The role of RPAS for wetlands

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It is important to quantify and understand the trends in the focus of scientific attention in order to avoid, among other inefficient innovations, the "wheel reinvention" syndrome. (*Pan R. K. et. al. 2018*).

Elements of theoretical and / or methodological originality, with a high degree of validity, represent the source of scientific progress (*Shibayama, S. et. al. 2020*)

RPAS capabilities are able to revolutionize natural resource management, remote sensing and many other areas such as the advent of GIS three decades ago. (*Watts A. et. al. 2012*)

Drones, UAV, UAVS, UAS, RPA, RPAS, UA ....

UAV (Unmanned Aerial/Aircraft/Airborne Vehicle etc.)
- the most present acronym on the internet and on *WebofScience*

Drone - *French Directorate for Civil Aviation (DGAC)*

UAS (Unmanned Aerial/Aircraft/Airborne System)

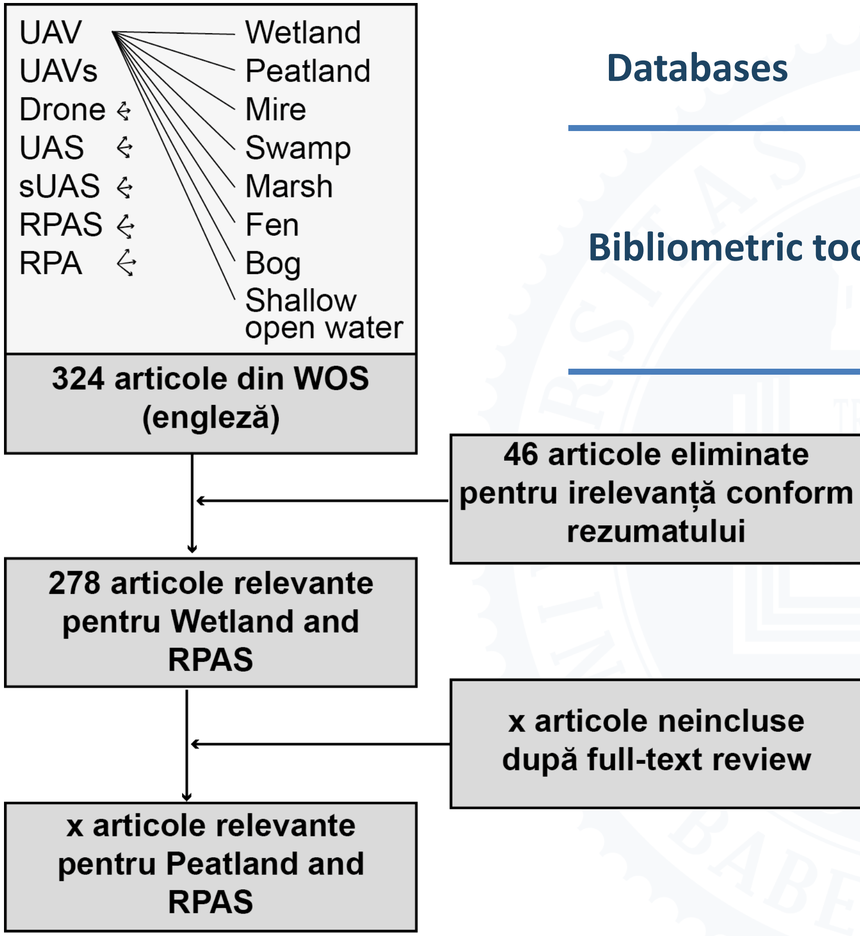
- spaţiul anglo-saxon *Civil Aviation Authority (CAA – United Kingdom); Federal Aviation Administration (FAA – United States); European Aviation Safety Agency (EASA)*

RPAS (Remotely Piloted Aircraft System)

- **international aviation-related agencies** *International Civil Aviation Organization (ICAO), Eurocontrol, the European Aviation Safety Agency (EASA), the Civil Aviation Safety Authority (CASA – Australia), Civil Aviation Authority (CAA – New Zealand), BeUAS* (*a*)

RPAS - flying certain types of UAVs require a lot more skill (think years of training) than anything you could buy in a store.
- taking control of an RPA requires more than simple handheld controls. You can't eat a sandwich and control one of these at the same time! (*b*)

“Not only the Internet shattered the market for ideas, but a myriad of brains have been shattered.“ (*Mircea Mihăieș, 2022*).

