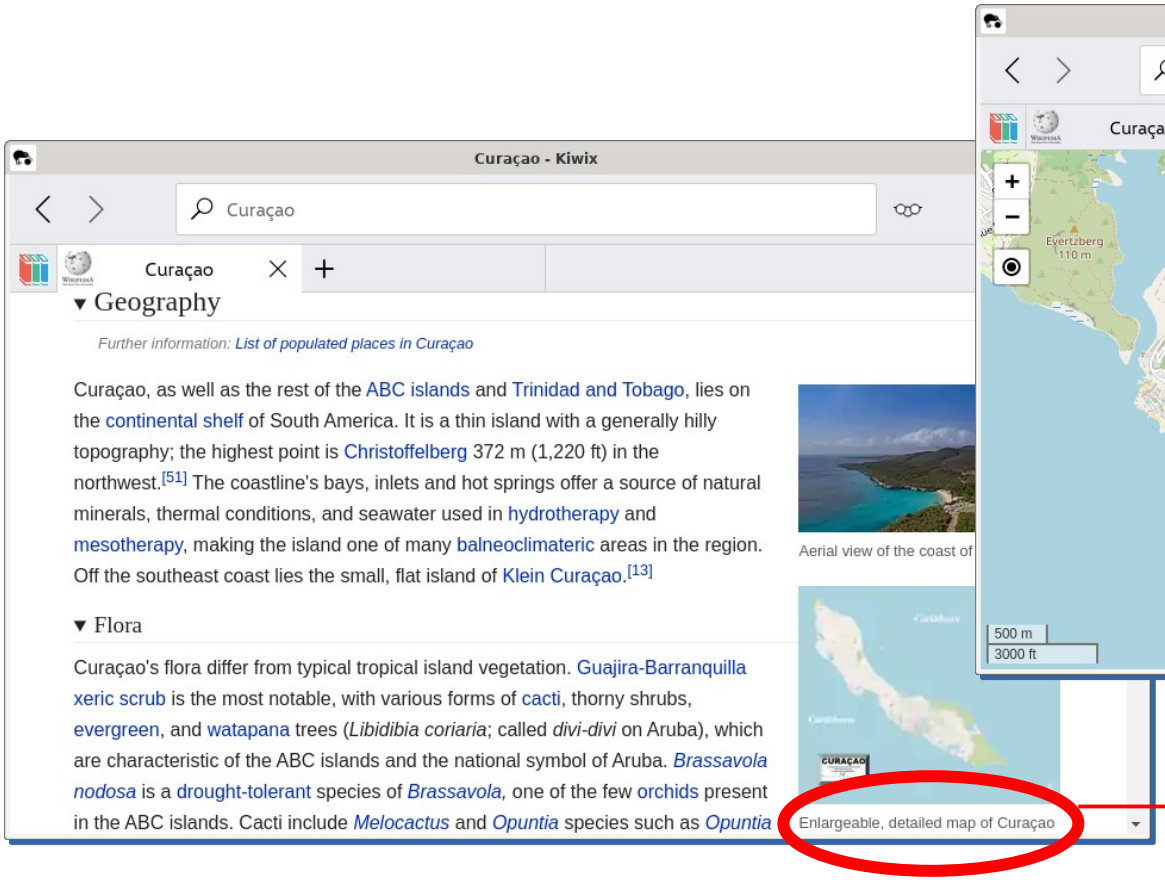
Example: Medical emergency (3)

