ECOPOTENTIAL PRODUCTS (extracted from D12.13 Results of the exploitation activities)

The following table contains a synthetic description of the **products contributed by the partners of ECOPOTENTIAL** through a EUSurvey online form. It contains several different kinds of products, including knowledge and dissemination products. It is intended to give an overview of the **activities, tools, potential users, and sustainability measures** as described by the partners. In the table, the different categories of products have been identified through a colour, according to the legend below.

Legend: App/Tool | Remote sensing product/service | Catalogue | Data Analysis | Model | Workflow | Other

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	ECOPOTENTIAL Virtual Laboratory (VLab)	OTHER: Model sharing and run platform; apps developed in further projects (e.g. GEO Community Portal) The Virtual Laboratory Platform (VLab) is a tool for facilitating the publication and invocation of scientific workflows supporting evidence-based decision-making. It provides functionalities for: a) harmonized discovery of and access to heterogeneous resources from multiple systems; b) publication of scientific workflows developed on heterogenous programming environments; c) run of scientific workflows developed on heterogenous programming environments and d) publication of workflow results	model sharing; interoperability; GEOSS	Researchers; Env. consultant companies	D10.1 Design of the ECOPOTENTIAL Virtual Laboratory	The ECOPOTENTIAL VLab with enhancements developed in further projects is available at https://vlab.geodab.org	6	paolo.mazzetti_at_cnr.it	National Research Council (CNR-IIA)
	Ellip Solutions	OTHER: Platform Platform-as-a-Service for EO application builders https://www.terradue.com/portal/ellip	PaaS, Cloud, EO		https://docs.terradue.com/ellip	Developer users with upgraded user accounts can access the Ellip Solutions from: https://ellip.terradue.com	9	herve.caumont_at_terradue.com	Terradue

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Protected Areas From Space	The web app is a map browser that allows the visualization, analysis and download of all datasets elaborated in WP4 as well as the position of the DEIMS sites in WP5. It adopts the standards recommended by GEO in terms or metadata and map creation and it allows for user feedback (using the GUF OGC standard).	map browser, visualization, on-line analysis, WMS, WCS.	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	D10.3 - https://ecopotential-project.eu/images/ecopotential/documents/D10.3.pdf	http://maps.ecopotential-project.eu/	8	cristina.domingo_at_uab.cat	CREAF
	ECOPOTENTIAL Data Cube	ECOPotential data cube, that supplements the efforts done in the MiraMon Map Browser, is a system developed to easy access, manage and analyse a multidimensional cube (x, y and t bands) of RS data, in this case Sentinel-2 Level 2A products. The main idea behind the datacube chases after minimizing the required knowledge to access and process remote	Data Cube, Sentinel-2, spatiotemporal analysis,	Researchers; Management auth. of PAs;Regional authorities;National and International	D 3_3 (not public yet)	http://maps.ecopotential-project.eu/	7	joan.maso_at_uab.cat	CREAF

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		sensing data and work efficiently with time series, thus transforming how users interact with large spatio-temporal RS data. Up to now, the DC contains two year of Sentinel 2 imagery for 18 protected areas, and is continuously updated.	map browser	governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists					
	West Crete Data Cube focusing on Samaria PA	Description: Samaria's Data Cube (West Crete) was developed as part of the Greek data cubes to provide analysis ready data to managers and other interested users in order to facilitate the monitoring of the protected area. It is based on CEOS and the Swiss Data Cube and is using Sentinel-2, Landsat 5, 7 and 8. The near real-time information provided by the coupled modules may be easily used as an evidence base for the design, implementation, and evaluation of policies, programs and regulation, and for developing policy advice.	Open Data Cube, spatiotemporal analysis, Analysis Ready Data	Management Authorities of PAs, Researchers	a relevant publication is under preparation	http://datacube.iti.gr/	5	imanakos_at_iti.gr	CERTH
	Data Mining Tools	The tool has three modules to be used for extracting information from satellite large Image Time Series (SITS) and their analyses. The first tool is called Image Time Series - Data Mining system, which was developed for finding patterns in image archives or collections of data (i.e. Image Time Series). With this tool, we investigate the behaviour of long Earth-Observation Image Time Series in order to extract repetitive patterns and create	Satellite Image Time Series, Image Information Mining	Users and scientists in Earth Observation	Deliverable D4.4	ECOPOTENTIAL platform, or upon request	5-6	mihai.datcu_at_dlr.de	DLR

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		classification maps. Moreover, this tool allows the semantic annotation of image patches and can be used with multispectral and Synthetic Aperture Radar (SAR) images. The second tool presents a new approach for dealing with optical multi-sensor data (i.e. Landsat, Sentinel-2) based on Latent Dirichlet Allocation used for change detection. Finally, the last tool presents a method for coastline detection using Polarimetric Synthetic Aperture Radar (SAR) images.							
	gBay: Bayesian Networks with geo-data	OTHER: online toolbox gBay is an online tool with a GUI that links Bayesian Networks with geo-data. BNs can be used to integrate different types of information, such as EO, models, and expoert or stakeholder knowledge, while accounting for uncertainty, and are therefore well suited for modelling ecosystem services. The gbay wiki page (wiki.gbay.ethz.ch) provides guidelines on how to develop BNs, along with examples and case studies of BNs used to model ecosystem services in ECOPOTENTIAL.	online tool, Bayesian Networks, geo-data, ecosystem services, expert knowledge, uncertainty	Researchers; Management auth. of PAs; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 7.3 and on the page wiki.gbay.ethz.ch.	The product will be publicly available pending publication (currently under review) at gbay.ethz.ch		astritih_at_ethz.ch	ETH Zürich
	THEMISE-THEmatic Metadata-	Web-based application based on open-sources technologies with tools to perform external (meta)data quality evaluation to support the quality-	Quality evaluation,	Researchers	https://ecopotential-project.eu/ima	https://github.com/pmrcastro/ECOP-WP5.5-ThemisE	4	pmc_at_estg.ipvc.pt	ICETA (CIBIO-InBIO)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	based and fItness for use Spatial data quality Evaluation	driven discovery and selection of relevant datasets. The process is based on requirements specified by the user, allowing to identify the data needs (or detect data gaps), based on the evaluation of the fitness for use of spatial datasets centered on users' requirements, resulting from the analysis of the matching level (fitness-for-use) between the characteristics of the data according to users' requirements (specified through the definition of expected.	metadata, fitness for use, Web app		ges/ecopotential/documents/D5.3.pdf				
	Dataset to support the assessment of cultural ecosystem services in protected areas based on social media data.	This dataset provides crowd-sourced and georeferenced information useful for the assessment of cultural ecosystem services in the Sierra Nevada Biosphere Reserve (southern Spain). Data were collected within the European project ECOPOTENTIAL focused on Earth observations of ecosystem services. The dataset comprises 778 records expressing the results of the content analysis of social media photos published in Flickr. Our dataset is illustrated in this data paper with density maps for different types of information.	Biosphere reserve; cultural ecosystem service; nature-based experience; social media content; social-ecological research	Researchers; Management auth. of PAs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	The data set is going to be published in a data paper, currently under revision.	The dataset is going to be avalilable after the publication of the datapaper. DOI will be: 10.6084/m9.figshare.8943509		ricuni_at_gmail.com	UGR University of Granada
	User-side access point by exploiting INSPIRE and	multilingual search and discovery tool that benefit of national infrastructures providing information, dataset and services based on INSPIRE themes across the European target areas identified by the projects	User-side access point	Researchers; Management auth. of PAs;Regional	D3.1 and D3.4	Yes, http://193.206.192.120:8080/ecopotential_geo/catalo	4	emiliana.valentini_at_isprambiente.it	ISPRA

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	in situ capabilities			authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists		g/search/browse/ browse.page			
	Data products at LTER-DEIMS Platform	Creating 14 data products for Tatra National Park – Poland on the LTER-DEIMS Platform. Themes/data products: wind damages to forests and bark beetle infestations, conservation zoning, forest types, human activity (tourism, infrastructure, land mgmnt, etc.) hydrographic data, MaB zoning, mountain meadows, Natura 2000 habitats, on-going and planned nature monitoring on animals and plants, planned nature monitoring on Natura 2000 habitats, plant communities.	Tatra Mountains; environmental data; protected areas; Natura 2000; biodiversity	Researchers; Management auth. of PAs; NGOs;Env. consultant companies	The data products have been entered into - and are available at - the LTER-DEIMS Platform.	Yes, at the LTER-DEIMS Platform: https://deims.org/		grid_at_gridw.pl	UNEP/GRID-Warsaw Centre (third linked party)
	DEIMS-SDR	DEIMS-SDR is the basic catalogue of LTER Europe and ILTER to register and document Long term observation and experimentation sites. In the ECOPOTENTIAL context the catalogue was extended to include protected areas as main source of observation data as well as to extend the metadata model to include monitoring activities (and data	protected areas; long term observation; dataset;	Researchers; Management auth. of PAs; NGOs;Env. consultant companies;Ci	Wohner et al (2019) DEIMS-SDR - a web portal to document research sites and their	Metadata to Research sites, data products, datasets and sensor are available under CC-BY 4.0	8	johannes.peter seil_at_umwelt bundesamt.at	Umweltbundesamt GmbH (EAA)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		products). This allows to provide a comprehensive catalogue on the whole observation and data collection process. With the DEIMS.ID a unique identification of long term Observation sites as well as protected areas is provided. See https://deims.org/	data product; research site; catalogue	tizen scientists	associated data. Ecol.Inf. 51:15-24; https://doi.org/ 10.1016/j.ecoinf.2019.01.005	International license. For datasets licenses are defined by data providers.			
	ECOPOTENTIAL In-Situ Data Catalogue	The ECOPOTENTIAL in-situ data catalogue provides access to a range of data provided by long term observation sites as well as selected protected areas. It is an integrated metadata catalogue harvesting ISO compliant metadata from a range of sources, most prominently DEIMS-SDR. The ECOPOTENTIAL IN-SITU DATA CATALOGUE provides access to ecosystem and biodiversity data from long term in-situ monitoring. The data are hosted at the different data providers allowing to download data files or using specified data services. The applied data policy if not otherwise specified in the metadata is CC-BY-NC	ecopotential; catalogue; metadata; datasets; discovery; in-situ	Researchers; Management auth. of PAs; NGOs;Env. consultant companies;Citizen scientists	Prados et al. (2018) D5.7 Database of pre-existing and new data. Project deliverable [https://ecopotential-project.eu/images/ecopotential/documents/D5.7.pdf]	metadata open and free available through the GEOSS-DAB	7	space_at_starlab.es	Starlab Bacelona SL
	Climate dataset (historical and future scenarios 4.5 and 8.5) for S.N. from CNR downscaling data	The dataset includes temperature and precipitation values from the historical period (1970-2005) for each of the models: "CNRM-CERFACS-CNRM-CM5_RCA4". "ICHEC-EC-EARTH_RCA4", "IPSL-IPSL-CM5A-MR_RCA4", "MOHC-HadGEM2-ES_RCA4" and "MPI-M-MPI-ESM-LR_RCA4" provided by CNR. Specifically, the following parameters have been calculated by temporarily grouping the data: Temperature: yearmean, monmean, daymin, daymax, sumer_mean, fall_mean, winter_mean and spring_mean.	Historical climate data; Sierra Nevada; Temperature; Precipitation; Downscaled	Researchers; Management auth. of PAs;Env. consultant companies	It is planned to publish it as a datapaper and make it public in a repository.	Will be available when the data paper is published		ricuni_at_gmail.com	UGR University of Granada

