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Date: 22 May, 2020

SERVIR HKH Services

Empowering women in geospatial information technology

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1. <http://tethys.icimod.org/apps/regionaldrought/>
2. <http://tethys.icimod.org/apps/dmlocal/?c=Nepal>
3. <http://tethys.icimod.org/apps/watershed-afgan/>
4. <http://geoapps.icimod.org/glacier/afglacier/#>
5. <http://tethys.icimod.org/apps/hiwat/>
6. <http://rds.icimod.org/>
7. <http://tethys.icimod.org:7000/thredds/catalog.html>



Tethys Platform

- **Tethys is a platform that can be used to develop and host environmental web apps. It includes a suite of free and open source software (FOSS) that has been carefully selected to address the unique development needs of web apps.**



Tethys Platform Overview

The image displays the Tethys Platform interface, featuring a grid of application icons on the left and a detailed view of the Apps Library on the right.

Applications Grid:

- Snow Inspector
- CUAHSI Time Series Viewer
- NWM Forecast Viewer
- Data Rods
- HydroShare
- Snow Probability Map
- Sherin PHREEQC
- HydroShare Geographic Feature Viewer
- Correlation Plot
- api
- NWM Data Explorer

Tethys Portal Apps Library:

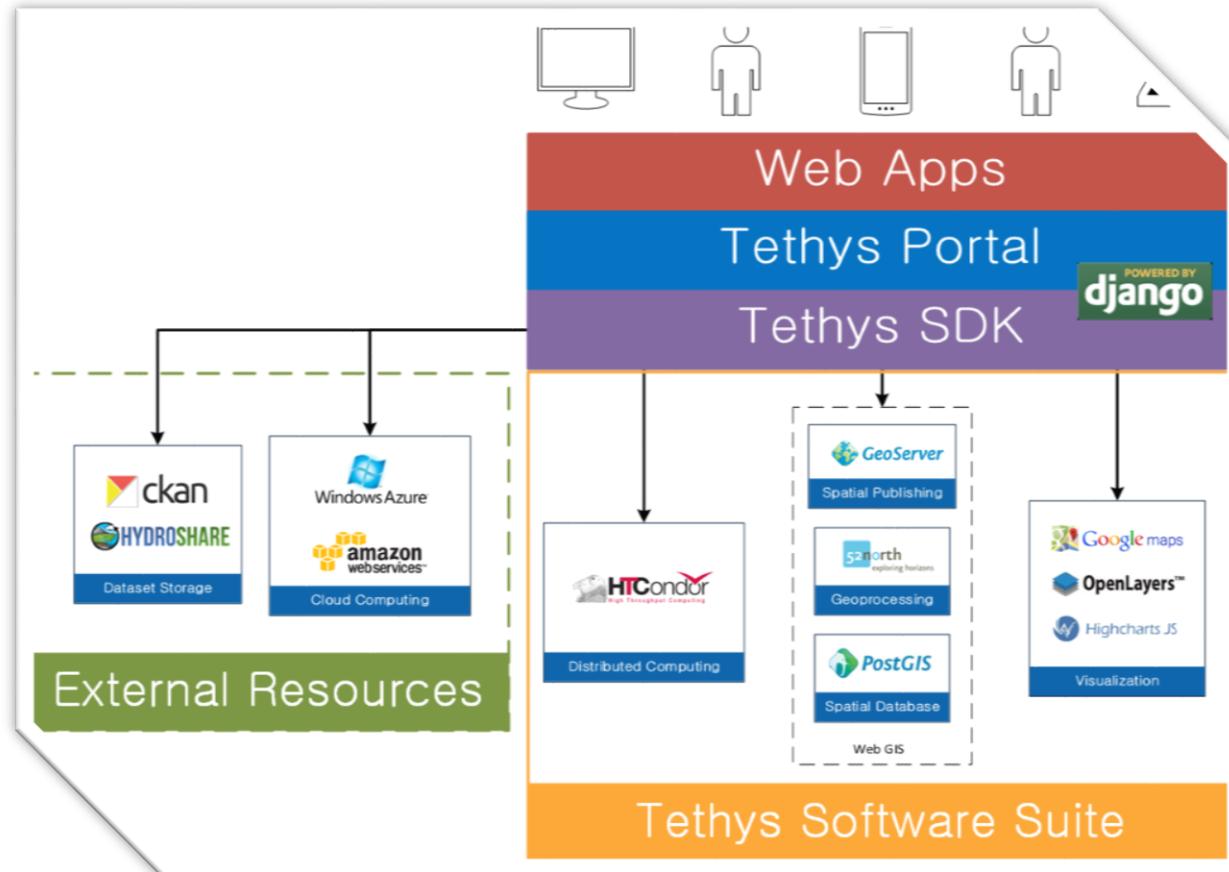
The Apps Library section shows a collection of hydrological and drought monitoring applications, organized into categories:

