BiDS25 eodashboard tutorial Playbook

URBAN HEALTH AND MEGACITIES NOTEBOOK	Work with workspaces to create COG and PNG result 60 min

ALL MATERIALS ON https://github.com/eurodatacube/2025-BiDS-EODashboard

1. Work along on the eoxhub workspaces instance for LPS25
2. https://workspace.eodashboardtutorial.hub-otc-sc.eox.at/ + sign via GitHub
    a. Allow access to EOX app (for login)
3. Available tools
    a. Jupyterlab + Conda server
    b. Examples Explorer (notebooks)
    c. File Explorer for accessing connected storage and making files public
    d. Data Editor for publishing to eodashboard
    e. Narrative Editor for Storybuilding
4. Choose **Examples Explorer**, search input or directly select **URBAN HEALTH AND MEGACITIES: THE CASE OF NEW DELHI**
5. and click on rocket icon 
    a. This should clone the notebook repository to your workspace and open notebook
    b. Select kernel **tutorial-dashboards**
6. Work through the notebook with Diego and Sara
7. Produce indicator file outputs
8. The end results of executing the notebook are
    a. RGB 8bit COG blended output file e.g. https://hub-otc-sc.eox.at/user/lubomir-bucek-ml/files/2025-BiDS-EODashboard/notebook/Nightlights/output/Nighttimelevel_Urban_h25v06_2019-2022.tif
    b. Downloaded LST GCOM-W tile for given month e.g. https://hub-otc-sc.eox.at/user/lubomir-bucek-ml/files/2025-BiDS-EODashboard/notebook/Heatwaves/LST.tiff

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Data Editor demo	Use the data editor to integrate a new dataset, and create a PR to the Catalogue Repository
integration of indicator on the Dashboard	Use the preview instance linked to this catalogue to explore the data Create rendering style 45 min

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Work along on https://workspace.eodashboardtutorial.hub-otc-sc.eox.at/

1. The files from your workspace are not available to the public - just for you, if you have the jupyter hub open. For this tutorial, a private s3 bucket is attached to the workspace.
2. Move finished datasets to a new subfolder on the bucket with your username.
3. Show repository https://github.com/ESA-eodashboards/eodashboard-catalog/
4. Show eodashboard.org STAC catalog (final result): https://radiantearth.github.io/stac-browser/#/external/ESA-eodashboards.github.io/eodashboard-catalog/trilateral/catalog.json
5. Search for “Night lights” in “description” (smart search): https://radiantearth.github.io/stac-browser/#/external/esa-eodashboards.github.io/eodashboard-catalog/trilateral/JAXA_Nighttimelevel_Urban/collection.json
6. Show differences in “visualisation” of metadata and why is it important to “set the metadata keys” https://eodashboard.org/explore?indicator=NTLU

Create Nightlights Dataset Submission to EODashboard

1. Go to Workspace **Data Editor**
2. Login via GitHub, Authorize git-clerk GitHub app on your personal repositories
3. **Start New Session** button on the top right - name of session = branch name
    a. will create a GitHub fork of eodashboard catalog repo for your user
4. Create new Dataset submission for Nightlights dataset
5. Show Wiki https://github.com/eodash/eodash_catalog/wiki
    a. Show supported dataset endpoint types - Raw type
6. Fill in information
    a. First tab (generic info)
    b. Resource - **COG source as Name**, Bbox": [-80, 40, -70, 50], 1 Time Entry, Time, Assets (Identifier, URL)
7. Open **File Browser** tool to create temporary public URLs to individual COG files at workspace.eodashboardtutorial.hub-otc-sc.eox.at/workspace-ui
8. Make them public via <info> icon on top right corner and **show “Presigned URL”**.
9. https://github.com/ESA-eodashboards/eodashboard-catalog/pull/83 - describe JSON additions
    a. Preview should appear on the right side + can go to session details (GitHub PR)
    b. Show deployment of catalog