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		Precipitation: yearsum, monsum, yearmean, summer_sum, fall_sum, winter_sum, spring_sum	climate data						
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Andalusia	OTHER: Climate Dataset The data and metadata description is available at: http://data.dta.cnr.it/ecopotential/andalusia/	Euro-CORDEX, precipitation, Min and Max Temperature, Andalusia	Researchers	Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	Available at: http://data.dta.cnr.it/ecopotential/andalusia/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Curonian Lagoon	OTHER: Climate Dataset The data and metadata description is available at: http://data.dta.cnr.it/ecopotential/curonian/		Researchers	Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	Available at: http://data.dta.cnr.it/ecopotential/curonian/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION:	OTHER: Climate Dataset Available at: http://data.dta.cnr.it/ecopotential/donana	air Temperature, precipitation	Researchers	Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	Available at: http://data.dta.cnr.it/ecopotential/donana		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Donana National Park								
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Hardangervidda	OTHER: Climate Dataset Data and metadata available at: http://data.dta.cnr.it/ecopotential/hardangervidda/	precipitation, air temperature, snow depth, surface wind, downscaling	Researchers	Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	Available at http://data.dta.cnr.it/ecopotential/hardangervidda/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Kalkalpen National Park	OTHER: Climate Dataset Available at: http://data.dta.cnr.it/ecopotential/kalkalpen/	air temperature (mean, max, min), precipitation, shortwave radiation, downscaling	Researchers	Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	Available at http://data.dta.cnr.it/ecopotential/kalkalpen/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)
	EURO-CORDEX data for the SMHI-	OTHER: Climate Dataset	air temperature,	Researchers	Deliverable D8.1, https://www.ec	Available at: http://data.dta.cnr		s.terzago_at_isac.cnr.it	National Research Council

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	RCA4 regional climate model, CRU data, REGION: Kruger National Park	Available at: http://data.dta.cnr.it/ecopotential/kruger/	precipitation, surface wind		opotential-project.eu/images/ecopotential/documents/D8.1.pdf	.it/ecopotential/kruger/			(CNR-ISAC)
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Mediterranean coastal areas	OTHER: Climate Dataset Available at: http://data.dta.cnr.it/ecopotential/mar-o-sel/	precipitation, potential evapotranspiration	Researchers	http://data.dta.cnr.it/ecopotential/mar-o-sel/	Available at: http://data.dta.cnr.it/ecopotential/mar-o-sel/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Negev	OTHER: Climate Dataset Available at: http://data.dta.cnr.it/ecopotential/negev/	Air temperature, precipitation, shortwave incoming radiation, potential	Researchers	Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	Available at: http://data.dta.cnr.it/ecopotential/negev/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			evapotranspiration, downscaling						
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Lake Ohird	OTHER: Climate Dataset

Available at: http://data.dta.cnr.it/ecopotential/ohrid/ | precipitation, temperatures, wind | Researchers | Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf | Available at: http://data.dta.cnr.it/ecopotential/ohrid/ | | s.terzago_at_isac.cnr.it | National Research Council (CNR-ISAC) |
| | EURO-CORDEX SMHI-RCA4 regional climate model datasets. REGION: Peneda-Geres | OTHER: Climate Dataset

Available at: http://data.dta.cnr.it/ecopotential/peneda-geres/ | air temperature, precipitation, relative humidity, shortwave radiation, downscaling | Researchers | Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf | Available at: http://data.dta.cnr.it/ecopotential/peneda-geres/ | | s.terzago_at_isac.cnr.it | National Research Council (CNR-ISAC) |
| | E-OBS gridded | OTHER: Climate Dataset | temperature | Researchers | Deliverable D8.1, | Available at: http://data.dta.cnr | | s.terzago_at_isac.cnr.it | National Research |

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	observation data for the REGION: Gran Paradiso National Park	Data and metadata description available at: http://data.dta.cnr.it/ecopotential/pngp_epfl/			https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	.it/ecopotential/pngp_epfl/			Council (CNR-ISAC)
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Gran Paradiso National Park	OTHER: Climate Dataset Available at: http://data.dta.cnr.it/ecopotential/pngp_igg/	air temperature, precipitation, snow depth, downscaling	Researchers	Deliverable D8.1, http://data.dta.cnr.it/ecopotential/mar-o-sel/	Available at: http://data.dta.cnr.it/ecopotential/pngp_igg/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)
	Downscaled EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Shaked Park, Negev	OTHER: Climate Dataset Available at: http://data.dta.cnr.it/ecopotential/shaked-park/	precipitation, temperature, RainFARM	Researchers	Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	Available at: http://data.dta.cnr.it/ecopotential/shaked-park/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)
	EURO-CORDEX data	OTHER: Climate Dataset	near surface	Researchers	Deliverable D8.1,	Available at: http://data.dta.cnr		s.terzago_at_isac.cnr.it	National Research

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	for the SMHI-RCA4 regional climate model, REGION: Wadden Sea	Available at: http://data.dta.cnr.it/ecopotential/wadden_sea/	air temperature, precipitation, Shortwave Radiation, wind components, surface pressure, Near-Surface Relative Humidity, cloud cover		https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	.it/ecopotential/wadden_sea/			Council (CNR-ISAC)
	EURO-CORDEX data for the SMHI-RCA4 regional climate model, REGION: Sierra Nevada	OTHER: Climate Dataset Available at: http://data.dta.cnr.it/ecopotential/sierra_nevada/	temperature, precipitation, downscaling	Researchers	Deliverable D8.1, https://www.ecopotential-project.eu/images/ecopotential/documents/D8.1.pdf	Available at: http://data.dta.cnr.it/ecopotential/sierra_nevada/		s.terzago_at_isac.cnr.it	National Research Council (CNR-ISAC)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Dataset of occurrence and incidence of pine processionary moth in Andalusia (South Spain)	OTHER: Dataset This dataset provides information about infestation caused by the pine processionary moth (Thaumetopoea pityocampa Schiffermüller, 1776) in pure or mixed pine plantations in Andalusia. It represents a long-term series (1993 - 2015) containing 81,908 records that describe the occurrence and incidence of this species. Data were collected by the Regional Ministry of Environment and Territorial Planning of the Andalusian Regional Government within the frame of the "Plan de Lucha Integrada contra la Procesionaria del Pino" (Plan for Integrated Control Against the Pine Processionary Moth).	Thaumetopoea pityocampa; forest pest; pine plantations; monitoring; degree of defoliation; Andalusia; Samplingevent	Researchers; Management auth. of PAs;Regional authorities;Env. consultant companies;Citizen scientists	A detailed description of the dataset can be found in: a datapaper (DOI: 10.3897/zookeys.852.28567) and the metadata of the repository (DOI: 10.15470/s1mxjb)	The dataset is available through the Global Biodiversity Information Facility (GBIF): http://ipt.gbif.es/resource?r=coplas (Spanish Node) and https://www.gbif.org/dataset/bb30e03a-b746-49e4-bab9-decbf27abdf1 (International)		a.roscandeira_at_gmail.com	University of Granada
	Dataset of Iberian ibex population in Sierra Nevada (Spain)	OTHER: Dataset This dataset provides information about Iberian ibex (Capra pyrenaica hispanica Schimper, 1848) presence in Sierra Nevada (SE Iberian Peninsula), as a result of annual sampling from 1993 to 2018 done by the managers of the Sierra Nevada Natural and National Park. They carried out the transects collecting different variables such as the number of individuals observed, the perpendicular distance of each group of goats to the transect line and, at the individual level, sex as well as age in the case of males.	Sierra Nevada; monitoring; Capra pyrenaica hispanica; management	Researchers; Management auth. of PAs	A data paper is being written to be sent to Scientific Data and the data will be stored in GBIF, both open access	It will be available when the data paper is published		a.roscandeira_at_gmail.com	UGR. University of Granada