- All
- ECMWF-Streamflow-Prediction
- Drought-Monitoring
- HIWAT-Streamflow-Prediction
- Hydro-stats-Validation

Applications listed in the library include:

- Streamflow Bhutan
- Streamflow Nepal
- Regional Drought Monitoring System Beta
- Apicenter
- Watershed Characterization for Afghanistan
- Agricultural Drought Watch
- Hydrostats App
- Sidasdataforecast
- Streamflow Prediction for Bangladesh
- HIWAT Streamflow Nepal
- HIWAT Streamflow Bangladesh

Tethys At a Glance



Tethys Powered by Django

django



Tethys Customizable

National agricultural drought watch - Nepal

Map Controls: Nepal, Province, Jumla. Select Periodicity: Dekad (10 Days), 1 Month, 3 Months. Select 4 Indices: Rainfall, Total Evapotranspiration, Soil Moisture, Temperature (min, max). Compute Indices.

Rainfall (mm/day) chart: 19-Oct to 20-Jan. Total Evapotranspiration (mm/day) chart: 2019-Oct to 2020-Jan (Total Evapotranspiration vs Long Term Average).

HIWATI

Select a Data Interval Type: Deterministic. Select a Variable: Dew Point Temperature (C). Coordinates: Latitude 42.77928, Longitude 79.10156. Current Opacity: 0.7. Legend: Dew Point Temperature (C) from -27 to 45.

Streamflow Prediction for Bangladesh

Introduction: Stream flow prediction tool uses ECMWF dataset which is further processed using RAPID model. The model generates 15 days forecast as shown in the chart. Select the point representing the stream in the map to get the prediction chart below.

The following chats can be viewed:

- Mean
- Standard Deviation Range Upper
- Standard Deviation Range Lower
- Outer Range Upper
- Outer Range Lower

Map showing river points across Bangladesh. A specific station is highlighted: Panchgarh station at Karatoya-Atrai-GGH river. The map includes a legend for River Points and a basemap option for OpenStreetMap.

Flow Prediction (cm) vs Date Time (Feb 8 to Feb 18). The chart shows five data series: Outer Range Upper (blue diamonds), Mean (black dots), StdDev Range Upper (green squares), StdDev Range Lower (orange triangles), and Outer Range Lower (blue crosses).

Tethys Administration

The screenshot shows the Tethys Platform Site Administration interface. The top navigation bar includes the Tethys Platform logo, the title "Tethys Platform", and links for "Apps" and "Developer". The main content area is titled "Site Administration" and is organized into several sections:

- Authentication and Authorization:** Includes "Groups" and "Users" with "Add" and "Change" buttons.
- Tethys Compute:** Includes "Clusters", "Jobs", and "Settings" with "Add" and "Change" buttons.
- Tethys Portal:** Includes "Site Settings" with a "Change" button.
- Tethys Services:** Includes "Dataset Services", "Spatial Dataset Services", and "Web Processing Services" with "Add" and "Change" buttons.

A sidebar on the right, titled "Recent Actions", lists recent actions taken by the user, such as "General Settings", "My WPS", and various "default" entries for dataset and spatial services.

At the bottom of the page, there is a copyright notice "Copyright © 2015 Your Organization" and a "Powered by Tethys Platform" footer.



Tethys Apps Library

Tethys Portal

Apps Library

All ECMWF-Streamflow-Prediction Drought-Monitoring HIWAT-Streamflow-Prediction Hydro-stats-Validation

The screenshot displays a grid of 11 application cards, each featuring a blue circular icon with a white triangle and a descriptive title. The cards are arranged in three rows: the first row has four cards, the second row has four cards, and the third row has three cards. The titles of the applications are:

- Streamflow Bhutan
- Streamflow Nepal
- Regional Drought Monitoring System Beta
- Apicenter
- Watershed Characterization for Afghanistan
- Agricultural Drought Watch
- Streamflow Prediction for Bangladesh
- HIWAT Streamflow Nepal
- HIWAT Streamflow Bangladesh
- Hydrostats App
- Sidasdataforecast



Tethys Developer Tools

The screenshot shows a web application interface for 'Developer Tools' on the 'Tethys Platform'. The top navigation bar includes links for 'Apps' and 'Developer'. The main content area features two sections: 'Gizmos' (with a yellow puzzle piece icon) and 'Web Processing Services' (with an orange circular icon containing a map and gear). Both sections include descriptive text and a 'Show me the docs.' or 'Go to tool.' link.