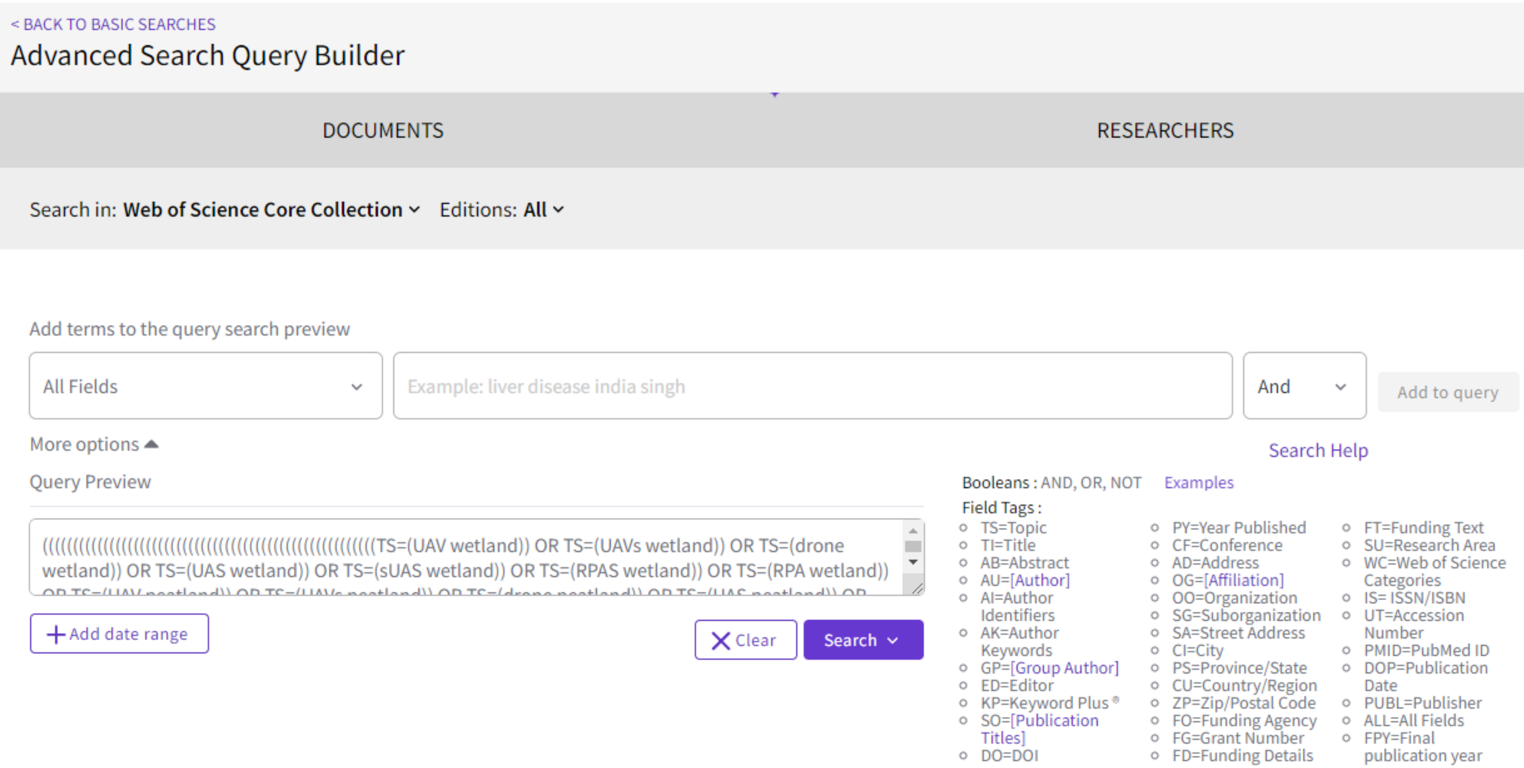


Methodological workflow

Databases	Web of Science Group, Scopus, Google Scholar
Bibliometric tools	VOSviewer, bibliometrix, CiteSpace

Predatory /fake journals (PFJs) – they have become a threat to science (Grudniewicz A. et. al. 2019)

Where and how you look makes the difference between a good result and a mediocre one!