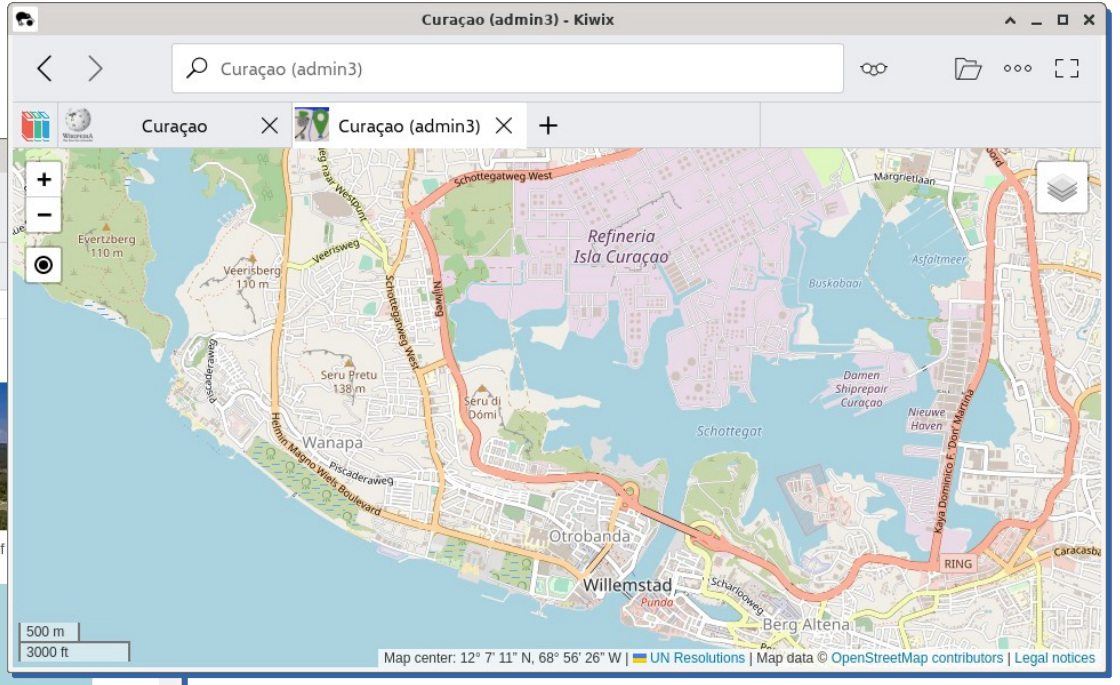


Example: Search in layers



Example: Homework assignment

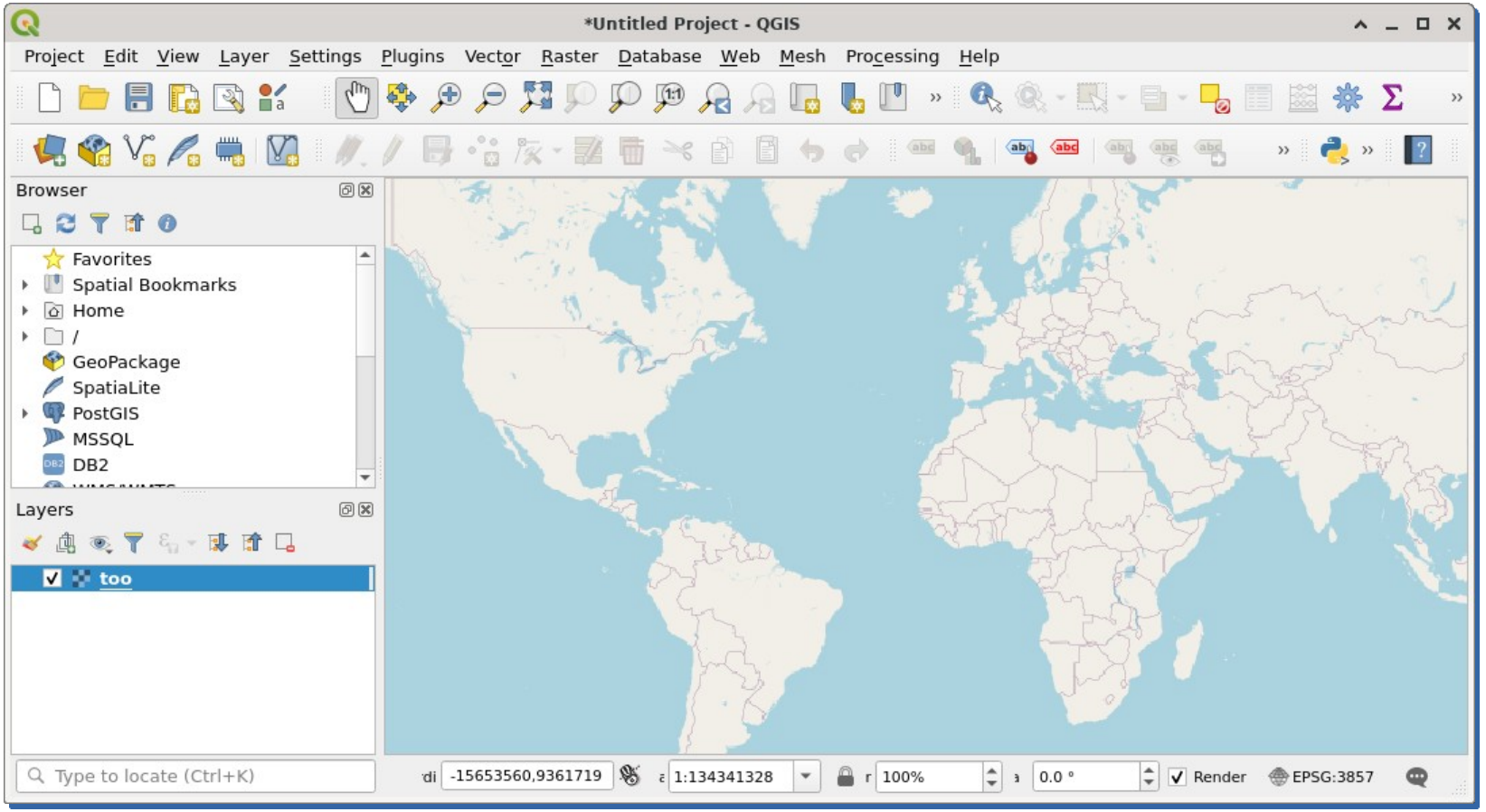




Unfortunately not feasible for the Wikipedia ZIM file...

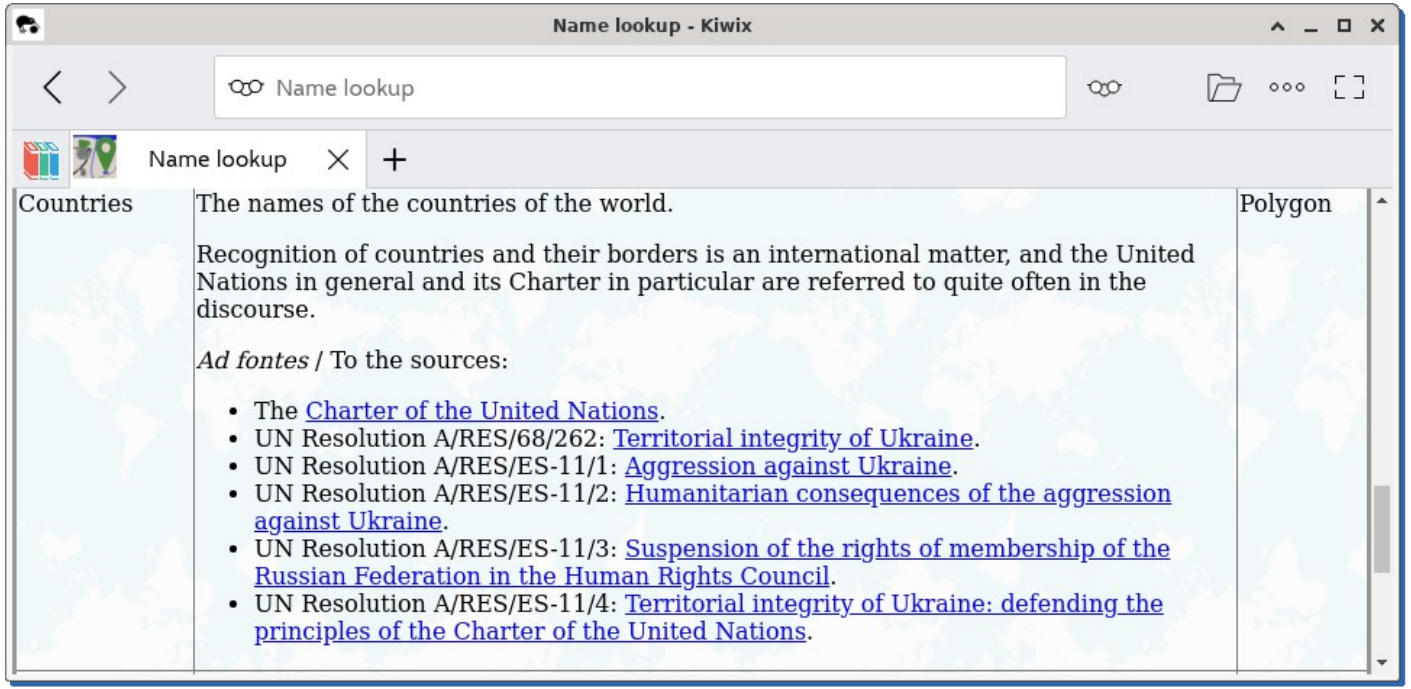
… but possible with TOO.

Example: TOO as a supporting background in QGIS



UN Charter and UN Resolutions

- TOO raises awarness regarding the Russian invasion of Ukraine.



Summary

- TOO empowers humans without internet access with spatial knowledge.
- Those humans with access to TOO can
  - Discover important infrastructure in vicinity.
  - Search for both places and features.
  - Navigate to a place.
  - Perform spatial planning.
- And everything without an Internet connection.