        i. Via stac browser https://radiantearth.github.io/stac-browser/#/external/esa-eodashboards.github.io/eodashboard-catalog/pr-preview/pr-83/trilateral/catalog.json
        ii. Via eodash preview instance https://eodash.github.io/preview-instance/?stacEndpoint=https://esa-eodashboards.github.io/eodashboard-catalog/pr-preview/pr-83/trilateral/catalog.json
10. Add new metadata fields (DOI) to see the changes
    a. Take inspiration for fields in original dataset https://github.com/ESA-eodashboards/eodashboard-catalog/blob/main/collections/NTLU_JAXA_Nighttimelevel_Urban.json

Create LST Dataset Submission to EODashboard and style it

1. Create new Dataset submission for LST dataset
2. Fill in only essentials for General and Resource tab

Following approach is only temporary until we fully integrate our prototype of Style Editor

3. Create empty style json file in for example root folder (no schema will be used)
4. Show OpenLayers raster style expressions documentation
5. Show additional eodash specific configs https://eodash.org/data.html#raster-data
6. Create a magma style with color, legend, jsonform and variables which has UI slider to select min-max range for cutoff based on https://raw.githubusercontent.com/lubomir-bucek-ml/eodashboard-catalog/refs/heads/lubomir-bucek-ml/bids-2025-dry-run-20250926/GCOM_style_cutoff.json
7. To generate color values from a few popular colorscales in a quick way, we can use this simple app
8. Save the style file and check the result in session catalog preview

Introduce eodash template repositories for local development

If there is time

1. Client instance template

https://github.com/eodash/eodash-instance-template

2. Catalog instance template with CI

https://github.com/eodash/catalog-template

3. Openly deployed preview instance for WIP catalogs

https://eodash.github.io/preview-instance/?stacEndpoint=https://esa-eodashboards.github.io/eodashboard-catalog/pr-preview/pr-83/trilateral/catalog.json

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Narrative Editor DEMO	Show the storytelling tool that will be used in the hands-on part 45 min

Content for the story:

tinyurl.com/EOstorytelling

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Work along on https://workspace.eodashboardtutorial.hub-otc-sc.eox.at/

1. Show a final story in eodash created by the story editor
    a. **Nighttime Stories:** https://eodashboard.org/story?id=nighttime-lights
    b. **Urban Health in Megacities:**
    SHOW)
    https://eoxhub-workspaces.github.io/preview-narratives/story/?storyurl=https%3A%2F%2FESA-eodashboards.github.io%2Feodashboard-narratives%2Fpr-preview%2Fpr-82%2FDEMO_BiDS25.md
    c. Repository for MD files
    SHOW) https://github.com/ESA-eodashboards/eodashboard-narratives
    d. All stories seen on https://eodashboard.org homepage
2. Open supporting document:
    Open) material to create the story
3. Move to workspace **Narrative Editor:**
    Open) https://workspace.eodashboardtutorial.hub-otc-sc.eox.at/
4. **Start New Session** button on the top right - name of session = branch name
5. Select **Create Narrative** - id = filename, title = first text header
    URL to documentation - self standing EOxElement (open source),
    Open)https://eox-a.github.io/EOxElements/?path=/story/elements-eox-storytelling--markdown-with-editor scroll through it to show
    a. Talk about enhanced markdown with custom additions
    b. Generic markdown features (link, bold, import/export), resize editor, scroll through content on left/right
    c. Map tour/Map view show parameters, ##as=<html-element-name>
6. Recreate “trimmed down” story
7. Export the Map / map tour from dashboard
    https://eodash.github.io/preview-instance/?stacEndpoint=https://esa-eodashboards.github.io/eodashboard-catalog/pr-preview/pr-83/trilateral/catalog.json preview via

    button

8. Share with people outside: https://github.com/ESA-eodashboards/eodashboard-narratives/pulls