Tethys Platform

Developer Tools

Gizmos

Gizmos are building blocks that can be used to create beautiful interactive controls in Tethys Apps. Using gizmos, developers can add date-pickers, plots, and maps to their templates with minimal coding. Follow the link to learn more.

[Show me the docs.](#)

Web Processing Services

Geoprocessing in Tethys apps can be accomplished using any web processing service (WPS). For convenience, Tethys provides the 52 North WPS service built in. Use this tool to explore the processes that are available and how to parameterize them.

[Go to tool.](#)

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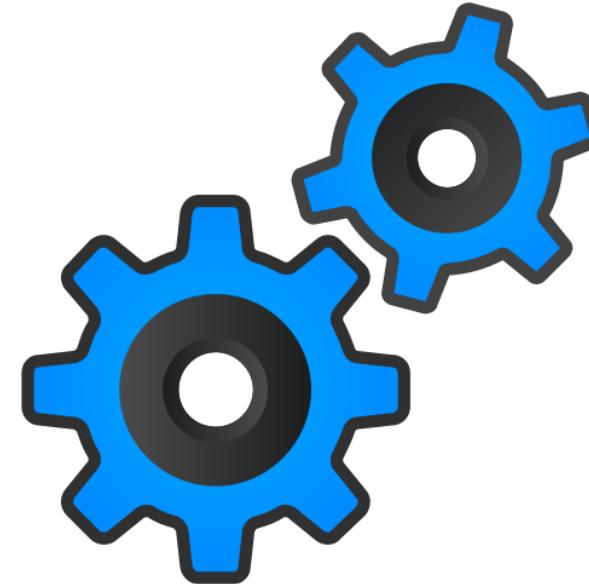
Tethys Spatial Database



Column Types:

- Integer
- Float
- Double
- String
- Raster
- Geometry
- Geography

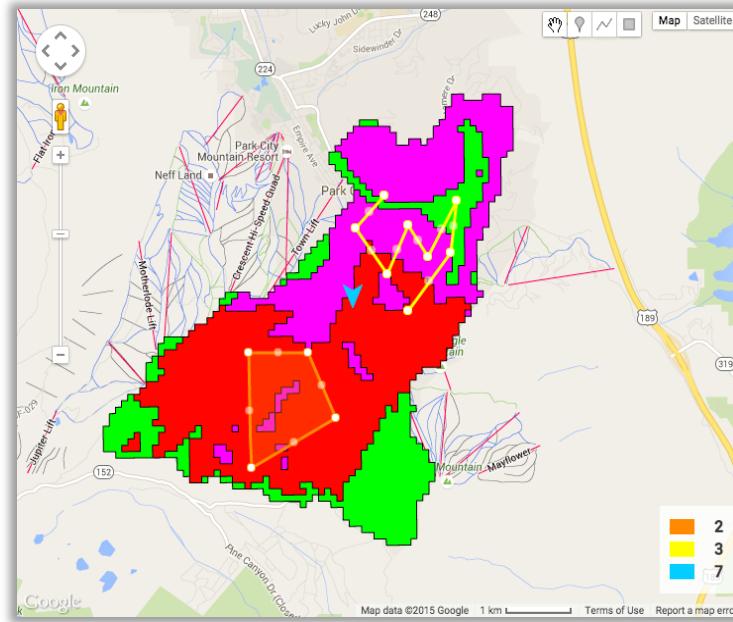
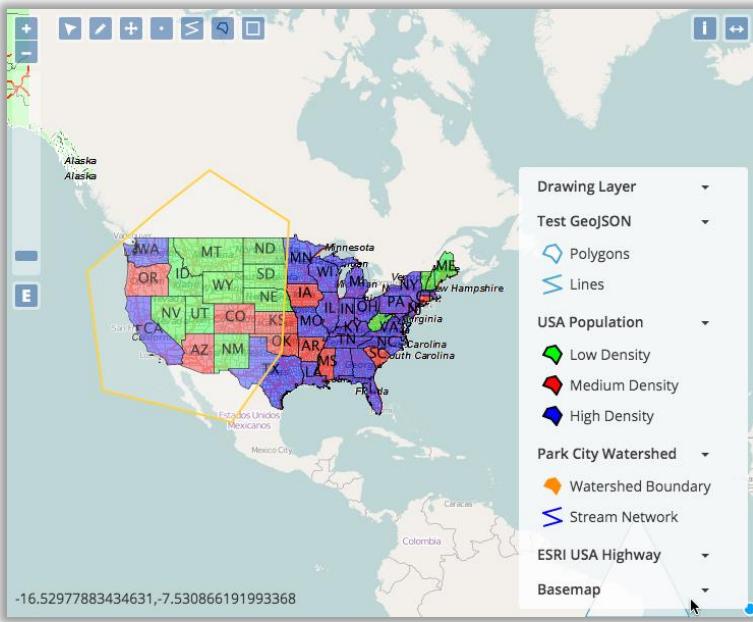
Tethys Geo-Processing