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Checklist of the vascular flora of Sierra Nevada mountain range (SE Spain)	OTHER: Dataset This dataset provides information about the vascular flora present in Sierra Nevada, indicating data about: distribution, habitat, abundance, conservation status and different functional traits such as flower symmetry, perianth type, seed dispersal, etc. This checklist was completed according to all the available information sources on taxonomy and plant-species distribution. The total number of taxa accounted for in this checklist was 2,348.	Sierra Nevada; Endemics; Plant Biodiversity Hotspot; Threatened flora; Vascular Plants	Researchers; Management auth. of PAs;Citizen scientists	A data paper is being written to be sent to Ecology	The dataset will be stored in an open repository		jlorite_at_ugr.es	UGR University of Granada
	Limnological data of the high mountain lakes of Sierra Nevada (SE Spain)	OTHER: Dataset Limnological (biological and physical-chemical) data of the high mountain lakes of Sierra Nevada from the 1970s to the present day as a result of sampling carried out by different researchers from the University of Granada.	Sierra Nevada; limnological data; monitoring; historical data	Researchers; Management auth. of PAs;Citizen scientists	A data paper is being written to be sent to Scientific Data	The dataset will be stored in an open repository		mvillar_at_ugr.es	UGR University of Granada
	EcoPotential WP9 surveys on requirements of Protected Areas	In 2017 and 2018 large-scale ECOPOTENTIAL WP9 surveys were carried out whereby all-over Europe more than 120 Protected Area (PA) managers, rangers and scientists from 25 PA were interviewed on-the-spot. In the surveys indicative variables were assessed that were judged by Protected Area (PA) managers, rangers and ECOPOTENTIAL scientists to be the most important for the status and development of the Ecosystem Functions and Structures (EF), Ecosystem Services (ES), and pressures (Threats) in their PA. The products give overviews of the outcomes of the surveys	https://doi.org/10.6084/m9.figshare.5513530.v1	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Ci	D9.1 Hummel e.a. 2017. Essential Environmental and Socio-Economic Variables for PAs D9.2 Hummel e.a. 2018. Integrated overview of the	https://doi.org/10.6084/m9.figshare.5513530.v1		herman.hummel_at_nioz.nl	Royal Netherlands Institute for Sea Research (NIOZ)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				tizen scientists	Requirements and Quality of PAs. D9.3 Wit e.a. 2018. Potential Impacts of Drivers of Change in PA Hummel e.a. 2017. Ecosystem Services in European PAs: Ambiguity in Views of Scientists and Managers? PLoS ONE 12(11), https://doi.org/ 10.1371/journa l.pone.0187143				
	Classification of EODSM land cover forms for the Tatras (incl. the outlying buffer zone) on both level 3 and level 4	For WP4 purposes: based on EO and other thematic data layers, conducted classification of EODSM land cover forms for the Tatras (both the TPN and the outlying buffer zone) on both level 3 and level 4. Classes identified: cadastral, urban, imperviousness, bare ground, orchard, plantation, artificial surface aspect, artificial water, aquatic, vegetated. Advanced processing yielded thematic raster maps (geotiff).		Researchers; Management auth. of PAs;Env. consultant companies	This is an input to a more complex Project product, related to one PA.	Probably no, as it was meant to be integrated into a compiled product.		grid_at_gridw. pl	UNEP/GRI D-Warsaw Centre (third linked party)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Dataset to support the assessment of interactions between the lake's physical, chemical and biological conditions and modelling	Climate, physico-chemical and biological in situ data used for: a) Definition of the set of essential variables (EVs) necessary to monitor their status through key indicators b) Assessment of status and evolution of ecosystem service indicators c) Definition of Ecosystem Services and Mind Maps d) Modelling of chlorophyll-a concentrations in Lake Ohrid e) Trophic chain model: a simplified mathematical model of the ohrid trout (Salmo letnica) trophic chain f) Assessment the capacity of the lakes to provide eutrophication control	water ecosystems; essential variables; ecosystem services; trophic chain;	Researchers; Management auth. of PAs;Regional authorities; NGOs;Env. consultant companies;Citizen scientists	D2.2; D7.1; paper in press	In the Ecopotential project ftp		orhidejat_at_hio.edu.mk	PSI Hydrobiological Institute, Ohrid (HIO)
	Climate Change Vulnerability Framework	Framework for assessing climate change vulnerability tailored to freshwater ecosystems. The framework is based on three dimensions: (i) exposure to climate change, (ii) sensitivity to altered environmental conditions, and (iii) resilience potential. It includes 1685 freshwater species of plants, fishes, molluscs, odonates, amphibians, crayfish and turtles alongside key features within and between catchments, such as topography and connectivity.	Climate change; Freshwater biodiversity; Exposure; Sensitivity; Reslilience	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Citizen scientists	Markovic, D., Carrizo, S.F., Kärcher, O., Walz, A., David, J.N.W. (2017): Vulnerability of European freshwater catchments to climate change. Global Change Biology 23, 3567-3580.	Yes: https://doi.org/10.1111/gcb.13657		d.markovic-bredthauer_at_hs-osnabrueck.de	University of Potsdam / Osnabrück University of Applied Sciences (UP-HSOS) product 1
	DA – Land cover change in protected	This product comprises a DA of land cover changes across Europe between 2000 and 2012 based on earth observation data. It includes a comparison of	Land use change; Land	Researchers; Management auth. of	Hellwig, N., Walz, A., Markovic, D.	Yes: https://doi.org/10.		niels.hellwig_at_uni-potsdam.de	University of Potsdam /

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	areas, non-protected areas, and protected area buffers	land cover changes in protected areas, non-protected areas, and 1 km buffer zones around protected areas and an analysis of their relationship to climatic and socioeconomic factors. Major change processes were described based on the land cover flows urbanisation, afforestation, deforestation, intensification of agriculture, extensification of agriculture, and formation of water bodies.	cover flows; Protected areas	PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Citizen scientists	(2019): Climatic and socioeconomic effects on land cover changes across Europe: Does protected area designation matter? PLoS ONE 14(7), e0219374.	1371/journal.pone.0219374			Osnabrück University of Applied Sciences (UP-HSOS) product 3
	Analysis of reindeer data in Hardangervidda National Park	A DA of the wild reindeer population in Hardangervidda and how it is affected by weather and hunting data.	Hardangervidda, reindeer, population modelling, hunting, weather	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Citizen scientists	An earlier version is contained in deliverable 8.3. An updated version will be published in an upcoming (accepted) open access paper.	It will be described in an upcoming paper in Population Ecology.	3	e.d.wheatcroft _at_lse.ac.uk	LSE
	Spatial and temporal variability of precipitation and temperature	This product offers the accumulated and mean maps of precipitation and temperature for the whole Sierra Nevada, obtained from point data measured at 27 and 31 stations respectively, from 2001 to 2014. Time series have been corrected and filled using algorithms based on linear correlations among data, and then		Researchers; Management auth. of PAs;Env. consultant companies;Ci	D2.3 Essential Variables	Available upon request		javier.herrero_ at_gmail.com	UGR. University of Granada

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	for Sierra Nevada	interpolated with WiMMed model at 90x90 m with algorithms for spatial interpolation that consider the available knowledge regarding the topography influence over each individual variable.		tizen scientists					
	INSTAR	INSTAR is an Agent-Based Model aiming to simulate the population dynamics of the Thaumetopoea pityocampa forest pest. The model has been designed using a modular approach: several inter- connected modules (submodels) facilitate the incorporation of new knowledge about the pest biology and can serve as template for the design of other similar models. The model is spatially and temporally explicit and allows its implementation under di erent climate and land use scenarios. INSTAR is described in detail in this manuscript using the ODD (Overview, Design, concepts, and Details) protocol.	agent-based model, forest pests	Researchers; Management auth. of PAs	The model has been described in an open source publication (still in press). It has also deployed within ECOPOTENTIAL virtual lab.	https://github.com/MARIASUAM/INSTAR_1.0	3	fjbonet_at_gmail.com	University of Córdoba
	Model for terraced riverbeds	1. A meta-ecosystem model has been developed for communities of annuals in terraced dry riverbeds. The model considers a community of functional groups that make different tradeoffs in investments in above-ground biomass vs. in below-ground biomass. The model provides information about community composition, functional diversity and total biomass in entire riverbeds. 2. Climate extremes may induce ecosystem collapse far from tipping points, where current early warning signals are not applicable. We developed an indicator that fills that gap: period-doubling signatures in time series.		Researchers	A paper entitled "A model study of terraced riverbeds as novel ecosystems" by Hezi Yizhaq, Moshe Shachak, and Ehud Meron is under review in Scientific Reports.	Once published both papers will be open access	1	ehud_at_bgu.ac.il	Ben-Gurion University of the Negev

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
					A paper entitled "Period doubling as an early warning signal for desertification" by Omer Tzuk, Sangeeta Rani Ujjwal, Cristian Fernandez-Oto, Merav Seifan and Ehud Meron is under review in Scientific Reports.				
	EO-SDM: Ensemble species distribution modeling framework using remote sensing data	EO-SDM implements an ensemble species distribution modeling framework using remote sensing data. The modeling framework is not based on a new algorithm, but makes used of established species distributions modeling algorithms (Maxent, Random Forest – RF and Generalised Linear Models - GLM, as implemented in the biomod2 package version 3.1) and tests their applicability in combination with remote sensing data. The code includes the calculation of a model uncertainty map and provides algorithm-specific estimates of the importance of remotely sensed input variables.	Species Distribution Model, Remote Sensing, Biodiversity	Researchers; Management auth. of PAs	The model is available from the ECOPOTENTIAL VLAB.	Yes, under license CC-BY-NC 2.0		anna.cord_at_ufz.de	Helmholtz Centre for Environmental Research - UFZ
	Species distribution model for the	To assess the suitable habitat of an invasive grass species and its impacts on ecosystems, biodiversity	species distribution	Researchers; Management auth. of PAs	Paper for witch the model has been	For access contact author (anna.walentowitz		anna.walentowitz_at_uni-bayreuth.de	University of Bayreuth