(((TS=(UAV wetland)) OR TS=(UAVs wetland)) OR TS=(drone wetland)) OR TS=(UAS wetland)) OR TS=(sUAS wetland)) OR TS=(RPAS wetland)) OR TS=(RPA wetland)) OR TS=(UAV peatland)) OR TS=(UAVs peatland)) OR TS=(drone peatland)) OR TS=(UAS peatland)) OR TS=(sUAS peatland)) OR TS=(RPAS peatland)) OR TS=(RPA peatland)) OR TS=(UAV mire)) OR TS=(UAVs mire)) OR TS=(drone mire)) OR TS=(UAS mire)) OR TS=(sUAS mire)) OR TS=(RPAS mire)) OR TS=(RPA mire)) OR TS=(UAV swamp)) OR TS=(UAVs swamp)) OR TS=(drone swamp)) OR TS=(UAS swamp)) OR TS=(sUAS swamp)) OR TS=(RPAS swamp)) OR TS=(RPA swamp)) OR TS=(UAV marsh)) OR TS=(UAVs marsh)) OR TS=(drone marsh)) OR TS=(UAS marsh)) OR TS=(sUAS marsh)) OR TS=(RPAS marsh)) OR TS=(RPA marsh)) OR TS=(UAV fen)) OR TS=(UAVs fen)) OR TS=(drone fen)) OR TS=(UAS fen)) OR TS=(sUAS fen)) OR TS=(RPAS fen)) OR TS=(RPA fen)) OR TS=(UAV bog)) OR TS=(UAVs bog)) OR TS=(drone bog)) OR TS=(UAS bog)) OR TS=(sUAS bog)) OR TS=(RPAS bog)) OR TS=(RPA bog)) OR TS=(UAV "Shallow open water")) OR TS=(UAVs "Shallow open water")) OR TS=(drone "Shallow open water")) OR TS=(UAS "Shallow open water")) OR TS=(sUAS "Shallow open water")) OR TS=(RPAS "Shallow open water")) OR TS=(RPAS "Shallow open water")

