

Master class “Space Fire Unit”



Description: the master class is a designation of approaches to the practical identification of active fires in various natural territories based on the analysis of Earth images from space, geospatial data and data from open sources of information. One of the practical blocks for managing territories.

Age and the number of participants: 13+

Age 13+. Adults (teachers and just wishers) are invited - 5 persons. Work in groups adults + children (1+3) is possible, total 15 children and 5 tutors (20 people). Work only with children or only with adults is also possible.



Duration: 3 hours

Technical requirements: separate room, computer, a projector, Internet access, computer class (minimum 10 computers, 20 working places, 1 computer for 2 persons, better a computer for each person) with Internet access via cable connection (not WiFi!!) - for participants, working tables and chairs, a sufficient number of outlets for connecting computers and personal laptops of participants, the possibility to darken the room for viewing the presentation (blackout curtains / blinds).



*Contra fire strips in action.
Fire in eucalyptus forest. Australia.*

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 **Developed skills and competencies:** participants get opportunity to work with the real geospatial data and to use them for fires monitoring. The combination of different types of data and the variety of sources for their receipt provides a good tool not only for assessing environmental impact, but also for making managerial decisions, especially if it concerns the work with geodata and satellite images received in real time (or close to it).

What the participant will be able to know and understand after passing the master class:

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- to understand the difference between satellite images of high, medium and low spatial resolution and choose the right data for the task;
 - to be able to work with open geoportals and sites and download from there the data necessary for work;
 - identify existing fires on satellite images of different resolutions and give an approximate estimation of the area of active fires;
 - to make a comparative analysis of burned-out areas on different territories;
 - to qualitatively assess the speed of fire spread;
 - to understand the need to use relevant weather data to predict the fire hazard of the territory;
 - to recognize the obligatoriness of using high-resolution operational satellite imagery to make the right administrative and managerial decisions in assessing, forecasting and preventing fires, primarily for forest and prairies territories;
 - Participant will get the basis and technological skills, needed for the realization of design work to monitor the fire situation.



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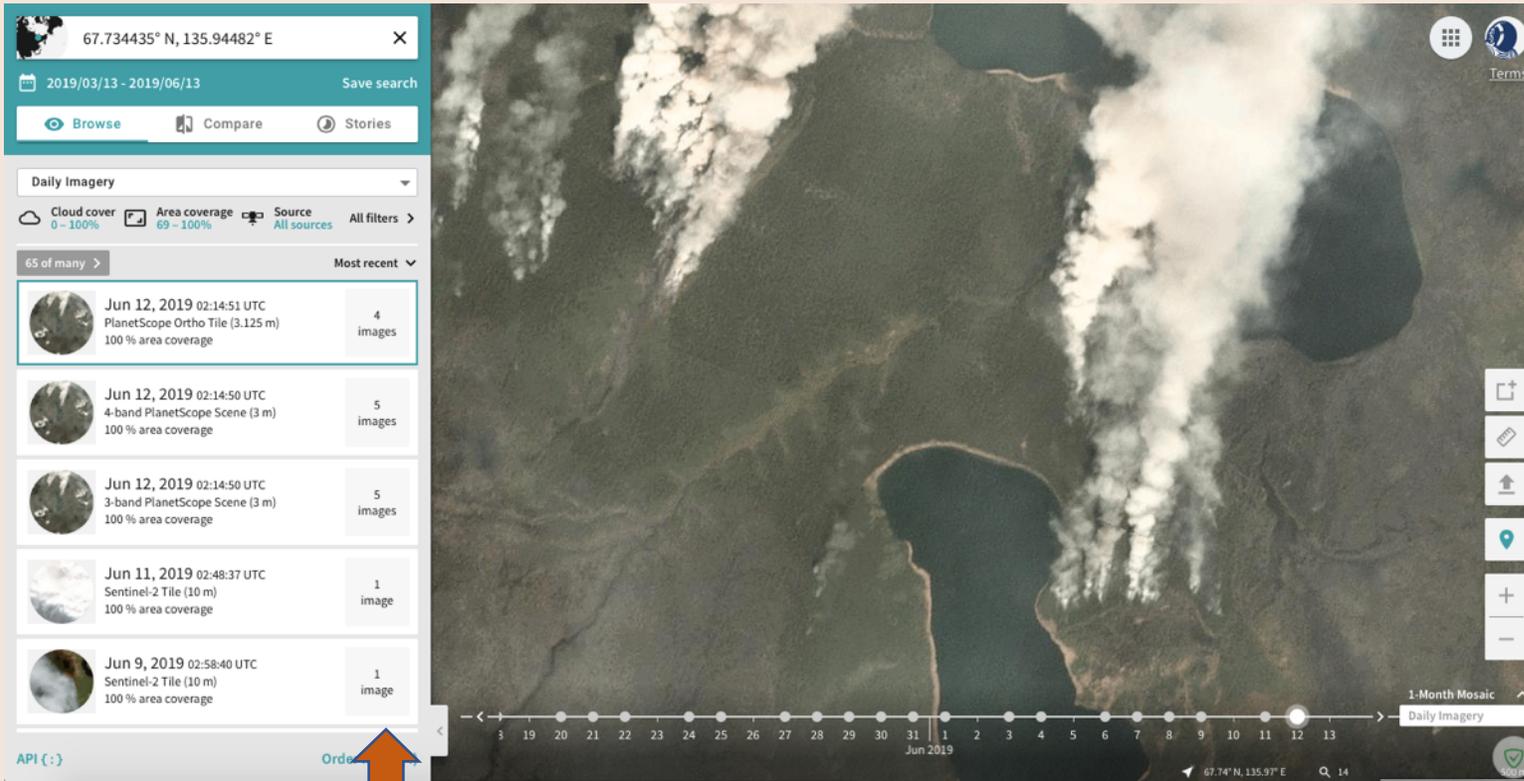
Master class summary: participants will create a map of the active points of fires and / or burned out forest areas for the territory chosen for the master class. They will also compare this map with the neighboring territory, close in area, as well as with the situation a year ago in both areas.



Fire situation in the Krasnoyarsk Territory (Tura, Vanavara, Kodinsk) according to MODIS. Acquisition date: 21.07.2019.

Source: open portal worldview.earthdata.nasa.gov

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Fire situation near the Amydai Lake,
Verkhoyansk municipal district, Yakutia.
Acquisition date: 12.06.2019. Source:
portal [planet.com](https://www.planet.com)

Fire situation in Vilyui ulus of Yakutia
(Vilyuysk, Kyssyl-Syr) according to MODIS.
Acquisition date: 22.07.2019. Source:
open portal worldview.earthdata.nasa.gov