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	invasive graminoid Pennisetum setaceum on La Palma	and protected areas a distribution model was developed.	model, Pennisetum setaceum, La Palma, invasion		produceed is accepted, but not published yet.	_at_uni-bayreuth.de) as paper is not published yet.			
	Chlorophyll a model, validated for mountain lake ecosystems	Chlorophyll a (Chl-a) – Nutrient and Temperature Relationships, and Predictions for Lakes across Mountain Regions. Chl-a was modelled by using two different variable sets. Each variable set included total nitrogen (TN), total phosphorus (TP), TN:TP, and maximum lake depth. To identify variations resulting from the utilization of lake surface water temperature (LSWT) and LSWT surrogates, we extended the basic variable set with either LSWT or altitude. Chl-a and the trophic state were predicted for eleven perialpine and two central Balkan mountain lakes.	Lake trophic state; Lake nutrients; Lake surface water temperature; Mountain lake ecosystems	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Citizen scientists	ECOPOTENTIAL Deliverable D8.5	Yes, through direct request.		o.kaercher_at_hs-osnabrueck.de	University of Potsdam / Osnabrück University of Applied Sciences (UP-HSOS) product 2
	Species distribution modelling framework (upstream vs. local influences)	Framework for assessing scale effects on the performance of niche-based species distribution models of freshwater fish species. The analysis was based on fish occurrence data from the Danube River Basin and various factors representing climate, land cover and anthropogenic pressures. The scale-dependence components considered are (a) environment spatial structure, represented by hierarchical catchment ordering, (b) analysis grain, that included 1st to 5th order catchments, and (c)	Catchment order; Conservation planning; Danube; Freshwater fish;	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant	1) Kärcher, O., Frank, K., Walz, A., Markovic, D. (2019): Scale effects on the performance of niche-based models of freshwater fish distributions.	Yes: https://doi.org/10.1016/j.ecolmodel.2019.05.006 and https://doi.org/10.1016/j.ecolmodel.2019.108818		o.kaercher_at_hs-osnabrueck.de	University of Potsdam / Osnabrück University of Applied Sciences (UP-HSOS) product 2

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		response grain, the grain at which species respond most, represented by local and upstream catchment area effects.	Upstream area	companies;Citizen scientists	Ecological Modelling 405, 33-42. 2) Markovic, D., Walz, A., Kärcher, O. (2019): Scale effects on the performance of niche-based models of freshwater fish distributions: Local vs. upstream area influences. Ecological Modelling 411, 108818.				
	Time series analysis of vegetation-cover response to environmental factors and residential development in a dryland region	We propose a novel framework for exploring vegetation cover change as a function of environmental and human-driven factors including different types of populated areas in drylands. The study demonstrates how different land-use practices alter the landscape in terms of vegetation cover and differ in their extents, patterns, and effects. With the expected growth in population and residential development worldwide, the proposed framework may assist conservation managements and policy	drylands; protected area; grazing; agricultural settlements; remote sensing;	Researchers; Management auth. of PAs;Regional authorities; NGOs	GIScience & Remote Sensing. 56. 362-387. DOI 10.1080/15481 603.2018.1519 093.	Yes		karnieli_at_bgu .ac.il	Ben Gurion University of the Negev

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		makers in minimizing environmental degradation in drylands.	spatial analysis						
	Identifying vegetation in drylands using object-based image analysis with RGB-only aerial imagery	The study identifies vegetation patches in the hyper-arid desert using only the visible bands from aerial photographs by adapting an alternative geospatial object-based image analysis routine, together with recent improvements in pre-processing. The results show successful identification of vegetation patches in multiple zones from each study area. The remote sensing tool demonstrated in this research can open the way to ecological investigation that was not easily achievable previously by utilizing archives of aerial imagery.	segmentation; classification; vegetation; arid regions; gray-level co-occurrence matrix; texture; object-based image analysis;	Researchers; Management auth. of PAs;Regional authorities;Env. consultant companies	Remote Sensing. 11, 2308; doi:10.3390/rs11192308			karnieli_at_bgu.ac.il	Ben Gurion University of the Negev
	INSTAR Agent-Based Model was uploaded into VLAB	INSTAR is an Agent-Based Model whose ultimate purpose is to aid environmental decision making in pine plantations affected by Thaumetopoea pityocampa forest pest. Specifically, it aims at generating a deeper understanding of the population dynamics of this pest and at forecasting the probability of occurrence and intensity of the pest outbreaks at a landscape scale under different climate as well as land use scenarios.	Agent-Based Model; Thaumetopoea pityocampa; Pine processi	Researchers; Management auth. of PAs;Regional authorities;Env. consultant companies	INSTAR short description has been included in deliverables from WP4 and WP10..	Yes, a demo of the model can be directly run through VLAB, while the model code is openly available in GitHub.	1	maria.suarez.munoz_at_gmail.com	UGR. University of Granada

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			onary moth; forest pest; populati on dynamic s						
	WiMMed model in VLab	This tool is used to calculate two ecosystem services (ES) related to hydrology (aquifer recharge and surface runoff) with the hydrological model WiMMed (fully distributed and phisically based) in Sierra Nevada (Spain) for a specific period. Surface runoff is an ES of water regulation, as it represents the excess of water that will directly flow into the rivers, what makes it susceptible to generate floods. Accumulated aquifer recharge is an ES of water provisioning. It is highly related with the available water for drinking and cropping in low-elevation places during the summer periods.	Hydrolog y, ecosyste m service, model	Researchers; Management auth. of PAs;Env. consultant companies	https://vlab.ge odab.eu	https://github.co m/fherlan/WiMM ed_ES_SierraNeva da	9	javier.herrero_ at_gmail.com	UGR. University of Granada
	COINS (COntrol of INvasive Species)	The routine COINS implements a modelling approach for the optimal spatiotemporal control of invasive species in natural protected areas of high conservation value. The model is based on diffusion equations and is spatially explicit. It includes a budget constraint and a functional response which models the control rate as a function of the species density. The growth of the species is modulated by a habitat suitability function internally computed by using the land cover map of the study area and the map of the initial density of the invasive species.	invasive species; optimal control; habitat suitabilit y; diffusion ; budget constrai nt;	Researchers; Management auth. of PAs;Regional authorities;E nv. consultant companies	Deliverable D6.3	https://github.co m/CnrIacBaGit/CO INSvlabrepo; https://vlab.geoda b.eu/. It can be used under the conditions of CC-BY-NC 2.0	4	a.martiradonna _at_ba.iac.cnr.i t	National Research Council (CNR-IAC)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			resources allocation strategy; Ailanthus altissima ; Alta Murgia						
	Metapopulation model for carabids species on the GPNP	The model assesses the ongoing changes in occupancy of carabids species in the GPNP based on: (i) on-situ monitoring of species abundance; (ii) variations in the environmental drivers that characterised the species habitat (e.g, temperature, wetness, greenness, forest cover as described by EO-data) and (iii) colonization, extinction and diffusion processes ad described in the metapopulation dynamics and suitably calibrated for the species under study.	Metapopulation model, carabids	Researchers; Management auth. of PAs	The paper describing the model and results has been submitted in PNAS. A simplified version of the model is available in VLAB (MountainMetapop), with reference paper: J. Giezendanner, E. Bertuzzo, D. Pasetto, A. Guisan, and A. Rinaldo (2019).	For access contact author (jonathan.giezendanner_at_epfl.ch) as paper is not published yet. The model MountainMetapop is available on VLAB.		jonathan.giezendanner_at_epfl.ch damiano.pasetto_at_unive.it	EPFL

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
					A minimalist model of extinction and range dynamics of virtual mountain species driven by warming temperatures. Plos One, 14(3): e0213775, doi: 10.1371/journal.pone.0213775				
	Hydroperiod Estimation (HydroMap) module	HydroMap generates a hydroperiod map from a series of water masks, falling within the time period between the starting and the ending date of hydroperiod, by applying the following interpolation approach. For two dates separated by n days, the occurrence of water is compared. If a pixel is inundated on both dates, then it is assumed inundated for n-days. If a pixel is not inundated on both dates, then it is assumed inundated for n/2 days. The total number of days of inundation per pixel in the hydroperiod map is determined by accumulating the water masks throughout the desired time period.	hydroperiod map module	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 6.3	Hydromap module can be accessed and executed via the Virtual Laboratory of CNR by following the next steps: 1. Follow: https://vlab.geodab.eu/, 2. Select "Workflows" tab to show the list of workflows, 3. Select "Hydroperiod Estimation (Hydromap)" workflow to	4	imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
						execute Hydromap. Detailed descriptions on modules' inputs/outputs are provided as well.			
	Inland free water surface derivation from Sentinel-2 satellite imagery (WaterMasks)	WaterMasks integrates an unsupervised local thresholding approach to estimate water extent of an area relying on a single Sentinel-2 radiometrically corrected image. This module detects automatically thresholds on the Short-Wave Infrared band and on a Modified-Normalized Difference Vegetation Index, derived from radiometrically-corrected Sentinel-2 data. Then, it combines them in a meaningful way based on a knowledge base coming out of an iterative trial and error process. Classes of interest concern water and non-water areas.	water mask, inundati on map, Sentinel-2	Researchers; Management auth. of PAs;Regional authorities;N ational and International governments ; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 6.3	WaterMasks module can be accessed and executed via the Virtual Laboratory of CNR by following the next steps: 1. Follow: https://vlab.geoda b.eu/, 2. Select "Workflows" tab to show the list of workflows, 3. Select "Inland free water surface derivation from Sentinel-2 satellite imagery (WaterMasks)" workflow to execute WaterMasks. Detailed descriptions on	5	imanakos_at_it i.gr	Centre for Research and Technolog y - Hellas (CERTH)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
						modules' inputs/outputs are provided as well.			
	Sentinel-1 data speckle noise suppression (SpeckleRemoval)	Suppress speckle in the SAR Sentinel-1 product (developed for GRD data) by using guided image filtering. The guided filter computes the filtered SAR output by considering the content of a guidance image (Sentinel-2 RGB image). Guided filter has a good edge-preserving property, while it suppresses speckle noise.	speckle suppression, Sentinel-1, Sentinel-2, guided filter	Researchers	ECOPOTENTIAL Deliverable 6.3	SpeckleRemoval module can be accessed and executed via the Virtual Laboratory of CNR by following the next steps: 1. Follow: https://vlab.geodab.eu/, 2. Select "Workflows" tab to show the list of workflows, 3. Select "Sentinel-1 data speckle noise suppression (SpeckleRemoval)" workflow to execute SpeckleRemoval. Detailed descriptions on modules' inputs/outputs are provided as well.	4	imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)
	Estimation of phenology metrics	PhenologyMetrics generates phenology related layers relying on NDVI time series covering a vegetation growth period. The phenology metrics, which are	Phenology metrics,	Researchers; Management auth. of	ECOPOTENTIAL Deliverable 6.3	PhenologyMetrics module can be accessed and	4	imanakos_at_iti.gr	Centre for Research and