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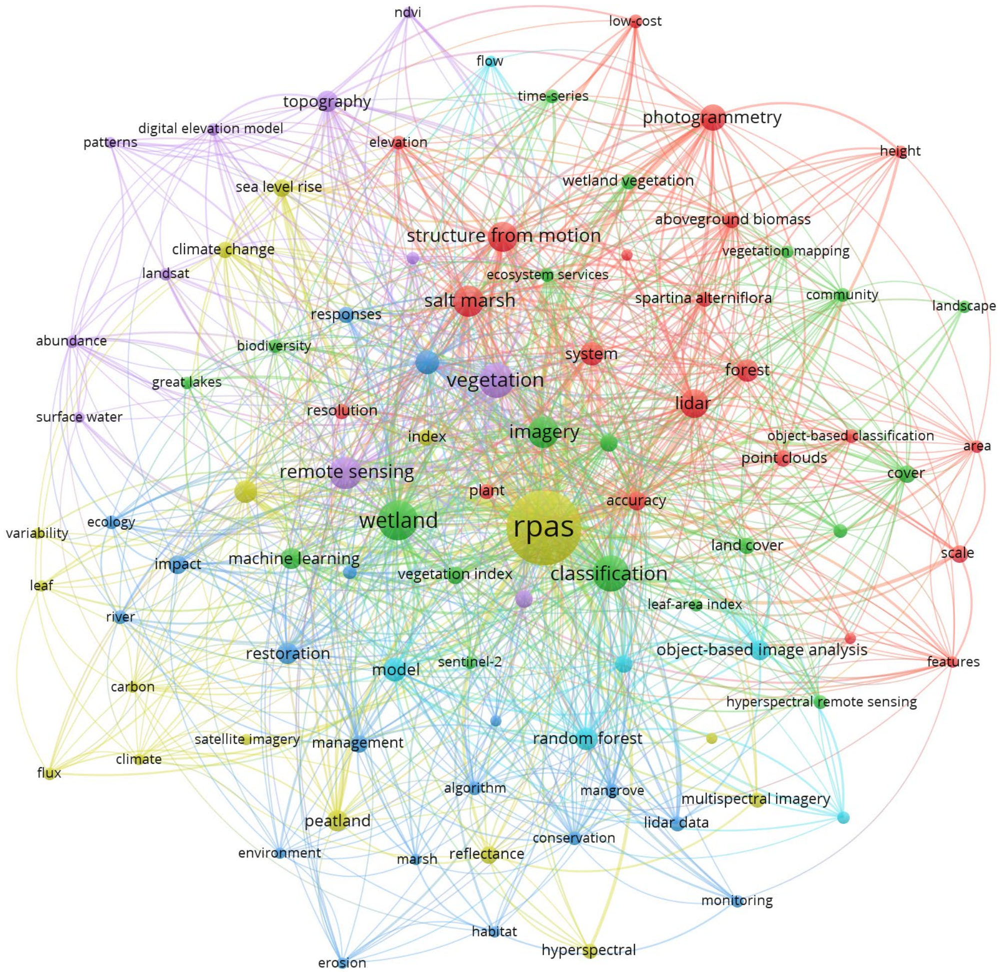
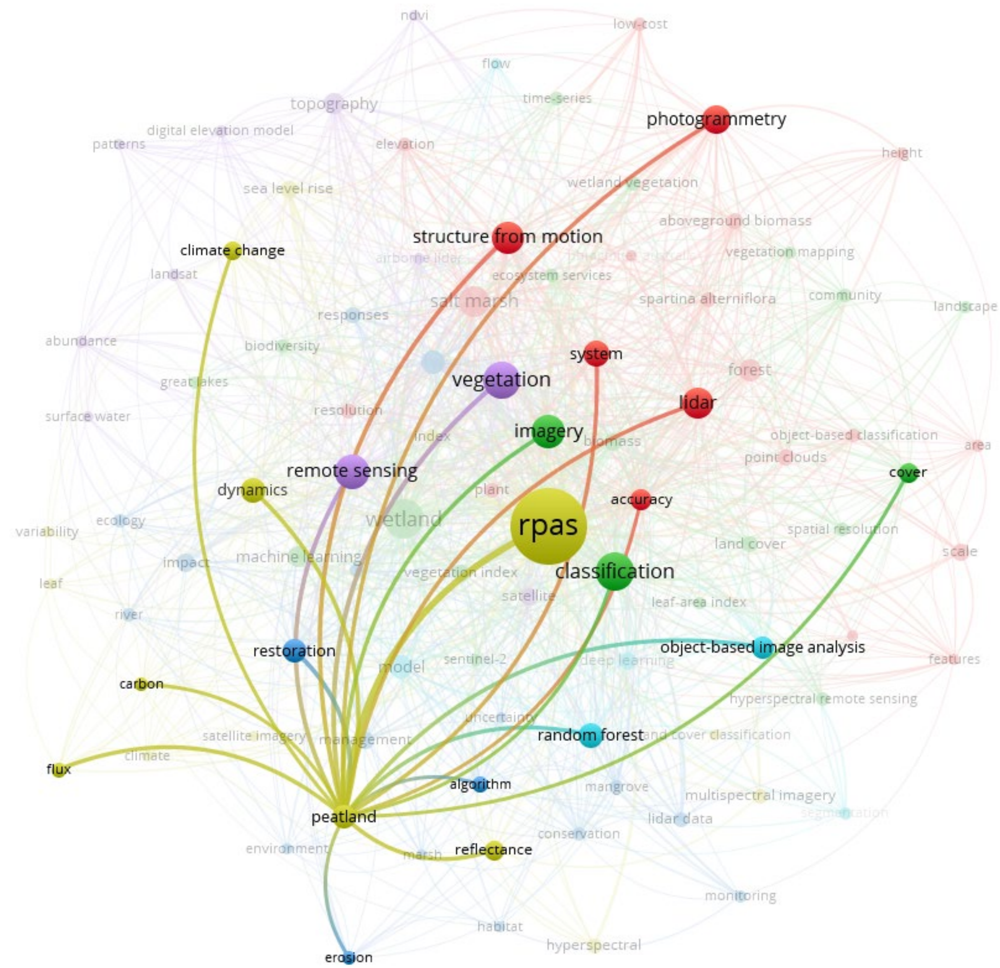
Co-occurrence all keywords – bibliometric analysis in VOSviewer





Cluster 4: carbon, climate, climate-change, dynamics, flux, hyperspectral, index, land cover classification, leaf, multispectral imagery, peatland, reflectance, RPAS, satellite imagery seal level rise, variability

RPAS replaced all references to this type of infrastructure (eg UAVs, drones, UASs);
In the case of “plural duplications” of the type (eg system / systems), the singular form has been retained.
In the case of “spelling duplications” of the type (phragmites australis / phragmites-australis), the hyphen-free version was preferred.

