Summary of the options for map visual in Power BI   February 2021

1. Power BI (Basic) Map – BING

https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-map-tips-and-tricks

This type of map is best for basic display. There's not much customization you can do as this is only good for common uses. However, there are certain things you can do to make it look better and fit your purposes like changing the map style and turning it into a heat map.

Pros:

- Easy to use
- Fully supported by the Microsoft Power BI team, Integrated natively into Power BI
- Perfect for basic and common uses (mapping by area or latitude and longitude)
- Includes map themes

Cons:

- Rare geocoding issues giving you inaccurate locations, especially in the typical humanitarian operations target countries
- **No support for custom geographic formats like GeoJson, ESRI Shapefiles, and others**
- **No custom tooltips.**
- No option to use background maps other than those provided by Bing. In the UN operations, these are not not widely used as a stand along product. Users expect better background mapping. Also, these are not always aligned with the UN conventions on sovereignty and international boundaries.

2. Shapemap

https://docs.microsoft.com/en-us/power-bi/visuals/desktop-shape-map

Useful to implement simple single layer polygon maps (no background)

Pros:

- Possibility to create simple choropleth maps
- Supports full Power BI tool tips.
- Supports custom geographic formats: TopoJSON.

Cons:

- Preview implementation, not fully integrated. No background mapping.
- Supports single layers only, so not possible to add additional geodata (such as names of capital cities or other settlements)
- Usually requires some geoprocessing to simplify the map files and convert them into TopoJSON.
  - This can be done quickly and easily at www.mapshaper.org

MapBox

https://docs.mapbox.com/help/tutorials/power-bi/

Pros:

- Widely used across OCHA. Existing 'Official' political boundaries background map. Outstanding customizable background maps. OCHA Power BI tutorial goes through the set-up process.

Cons:

- Complex implementation with custom maps if not familiar with MapBox.
- Will not appear in PDF exports.

ArcGIS Online

Use ArcGIS Maps for Power BI as a **standard user at no cost**.

Or sign in using your ArcGIS Online or ArcGIS Enterprise account to access content from your organization, global demographics, hundreds of geographic layers from the Living Atlas of the World, more base maps, and the ability to view more locations on your maps. More information on this is available here.

https://doc.arcgis.com/en/maps-for-powerbi/

Pros:

- OCHA uses the ESRI ecosystem
- Standard user can still access all content that has been shared publicly on AGOL and can add that content to the map
- Premium users (ArcGis Maps for Power BI Premium App License): **can add custom reference layers to AGOL and then access this content in PBI** https://doc.arcgis.com/en/maps-for-powerbi/get-started/add-custom-reference-layers-to-arcgis.htm
- If **your organization has a shapefile that defines custom boundaries** (water districts, sales districts, or zoning boundaries, for example), **you can publish it as a hosted feature layer in ArcGIS Online and add it as a reference layer to your ArcGIS Maps for Power BI visualization**. To use custom reference layers, they must be publicly shared, hosted polygon feature layers in ArcGIS Online.
- Allows displaying multiple indicators on one map, e.g. colored polygons presenting one, proportional circles another

Cons:

- Complicated licensing for advanced versions; Licensing tied to individual accounts, not good when temporary staff are working.
- Additional licensing costs
- Free version does not allow the use of custom base maps (ie maps created with COD feature services)
- Power BI custom tooltips not supported in the free version
- Not possible to use private ArcGIS Online content. All content to be used in the Power BI visualization must be shared with the wider public.