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	(PhenologyMetrics)	calculated using the phenex R package, include (a) the day of the growth period, at which the greenup takes place, (b) the day of the growth period with the highest NDVI value and (c) the day of the growth period, at which senescence takes place. PhenologyMetrics is able to estimate the aforementioned metrics for multiple vegetation cycles occurring within a set period.	Senescence day, Green up day, Day of Maximum NDVI, Phenex	PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies		executed via the Virtual Laboratory of CNR by following the next steps: 1. Follow: https://vlab.geodab.eu/, 2. Select "Workflows" tab to show the list of workflows, 3. Select "Estimation of phenology metrics (PhenologyMetrics)" workflow to execute PhenologyMetrics. Detailed descriptions on modules' inputs/outputs are provided as well.			Technology - Hellas (CERTH)
	BFAST detection of changes in NDVI approximated phenological cycles	PhenologyChanges registers the abrupt trend changes/ breaks in the vegetation phenology cycles throughout numerous annual NDVI series, based on the iterative decomposition of the time series into trend, seasonal and remainder components, which is performed using the BFAST R package. The module calculates per pixel the total number and dates of abrupt changes that have occurred, and the date of the maximum abrupt change.	time of detected abrupt changes, total number of abrupt changes,	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env.	ECOPOTENTIAL Deliverable 6.3	PhenologyChanges module can be accessed and executed via the Virtual Laboratory of CNR by following the next steps: 1. Follow: https://vlab.geoda	3	imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	(PhenologyChanges)		time of biggest change, NDVI time series	consultant companies		b.eu/, 2. Select "Workflows" tab to show the list of workflows, 3. Select "BFAST detection of changes in NDVI approximated phenological cycles (PhenologyChanges)" workflow to execute PhenologyChanges. Detailed descriptions on modules' inputs/outputs are provided as well.			
	Landscape fragmentation measures calculation (LandMetrics)	LandMetrics calculates a number of landscape measures used as indicators of fragmentation and/or connectivity of land cover or habitat classes in the selected study area. In particular, the following measures are calculated (as per FRAGSTATS): (i) PLAND, (ii) PD, (iii) SHAPE, (iv) CA, (v) MPS, (vi) MESH, (vii) AWMPFD. The input to the landscape indicators estimation approach is comprised of land cover (LC) or habitat maps and the output is a raster file for each calculated landscape measure and a file containing the values of the measures for each LC or habitat object.	landscape and biodiversity indicators, PLAND, PD, SHAPE_ MN, CA, MPS, MESH,	Researchers; Management auth. of PAs;Regional authorities;National and International governments ; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 6.3	LandMetrics module can be accessed and executed via the Virtual Laboratory of CNR by following the next steps: 1. Follow: https://vlab.geodab.eu/, 2. Select "Workflows" tab to show the list of	5	imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			AWMPFD			workflows, 3. Select "Landscape fragmentation measures calculation (LandMetrics)" workflow to execute LandMetrics . Detailed descriptions on modules' inputs/outputs are provided as well.			
	Connectivity analysis for the seagrass *Posidonia oceanica* in the Mediterranean Sea	The endemic seagrass *Posidonia oceanica* is a key component of the coastal seascapes of the Mediterranean, where it provides crucial Ecosystem Services. We used a biophysical Lagrangian approach to simulate the release of seagrass fruits from suitable sites and their subsequent dispersal operated by marine currents, as projected by a state-of-the-art oceanographic reanalysis asslimilating Earth Observations. We analyzed basin-wide patterns of seagrass connectivity over 30 years and identified the most ecologically connected areas, which may serve as priority targets for conservation actions.		Researchers; Management auth. of PAs;Regional authorities;National and International governments	This product has been described in Ecopotential deliverables 8.2 and 8.5. A related manuscript (Mari, Melia', Fraschetti, Gatto and Casagrandi - Spatial patterns and temporal variability of seagrass connectivity in	All data used for the analysis are openly available: the suitablity map for *Posidonia oceanica* is available at http://www.emodnet-seabedhabitats.eu, while the physical reanalysis of circulation field is available online at http://marine.copernicus.eu/. All the relevant results		renato.casagrandi_at_polimi.it	Politecnico di Milano

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
					the Mediterranean Sea) has been accepted for publication in Diversity and Distribution.	are/will be described in open access documents.			
	Analysis of plastics exposure for the marine biota in the Pelagos Sanctuary	Plastic litter is a cause of increasing concern in the Mediterranean Sea because of its environmental and biological impacts. We used a Lagrangian approach to simulate the release of plastic litter from coasts, rivers and ships, and its subsequent dispersal operated by marine currents, as projected by a state-of-the-art oceanographic reanalysis assimilating Earth Observations. We interlaced maps of litter distribution and habitat suitability based on bathymetry and satellite-derived estimates of chlorophyll-a to map the risk of plastic ingestion for fin whales and other marine biota.		Researchers; Management auth. of PAs;Regional authorities;National and International governments	This product has been described in the following open access paper: Guerrini, Mari and Casagrandi (2019) - Modelling plastics exposure for the marine biota: Risk maps for fin whales in the Pelagos Sanctuary (North-Western Mediterranean) - Frontiers in Marine Science,	All data used for the analysis are openly available and are fully referenced in the accompanying publication.		renato.casagrandi_at_polimi.it	Politecnico di Milano

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
					6:299. Freely available at https://doi.org/10.3389/fmars.2019.00299				
	Model of Web of interactions among diversity approaches to identify ecosystem essential variables: Negev Highlands case study	We developed a conceptual framework, offering theoretical foundation and a methodology for identifying ecosystem essential variables		Researchers	Web of interactions among diversities to identify ecosystem essential variables: Negev Highlands case study

Ecosphere open access - submittet | Will be in few weeks open access paper | | Shaylidh_at_post.bgu.ac.il | Ben Gurion university in the Negev |
| | Spatial heterogeneity and temporal variability of the ecosystem functioning of Sierra Nevada (SE Spain) | Here, we presents a description of the spatial heterogeneity and temporal variability of the ecosystem functioning of Sierra Nevada (SE Spain) from the vegetation dynamics captured through the spectral vegetation index EVI (Enhanced Vegetation Index) since 2001 to 2016 (product MOD13Q1.006 from MODIS sensor). First, we provided three Ecosystem Functional Attributes (EFAs) as well as their integration into a synthetic mapping of Ecosystem Functional Types (EFTs). Second, we | Enhanced Vegetation Index; Ecosystem Functional Attributes; | Researchers; Management auth. of PAs;Regional authorities;Env. consultant companies | A data paper is being written to be sent to a journal and the data will be stored in a public and open repository | It will be available when the data paper is published | | beaperezcazorla_at_gmail.com | UGR University of Granada |

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		provided two measures of functional diversity, EFT richness and EFT rarity.	Ecosystem Functional Types (EFT); EFT richness; EFT rarity; Sierra Nevada						
	Mediterranean Chlorophyll	estimate of sea surface concentration of photosynthetic pigment chlorophyll-a from optical multispectral sensors packaged as multitemporal series (derived from Chl L3 dataset in Copernicus CMEMS service), -1km resolution, monthly, from 2008 to 2014	Med_Chl	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	D4.2, D4.5, D8.5	Ecopotential project ftp		alessandra.nguyenxuan_at_isprambiente.it	ISPRA
	Snow cover map	Time series of daily snow cover maps derived from MODIS data	Snow, MODIS	Researchers; Management auth. of PAs;Regional	https://ecopotential-project.eu/images/ecopotenti	Available on Zenodo: https://zenodo.or	9	bartolomeo.ventura_at_eurac.edu	EURAC

T y p e	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	al/documents/ D4.3.pdf	g/communities/ec opotentialh2020			
	Snow cover duration	The product provides the number of days for which a pixel is covered by snow based on the analysis of daily MODIS data.	Snow cover duration , MODIS	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	https://ecopot ential-project.eu/ima ges/ecopotenti al/documents/ D4.3.pdf	Available on Zenodo: https://zenodo.or g/communities/ec opotentialh2020	6	mattia.callegari _at_eurac.edu	EURAC
	Wet snow cover	Time series of wet snow cover area maps derived from Sentinel-1 images.	Wet snow cover,	Researchers; Management auth. of	https://ecopot ential-project.eu/ima	Available on Zenodo: https://zenodo.or	6	carlo.marin_at _eurac.edu	EURAC

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			Sentinel-1	PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	ges/ecopotential/documents/D4.3.pdf	g/communities/ecopotentialh2020			
	Tasseled Cap data	Series of Tasseled Cap transformation images (brightness, greenness, wetness) derived from all available Landsat surface reflectance data (Landsat 5, 7, and 8) within May and September for the years 2006, 2007, 2012 and 2012 with a cloud cover less equal than 90%	Tasseled Cap, spectral transformation, Landsat, Brightness, Greenness, Wetness	Researchers; Management auth. of PAs;Regional authorities;Citizen scientists	http://sdi.eurac.edu/geonetwork/srv/eng/main.home	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020	5	ruth.sonnenschein_at_eurac.edu	EURAC
	Normalized Difference Vegetation Index	Series of Normalized Difference Vegetation Index (NDVI) derived from all available Landsat surface reflectance data (Landsat 5, 7, and 8) within March and October for the years 1984 to 2016 with a cloud cover less equal than 90%	NDVI, spectral index, Vegetation, Landsat	Researchers; Management auth. of PAs;Regional authorities;Citizen scientists	http://sdi.eurac.edu/geonetwork/srv/eng/main.home	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		ruth.sonnenschein_at_eurac.edu	EURAC