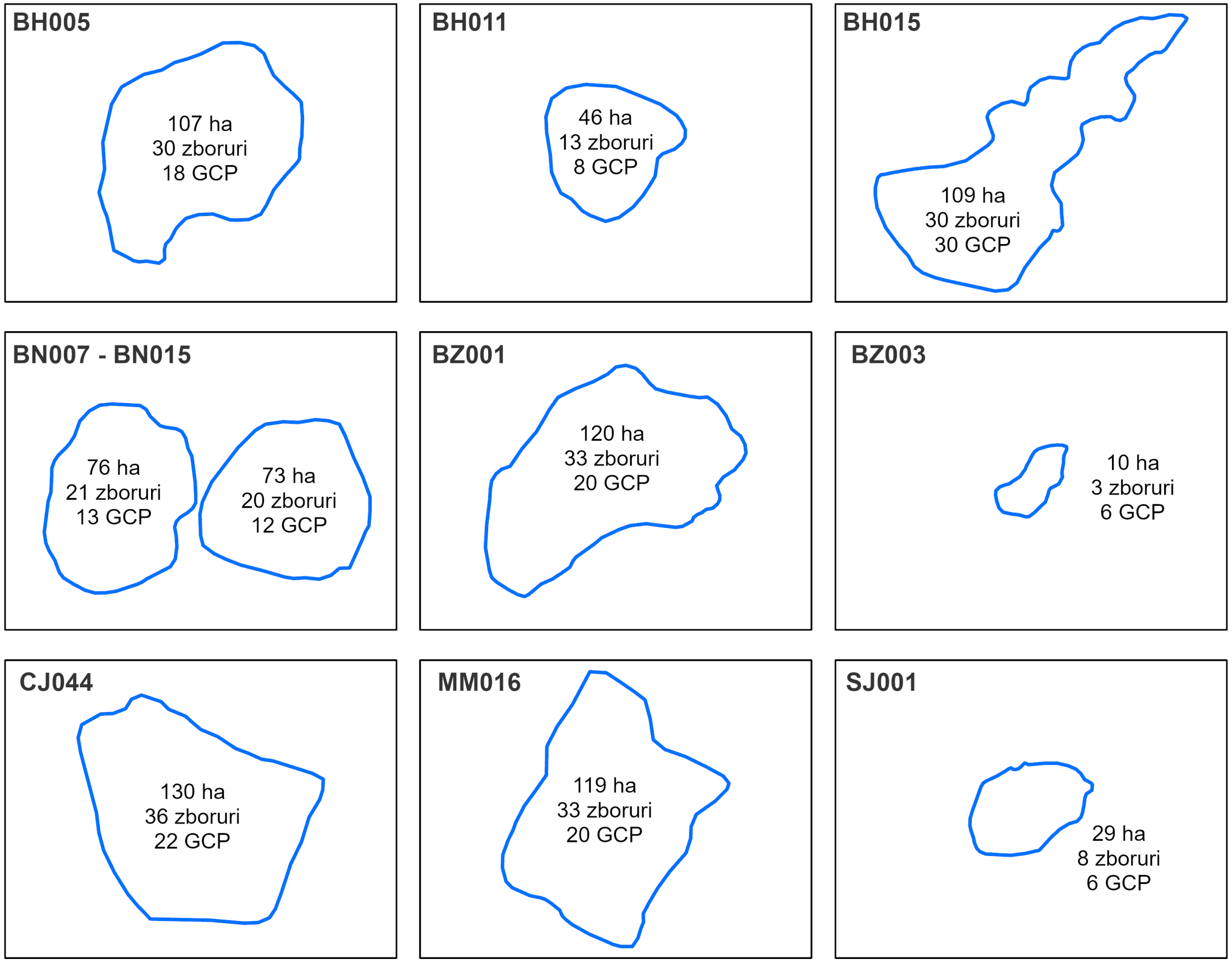
We write, but to be published ....?

Nr.	Reviste	Articole	Citări	Medie citări
1	Remote Sensing	59	726	12.3
2	Drones	13	108	8.3
3	Remote Sensing of Environment	9	195	21.7
4	International Journal of Remote Sensing	7	117	16.7
5	Wetlands	6	76	12.7
6	***GIScience & Remote Sensing****	***5***	***153***	***30.6***
7	***ISPRS Journal of Photogrammetry and Remote Sensing****	***5***	***122***	***24.4***
8	Journal of Unmanned Vehicle Systems	5	27	5.4
9	Sensors	5	125	25
10	Estuaries and Coasts	4	2	0.5
11	***IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing****	***4***	***4***	***1***
12	Remote Sensing in Ecology and Conservation	4	19	4.8
13	Ecological Engineering	3	23	7.7
14	European Journal of Remote Sensing	3	61	20.3
15	Frontiers in Marine Science	3	35	11.7
16	International Conference on Unmanned Aerial Vehicles in Geomatics	3	38	12.7

Quartile in the field in which the journal is best rated according to the non-influence score (AIS)

Journals that are also in the field of Physical Geography

”Recognizing” flight missions



2x DJI Phantom 4 Pro v2, 13 x acuulatori, 3 x stații de încărcare (the infrastructure belongs to the Centre for Regional Geography, UBB)

The initial overflight of the monitoring areas associated with the peatlands will be done at **100 m altitude, 90% Side Overlap, 90% Front Overlap**