Tethys Spatial Publishing



Tethys Spatial Visualization



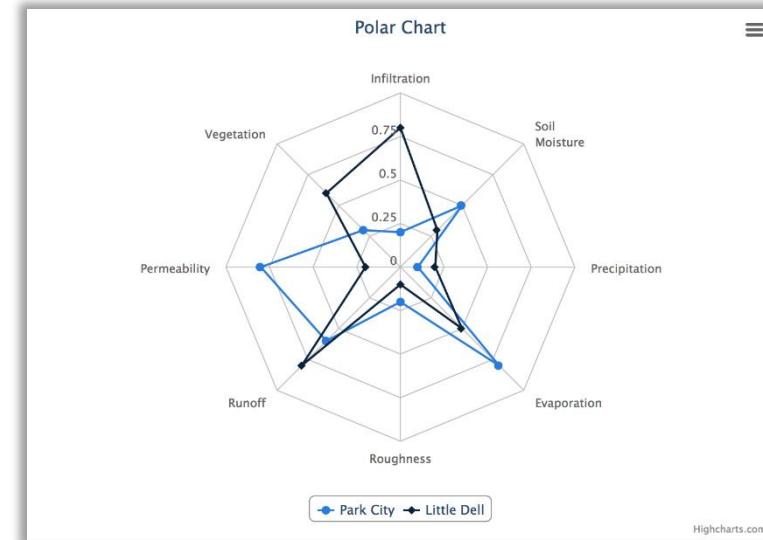
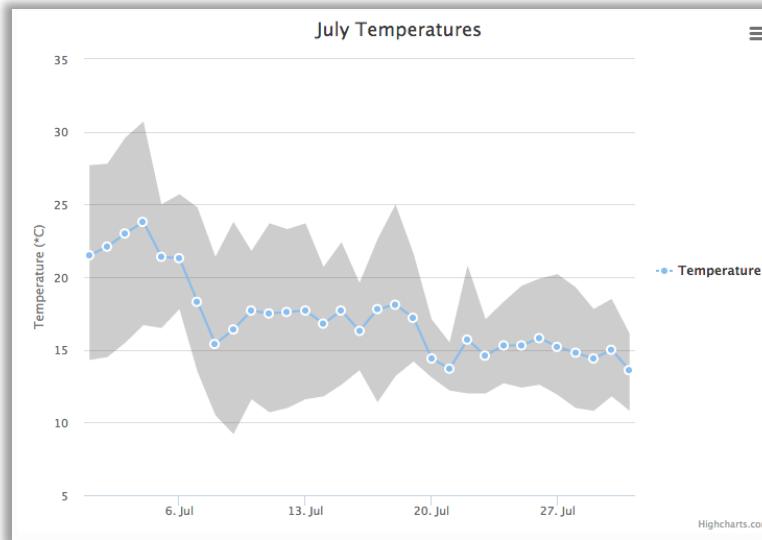
OpenLayers 3.0



Google maps



Tethys Data Visualization



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3. <http://tethys.icimod.org/apps/watershed-afgan/>
4. <http://geoapps.icimod.org/glacier/afglacier/#>
5. <http://tethys.icimod.org/apps/hiwat/>
6. <http://rds.icimod.org/>
7. <http://tethys.icimod.org:7000/thredds/catalog.html>
8. More ... if time permit





Thank you

Protect the pulse