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Soil moisture	Time series of surface soil moisture content maps (in m3m-3*100) derived from Sentinel-1 data.	Soil moisture , Sentinel-1	Researchers; Management auth. of PAs;Regional authorities;National and International governments ; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	https://ecopotential-project.eu/images/ecopotential/documents/D4.3.pdf	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020	7	felix.greifeneder_at_eurac.edu	EURAC
	Snow phenology	Snow phenology encompass the first snow fall and the last day of snow cover presence within the hydrological year (October - September) derived from daily MODIS snow cover maps.	First snow fall, last snow cover presence , snow cover, MODIS	Researchers; Management auth. of PAs;Regional authorities;Citizen scientists	http://sdi.eurac.edu/geonetwork/srv/eng/main.home	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020	4	bartolomeo.ventura_at_eurac.edu	EURAC
	Landscape and biodiversity indicators for La Palma - Canary Island	Regarding La Palma – Canary Island, Landscape and biodiversity indicators were generated for 2007. The Land Cover/Habitat map and Object-ID raster files were used as input to estimate the indicators. The outputs include a raster file of each indicator and a file "indValues.csv" containing the values of	Landscape and biodiversity indicators, La	Researchers; Management auth. of PAs;Regional authorities;National and	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Canary_Islands_La_Palma/Landscape_biodiv		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)

T y p e	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		indicators per object. The calculated indicators are: (i) PLAND; (ii) PD; (iii) SHAPE_MN; (iv) CA; (v) MPS; (vi) MESH; (vii) AWMPFD. Indicator files are accompanied by INSPIRE metadata XML files. Detailed information can be found in the "Readme.docx" included in the provided link.	Palma, PLAND, PD, SHAPE_ MN, CA, MPS, MESH, AWMPF D	International governments ; NGOs;Env. consultant companies		ersity_indicators_ by_CERTH Available on Zenodo: https://zenodo.or g/communities/ec opotentialh2020			
	Landscape and biodiversity indicators for Curonian Lagoon	Regarding Curonian Lagoon, Landscape and biodiversity indicators were generated for 2013-2014. The Land Cover/Habitat map and Object-ID raster files were used as input to estimate the indicators. The outputs include a raster file of each indicator and a file "indValues.csv" containing the values of indicators per object. The calculated indicators are: (i) PLAND; (ii) PD; (iii) SHAPE_MN; (iv) CA; (v) MPS; (vi) MESH; (vii) AWMPFD. Indicator files are accompanied by INSPIRE metadata XML files. Detailed information can be found in the "Readme.docx" included in the provided link.	Curonian Lagoon, landscap e and biodiver sity indicator s, PLAND, PD, SHAPE_ MN, CA, MPS, MESH, AWMPF D	Researchers; Management auth. of PAs;Regional authorities;N ational and International governments ; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.rec as.ba.infn.it//lustr e/ecopotential/inc oming/PAs/Curoni an_Lagoon/Landsc ape_biodiversity_i ndicators_by_CER TH Available on Zenodo: https://zenodo.or g/communities/ec opotentialh2020		imanakos_at_it i.gr	Centre for Research and Technolog y - Hellas (CERTH)
	Landscape and biodiversity indicators for Lake Prespa	Regarding Lake Prespa, Landscape and biodiversity indicators were generated for 2012. The Land Cover/Habitat map and Object-ID raster files were used as input to estimate the indicators. The outputs include a raster file of each indicator and a file "indValues.csv" containing the values of	Lake Prespa, landscap e and biodiver sity	Researchers; Management auth. of PAs;Regional authorities;N ational and	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.rec as.ba.infn.it//lustr e/ecopotential/inc oming/PAs/Lakes Ohrid_Prespa/Lan dscape_biodiversit		imanakos_at_it i.gr	Centre for Research and Technolog y - Hellas (CERTH)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		indicators per object. The calculated indicators are: (i) PLAND; (ii) PD; (iii) SHAPE_MN; (iv) CA; (v) MPS; (vi) MESH; (vii) AWMPFD. Indicator files are accompanied by INSPIRE metadata XML files. Detailed information can be found in the "Readme.docx" included in the provided link.	indicators, PLAND, PD, SHAPE_MN, CA, MPS, MESH, AWMPFD	International governments; NGOs;Env. consultant companies		y_indicators_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020			
	Landscape and biodiversity indicators for Montado	Regarding Montado, Landscape and biodiversity indicators were generated for 2007, 2012. The Land Cover/Habitat map and Object-ID raster files were used as input to estimate the indicators. The outputs include a raster file of each indicator and a file "indValues.csv" containing the values of indicators per object. The calculated indicators are: (i) PLAND; (ii) PD; (iii) SHAPE_MN; (iv) CA; (v) MPS; (vi) MESH; (vii) AWMPFD. Indicator files are accompanied by INSPIRE metadata XML files. Detailed information can be found in the "Readme.docx" included in the provided link.	Montado, landscape and biodiversity indicators, PLAND, PD, SHAPE_MN, CA, MPS, MESH, AWMPFD	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Montado/Landscape_biodiversity_indicators_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)
	Landscape and biodiversity indicators for Samaria	Regarding Samaria, Landscape and biodiversity indicators were generated for 1985,1995,2000,2005,2010,2015. The Land Cover/Habitat map and Object-ID raster files were used as input to estimate the indicators.	Samaria, landscape and biodiversity	Researchers; Management auth. of PAs;Regional authorities;N	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Samaria/PosterInputs/La		imanakos_at_iti.gr	Centre for Research and Technolog

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		The outputs include a raster file of each indicator and a file "indValues.csv" containing the values of indicators per object. The calculated indicators are: (i) PLAND; (ii) PD; (iii) SHAPE_MN; (iv) CA; (v) MPS; (vi) MESH; (vii) AWMPFD. Indicator files are accompanied by INSPIRE metadata XML files. Detailed information can be found in the "Readme.docx" included in the provided link.	indicators, PLAND, PD, SHAPE_MN, CA, MPS, MESH, AWMPFD	ational and International governments; NGOs;Env. consultant companies		ndscape_biodiversity_indicators_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020			y - Hellas (CERTH)
	Landscape and biodiversity indicators for Sierra Nevada	Regarding Sierra Nevada, Landscape and biodiversity indicators were generated for three different land cover vegetation maps. The Land Cover/Habitat map and Object-ID raster files were used as input to estimate theindicators. The outputs include a raster file of each indicator and a file "indValues.csv" containing the values of indicators per object. The calculated indicators are: (i) PLAND; (ii) PD; (iii) SHAPE_MN; (iv) CA; (v) MPS; (vi) MESH; (vii) AWMPFD. Indicator files are accompanied by INSPIRE metadata XML. Detailed information can be found in the "Readme.docx" included in the link.	Sierra Nevada, landscape and biodiversity indicators, PLAND, PD, SHAPE_MN, CA, MPS, MESH, AWMPFD	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Sierra_Nevada/Landscape_biodiversity_indicators_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)
	Maps related to the detection of abrupt changes in	Generated outputs: (i) a raster with the time of all detected abrupt changes per pixel (filename: "All_break_times_2007_to_2016.tif"), (ii) a raster with the total number of detected abrupt changes per pixel (filename:	Donana, time of detected abrupt changes,	Researchers; Management auth. of PAs;Regional authorities;N	ECOPOTENTIAL Deliverable 4.5	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Donana/BFAST_Phenolog		imanakos_at_iti.gr	Centre for Research and Technolog

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	NDVI approximated phenological cycles of Donana marshes for 2007-2016	"Marshes_maximum_number_of_breaks_2007_to_2016.tif"), (iv) a raster with the time for which the biggest change is detected per pixel has the (filename: "Marshes_maximum_break_time_2007_to_2016.tif") . The above files are accompanied by INSPIRE metadata XML files. Detailed information of inputs/outputs can be found in the "Readme.docx" included in the provided link.	total number of abrupt changes, time of biggest change, NDVI time series	ational and International governments ; NGOs;Env. consultant companies		ical_Change_Detection_in_Marshes_2007to_2016_using_Landsat_NDVI_series_by_CERTH/ Output Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020			y - Hellas (CERTH)
	Phenology metric layers and their classification layers for the NDVI approximated phenological cycle of Donana from 01/12/2015 to 31/11/2016.	"Phenology_metrics_layer_Dec2015_Nov2016.tif" includes the following layers: (i) green up day, (ii) senescence day, (iii) day of max NDVI value, and (iv) total number of NDVI peaks. These layers are also provided separately with the names: "Greenup_day_Dec2015_Nov2016.tif", "Senescence_day_Dec2015_Nov2016.tif", "Max_day_Dec2015_Nov2016.tif", "Number_of_peaks_Dec2015_Nov2016.tif". Classification layers based on these layers have been also generated. The above files are accompanied by INSPIRE metadata XML files.	Phenology metrics, Senescence day, Green up day, Day of Maximum NDVI, Total number of NDVI peaks, Classification layers based on phenolo	Researchers; Management auth. of PAs;Regional authorities;National and International governments ; NGOs;Env. consultant companies	More information can be found in "Readme.pdf" included in the provided link.	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Donana/S2_PhenologyMetrics_PerPixelISODATAclassification_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)

T y p e	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			gy metrics						
	Phenology curves regarding year 2016 for 66 vegetation habitat classes of Donana are included in "Donana_Phenology_Curves_2016.zip".	Per habitat class, two types of output images were generated: 1. The first type of output image contains six subimages corresponding to the selected indices. The respective filename has the form "Year_2016_Class_ID_'Number'_separate.tif". 2. The second type of output image contains the curves of all indices in a common image. All curves were rescaled to be directly comparable. The respective filename has the form "Year_2016_Class_ID_'Number'.tif". 'Number' is the habitat class id in the land cover map of Donana. More information can be found in "Readme.txt" included in the provided link.	phenology curves, Donana, vegetation	Researchers; Management auth. of PAs;Regional authorities	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Donana/Donana_PhenologycurvesbyCERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020)		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)
	Hydroperiod maps of Donana for 2015/2016, 2016/2017 and their accompanying INSPIRE metadata XML files.	The hydroperiod maps are named: "Donana_Hydroperiod_from_1st_Sept_2015_to_31st_Aug_2016_using_Sentinel_2_and_Landsat_inundation_maps.tif" and "Donana_Hydroperiod_from_1st_Sept_2016_to_31st_Aug_2017_using_Sentinel_2_inundation_maps.tif". Their pixel values range from 0 to 365 (or 366 for leap years) and denote the number of days a pixel is inundated within a year. They were generated by interpolating satellite-derived inundation maps falling within the period indicated in their filenames.	hydroperiod map, Donana	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Donana/Inundation_maps_and_Hydroperiod_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)
	Hydroperiod map of	The hydroperiod map is named: "Camargue_Hydroperiod_from_1st_Sept_2016_to_3	hydroperiod	Researchers; Management	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustr		imanakos_at_iti.gr	Centre for Research