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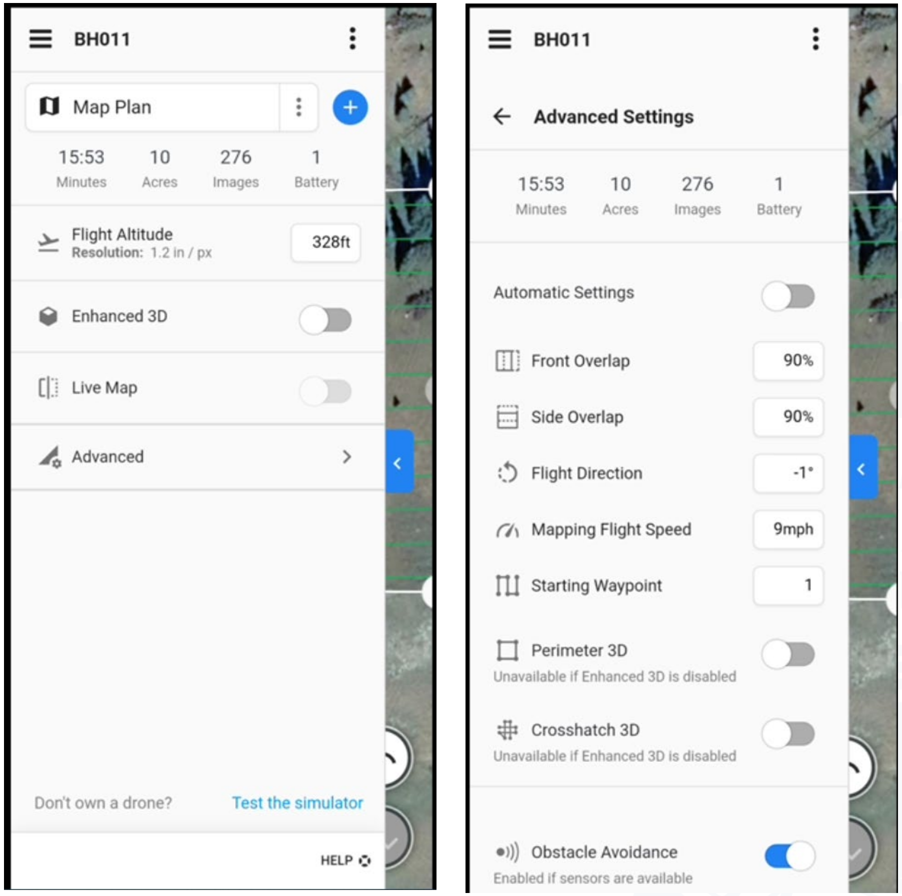
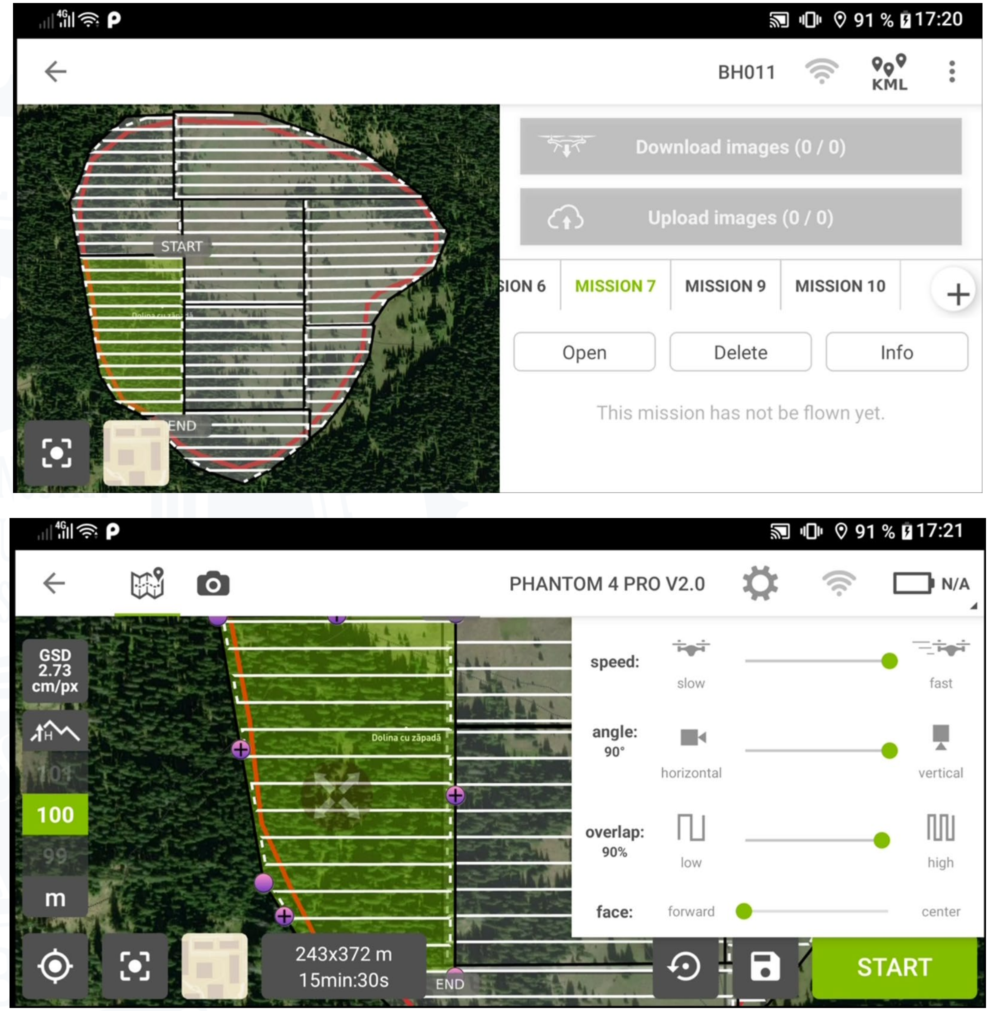
”Recognizing” flight missions