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Camargue for 2016/2017 and its accompanying INSPIRE metadata XML file.	1st_Aug_2017_using_Sentinel_2_inundation_maps.tif ". The pixel values range from 0 to 365 (or 366 for leap years) and denote the number of days a pixel is inundated within a year. The map is generated by interpolating satellite-derived inundation maps falling within the period indicated in its filename.	map, Camargue	auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies		e/ecopotential/incoming/PAs/Camargue/Inundation_maps_and_Hydroperiod_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020			and Technology - Hellas (CERTH)
	Hydroperiod map of Danube Delta for 2016/2017 and its accompanying INSPIRE metadata XML file.	The hydroperiod map is named: "Danube_Delta_Hydroperiod_from_1st_Sept_2016_to_31st_Aug_2017_using_Sentinel_2_inundation_maps.tif". The pixel values range from 0 to 365 (or 366 for leap years) and denote the number of days a pixel is inundated within a year. The map is generated by interpolating satellite-derived inundation maps falling within the period indicated in its filename.	hydroperiod map, Danube Delta	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Danube_Delta/Inundation_maps_and_Hydroperiod_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)
	Inundation maps of Donana for 23 dates within the period 2015/12/19 to	Each inundation map is named as " 'Date'_inundation_map_Donana_S2.tif ", and contains the following classes: Inundated Class, Non-inundated Class. In this map, Inundated and Non-inundated Classes are denoted with 0 and 1, respectively. 'Date' is in the form YYYY_MM_DD.	inundation map, Sentinel-2, Donana	Researchers; Management auth. of PAs;Regional authorities;National and International governments	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Donana/Inundation_maps_and_Hydroperiod_by_CERTH		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	2017/08/20 and their accompanying INSPIRE metadata XML files.			; NGOs;Env. consultant companies		Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020			
	Inundation maps of Danube Delta for 10 dates within the period 2016/10/05 to 2017/08/01 and their accompanying INSPIRE metadata XML files.	Each inundation map is named as " 'Date'_inundation_map_Danube_Delta_S2.tif ", and contains the following classes: Inundated Class, Non-inundated Class. In this map, Inundated and Non-inundated Classes are denoted with 0 and 1, respectively. 'Date' is in the form YYYY_MM_DD.	inundation map, Sentinel-2, Danube Delta	Researchers; Management auth. of PAs;Regional authorities;National and International governments ; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Danube_Delta/Inundation_maps_and_Hydroperiod_by_CERTH Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)
	Inundation maps of Camargue for 47 dates within the period 2016/02/09 to 2018/06/19 and their accompanyin	Each inundation map is named as " 'Date'_inundation_map_Camargue_S2.tif ", and contains the following classes: Inundated Class, Non-inundated Class. In this map, Inundated and Non-inundated Classes are denoted with 0 and 1, respectively. 'Date' is in the form YYYY_MM_DD.	inundation map, Sentinel-2, Camargue	Researchers; Management auth. of PAs;Regional authorities;National and International governments ; NGOs;Env. consultant companies	ECOPOTENTIAL Deliverable 4.2	sftp://frontend.recas.ba.infn.it//lustre/ecopotential/incoming/PAs/Camargue/Inundation_maps_and_Hydroperiod_by_CERTH Available on Zenodo: https://zenodo.or		imanakos_at_iti.gr	Centre for Research and Technology - Hellas (CERTH)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	g INSPIRE metadata XML files.					g/communities/ecopotentialh2020			
	MODIS Land Surface Phenology Metrics	This product includes start and end of season, minimum and maximum Normalized Difference Vegetation Index and their date of occurence, the length of the vegetation period, a gross primary productivity proxy and the standard deviation of these metrics. The spatial resolution of the product is 250m. Metrics are given yearly for the period 2002-2015.	MODIS vegetation phenology satellite	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	ECOPOTENTIAL deliverable 4.2 report; Meta-Information as ISO19115/INSPIRE available	no	4	maximilian.lange_at_ufz.de	Helmholtz-Centre for Environmental Research - UFZ
	WIW	Logical rule to dectect water in wetlands, including under vegetation using the NIR and SWIR2 bands of Landsat and Sentinel satellites:	water detection	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	https://doi.org/10.3390/rs11192210	Landsat 8:WIW = NIR ≤ 0.1735 and SWIR2 ≤ 0.1035 Landsat 5, 7:WIW = NIR ≤ 0.1558 and SWIR2 ≤ 0.0871 Sentinel 2:WIW = NIR ≤ 0.1804 and SWIR2 ≤ 0.1131		poulin_at_tourduvalat.org	Tour du Valat Research Institute
	Phenology statistics	Yearly Estimation of Ecological Functional Attributes of vegetation using MSAVI index based on Landsat data from 2005-2010 over the Peneda Geres National Park	Peneda Geres; EO_Biophysical;	Researchers; Management auth. of PAs	https://zenodo.org/record/2616557#.XZ71Weczafd	yes		saverio.vicario_at_iia.cnr.it	National Research Council (CNR-IIA)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			mountains						
	Pelagos Data Cube	the Pelagos Data Cube provides a representation of overlaped spatial data layers such as chlorophyll and whale presence to highlight areas of importance for whales and likely areas of interaction with human activity (i.e. using layers of anthropogenic sound)	Ecosystem Functional Types (EFT), Med_Chl, OBIS data, Index of human impact, map of whale presence	Researchers; Management auth. of PAs; NGOs;Citizen scientists	A paper is being written, data are available on Github	https://www-iuem.univ-brest.fr/datacube/sample-apps/rshiny_app/	3	benedicte.madon _at_lifewatch.eu	UBO-ISPRA-UofGrenada-UNESCO/IOC
	Normalized Difference Vegetation Index (NDVI)	NDVI) quantifies vegetation by measuring the difference between near-infrared (which vegetation strongly reflects) and red sunlight (which vegetation absorbs)	Landsat, biophysical parameter, measure of green vegetation	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial	Deliverable 4.2	In Zenodo: https://zenodo.org/communities/ecopotentialh2020		pere.serra_at_uab.cat	Universitat Autònoma de Barcelona (UAB)

T y p e	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				services.;Citizen scientists					
	Normalized Difference Water Index (NDWI)	Monitor changes in water content of leaves, using near-infrared (NIR) and short-wave infrared (SWIR) wavelengths	Landsat, biophysical parameter, water content of leaves	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	Deliverable 4.2	In Zenodo: https://zenodo.org/communities/ecopotentialh2020		pere.serra_at_uab.cat	Universitat Autònoma de Barcelona (UAB)
	Preliminary version of the snow observation from space algorithm used from data cube	This is a proof of concept of a methodology for snow cover detection through time series analyses using Landsat satellite observations stored in an Open Data Cube and applied to an ECOPOTENTIAL case study on the Gran Paradiso National Park	Data cube, snow cover, Elevation Dependant Warming	Researchers	https://doi.org/10.3390/data4040138	no		gregory.giuliani_at_unige.ch	University of Geneva, UNEP/GRID-Geneva, National Research Council - Institute of Atmospheric Sciences

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
									and Climate,
	Snow Cover from SAR data	An algorithm based on Sentinel-1 Interferometric Wide (IW) Ground Range Detected (GRD) SAR products

(~20x20m spatial resolution, 250 km swath) were used to generate snow cover maps in Sierra Nevada (Spain), Hardangervidda (Norway) and Tatra Mountains (Poland) national parks.

SAR acquisitions were found suitable to identify wet snow covered areas through a change detection approach. However, in order to classify the snow wetness (i.e. wet or dry snow), temperature maps and digital elevation model (DEM) are needed. | Snow cover | Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists | Deliverable 4.2 EO Biophysical Parameters, Land Use and Habitats Extraction Modules | | 3 | space_at_starlab.es | Starlab Barcelona SL |
| | Shoreline delineation | Sentinel-1 Interferometric Wide (IW) Ground Range Detected (GRD) products were used for the shoreline delineation of the Wadden Sea area. The frequent availability of such products with a spatial resolution of ~20x20m (10x10m pixel spacing) made them particularly suitable to the coastline detection. | Shoreline delineation | Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial | Deliverable 4.2 EO Biophysical Parameters, Land Use and Habitats Extraction Modules | | 3 | space_at_starlab.es | Starlab Barcelona SL |

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				and industrial services.;Citizen scientists					
	Corine Land Cover 2012	Subset of LC2012 for Abisko, Bavarian NP, Camargue, Curonian, Danube Delta, Donana, Gran Paradiso, High Tatra, La Palma, Limestone, Montado, Murgia, Ohrid Prespa, Samaria, Sierra Nevada, Swiss NP	Land cover / Land Use	Researchers; Management authorities of protected sites; Regional authorities; Non-governmental organisations; Environment consultant companies	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product Copernicus Services	In Zenodo	7	mihai_at_tma.ro	UPS/CESBIO
	Corine Land Cover Change 2012-2016	Subset of CLC2012-2016 for Abisko, Bavarian NP, Camargue, Curonian, Danube Delta, Donana, Gran Paradiso, High Tatra, La Palma, Limestone, Montado, Murgia, Ohrid Prespa, Samaria, Sierra Nevada, Swiss NP	Land Cover Change	Researchers; Management authorities of protected sites; Regional authorities; Non-governmental organisations;	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product Copernicus Services	In Zenodo	7	mihai_at_tma.ro	UPS/CESBIO