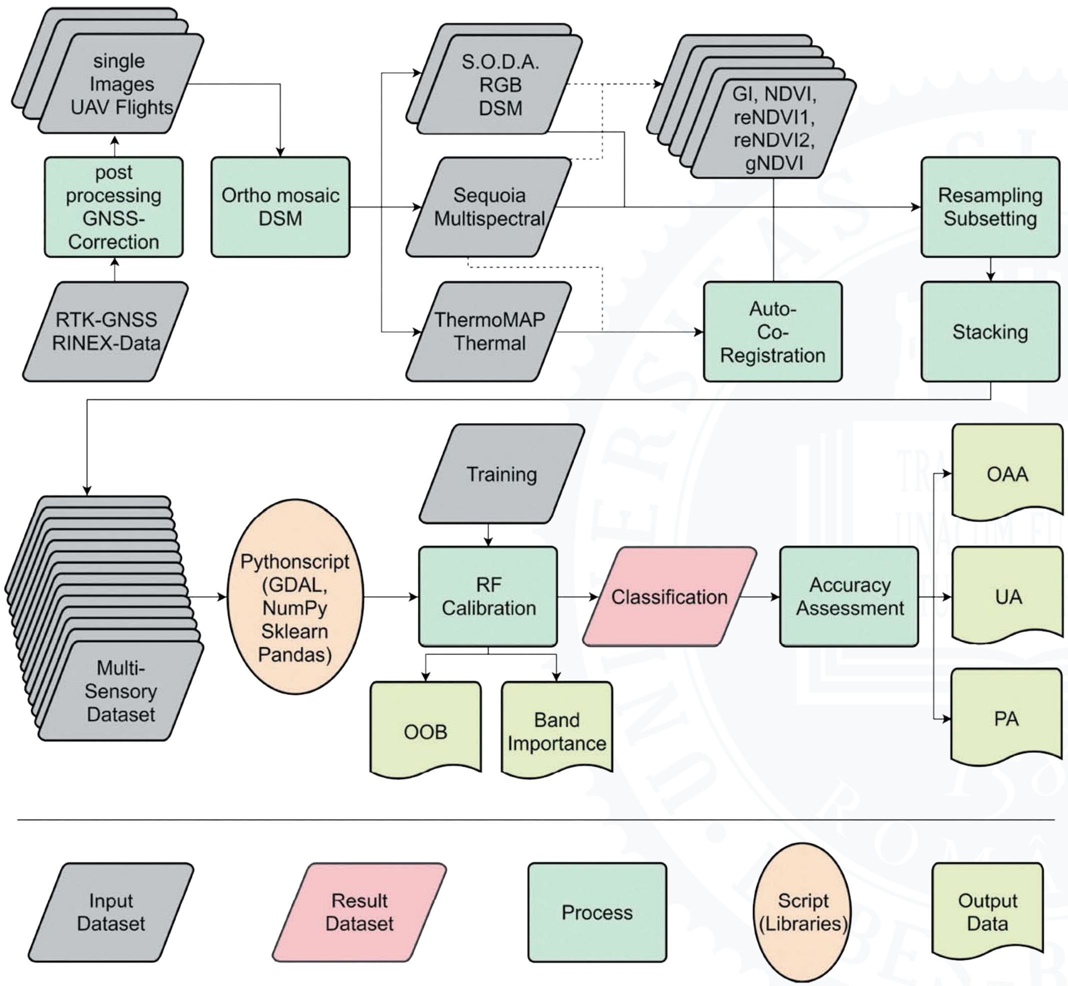


The possibilities offered by **DroneDeploy** in order to create flight missions



The possibilities offered by **Pix4D Capture** in order to create flight missions

Testing flight missions



The methodology applied by ***Beyer F. et. al. 2019***, which identified up to 9 vegetation classes in the area of peatlands using RGB, multispectral and infrared sensors.

a

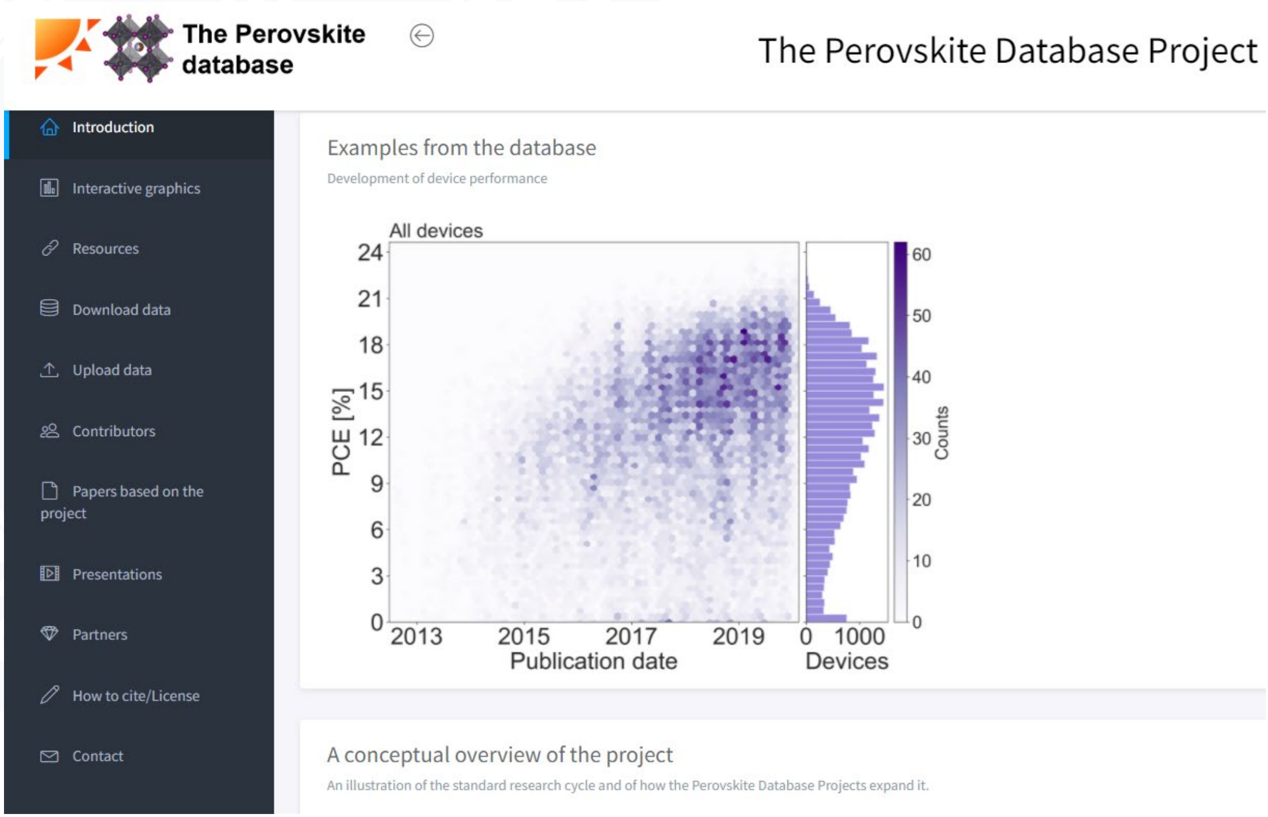
b

c

a) Fixed-Wings **SeenseFly eBee x**; ***b)*** **senseFly Duest T** (rugged dual RGB/thermal camera; ***c)*** **Parrot Sequoia+** (multispectral camera:green, red, red edge, near-infrared

"Large datasets are now ubiquitous as technology enables higher-throughput experiments, but rarely can a research field truly benefit from the research data generated due to inconsistent formatting, undocumented storage or improper dissemination." (T. Jesper Jacobsson T. J. et. al. 2022).

NWPEAT – beginning for ***RPAS in Peatlands Database***



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Fly with us over the peatlands!

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