T y p e	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				Environment consultant companies					
	Forest Type	Subset of Forest Type (coniferous, deciduous, mixed) for Abisko, Bavarian NP, Camargue, Curonian, Danube Delta, Donana, Gran Paradiso, High Tatra, La Palma, Limestone, Montado, Murgia, Ohrid Prespa, Samaria, Sierra Nevada, Swiss NP	Forest Type	Researchers; Management authorities of protected sites; Regional authorities; Non-governmental organisations; Environment consultant companies	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product Copernicus Services	In Zenodo	7	mihai_at_tma.ro	UPS/CESBIO
	Tree Cover Density	Subset of Tree cover density for Abisko, Bavarian NP, Camargue, Curonian, Danube Delta, Donana, Gran Paradiso, High Tatra, La Palma, Limestone, Montado, Murgia, Ohrid Prespa, Samaria, Sierra Nevada, Swiss NP	Tree cover density	Researchers; Management authorities of protected sites; Regional authorities; Non-governmental organisations; Environment	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product Copernicus Services	In Zenodo	7	mihai_at_tma.ro	UPS/CESBIO

T y p e	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				consultant companies					
	Sentinel-1 time series	Sentinel-1 time series of backscatter coefficient (VV, VH) for 2015-2016 for: Bavarian NP, Camargue, Curonian, Danube Delta, Donana, HarHarNegeve, Kruger, Limestone, Montado, Murgia, Peneda Geres, Samaria, Sierra Nevada	Sentinel-1 backscatter	Researchers; Environment consultant companies	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product	In Zenodo	9	mihai_at_tma.ro	UPS/CESBIO
	Lidar derived metrics and products for Limestone	Above ground biomass, Vegetstion height, DEM, Slope	AGB, Height, Topopgraphy	Researchers; Management authorities of protected sites; Regional authorities; Non-governmental organisations; Environment consultant companies	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product	In Zenodo	7	mihai_at_tma.ro	UPS/CESBIO
	Lidar derived metrics and products for: La Palma	Canopy height model, digital elevation model, digital surface model, vegetation fraction, LAI, forest canopy cover, Lidar return proportion for various height strata.	CHM, DSM, LAI FCC	Researchers; Management authorities of protected sites; Regional authorities; Non-	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product	In Zenodo	7	mihai_at_tma.ro	UPS/CESBIO

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				governmental organisations; Environment consultant companies					
	Lidar derived metrics and products for: Sierra Nevada Sierra de Baza	Above ground biomas, Canopy height model, digital elevation model, digital surface model, vegetation fraction, LAI, forest canopy cover, Lidar return proportion for various height strata.	AGB, CHM, DSM, LAI FCC	Researchers; Management authorities of protected sites; Regional authorities; Non-governmental organisations; Environment consultant companies	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product	In Zenodo	7	mihai_at_tma.ro	UPS/CESBIO
	Lidar derived metrics and products for: Swiss NP Davos wilderness	Above ground biomas 2003, Above ground biomas 2012, Canopy height model 2003, Canopy height model 2012	AGB, CHM	Researchers; Management authorities of protected sites; Regional authorities; Non-governmenta l	ECOPOTENTIAL Deliverable 4.2 ReadMe file with the product	In Zenodo	7	mihai_at_tma.ro	UPS/CESBIO

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				l organisations ; Environment consultant companies					
	Landsat Land Surface Temperature	Up-to-date Land Surface Temperature at 30 x 30 m. Datasets are available for downloading at user defined polygon (at any area of the globe), time frame (for the full Landsat 5, 7 and 8 archive) and emissivity source (ASTER, MODIS, NDVI-based)	LST; Landsat; Google Earth Engine; Cloud	Researchers; Management auth. of PAs;Regional authorities;National and International governments ;Env. consultant companies;Citizen scientists	https://www.mdpi.com/2072-4292/9/12/1208	YES	7	dpoursanidis_at_iacm.forth.gr	Foundation for Research and Technology - Hellas
	SARWIND LG-Mod 3	High resolution Sea Surface Wind retrieval over coastal Protected Areas by means of Sentinel-1 data	Coastal/ Marine; Wind Field; Sea Surface Wind (SSW); Local Gradient - Modified	Researchers; Management auth. of PAs;Regional authorities;National and International governments ; NGOs;Env. consultant companies;Commercial	https://zenodo.org/record/2625460#.XZ8xJpMzau4	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		fabiomichele.rana_at_iia.cnr.it	National Research Council (CNR-IIA)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			(LG-Mod); Synthetic Aperture Radar (SAR); Sentinel-1; Camargue; Wadden Sea	and industrial services.;Citizen scientists					
	Gran Paradiso: grassland change map (2012-2016)	A change map for the land cover class "GRASSLAND" in "Gran Paradiso" PA, obtained by the Cross Correlation Analysis algorithm (CCA).	Mountains; Gran Paradiso; Change detection	Researchers; Management auth. of PAs	https://zenodo.org/record/2628381#.XZ-ibVUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Murgia Alta: grassland change map (2012-2015).	A change map for the land cover class "GRASSLAND" in "Murgia Alta" PA, obtained by the Cross Correlation Analysis algorithm (CCA) [1,2] considering at time T1 the layer "GRASSLAND" from COPERNICUS Service VHR layer dated 2012 and at time T2 a Sentinel-2A image dated August 7th, 2015. The map was produced at 20 meters spatial resolution and projected in WGS84/UTM33N. The map has binary values where value 1 indicates pixels changed from GRASSLAND to other whereas	Arid-semi arid; Murgia Alta; Change detection	Researchers; Management auth. of PAs	https://zenodo.org/record/2624777#.XZ-iAlUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		value 0 indicates No changed/Not considered pixels. The Overall Accuracy (OA) of the map was: OA=94.21%±0.10%.							
	Murgia Alta: grassland change map (2006-2014).	A change map for the land cover class "GRASSLAND" in "Murgia Alta" PA, obtained by the Cross Correlation Analysis algorithm (CCA) considering at time T1 the layer "GRASSLAND" from an existing land use map dated 2006 (provided by Puglia Region) and at time T2 a Landsat 8 image dated August 10th, 2014. The map was produced at 30 meters spatial resolution and projected in WGS84/UTM33N. The map has binary values where value 1 indicates pixels changed from GRASSLAND to other whereas value 0 indicates No changed/Not considered pixels. The Overall Accuracy (OA) of the map was: OA=95.70%±0.30%.	Arid-semi arid; Murgia Alta; Change detection	Researchers; Management auth. of PAs	https://zenodo.org/record/2625574#.XZ-goFUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Murgia Alta: Ailantus altissima invasive species presence map (2012)	An Ailanthus altissima invasive species presence map in "Murgia Alta" PA, for 2012, obtained by a two stage algorithm. The map was produced at 2 meters spatial resolution and projected in WGS84/UTM33N. The map has binary values where value 1 indicates Ailanthus altissima pixels whereas value 0 indicates No Ailanthus altissima. The Overall Accuracy (OA) of the map was: OA=97.96%±0.14%.	Arid-semi arid; Murgia Alta; Invasive species	Researchers; Management auth. of PAs	https://zenodo.org/record/2628377#.XZ-f_lUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Murgia Alta: land cover map (2013)	A land cover map in "Murgia Alta" PA, for 2013, obtained by considering a Landsat intra-annual time series of NDVI spectral index computed for 27 images.	Arid-semi arid;	Researchers; Management auth. of PAs	https://zenodo.org/record/262	Available on Zenodo: https://zenodo.or		cristina.tarantino_at_iia.cnr.it	National Research

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		A Maximum Likelihood classifier was used for a 13 classes problem. The images were preprocessed, atmospherically corrected, masked for clouds and shadow clouds cover and interpolated for the gaps filling.The map was produced at 30 meters spatial resolution and projected in WGS84/UTM33N. The Overall Accuracy (OA) of the map was: OA=83.62%±0.90%. The map has 14 values related as follows in LCCS-FAO taxonomy	Murgia Alta; EO_classifications		8357#.XZ-kZ1UzaUk	g/communities/ecopotentialh2020			Council (CNR-IIA)
	Canary Islands La Palma: improductivo change map (2003-2015)	A change map for the land cover class "IMPRODUCTIVO" in "La Palma" PA, obtained by the Cross Correlation Analysis algorithm (CCA) considering at time T1 the layer "IMPRODUCTIVO" from an existing land cover map dated 2003 and at time T2 a Landsat 8 image dated July 8th, 2015.The map was produced at 30 meters spatial resolution and projected in WGS84/UTM28N. The map has binary values where value 1 indicates pixels changed from IMPRODUCTIVO to other whereas value 0 indicates No changed/Not considered pixels.	Mountains; Change detection; Canary Islands La Palma	Researchers; Management auth. of PAs	https://zenodo.org/record/2628473#.XZ-j21UzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Canary Islands La Palma: pinar canario change map (2003-2015)	A change map for the land cover class "PINAR CANARIO" in "La Palma" PA, obtained by the Cross Correlation Analysis algorithm (CCA) considering at time T1 the layer "PINAR CANARIO" from an existing land cover map dated 2003 and at time T2 a Landsat 8 image dated July 8th, 2015. The map was produced at 30 meters spatial resolution and projected in WGS84/UTM28N.	Mountains; Change detection; Canary Islands La Palma	Researchers; Management auth. of PAs	https://zenodo.org/record/2628485#.XZ-jgVUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		The map has binary values where value 1 indicates pixels changed from PINAR CANARIO to other whereas value 0 indicates No changed/Not considered pixels.							
	Canary Islands La Palma: cultivo change map (2003-2015)	A change map for the land cover class "CULTIVO" in "La Palma" PA, obtained by the Cross Correlation Analysis algorithm (CCA) considering at time T1 the layer "CULTIVO" from an existing land cover map dated 2003 and at time T2 a Landsat 8 image dated July 8th, 2015. The map was produced at 30 meters spatial resolution and projected in WGS84/UTM28N. The map has binary values where value 1 indicates pixels changed from CULTIVO to other whereas value 0 indicates No changed/Not considered pixels.	Mountains; Change detection; Canary Islands La Palma	Researchers; Management auth. of PAs	https://zenodo.org/record/2628467#.XZ-i1VUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Canary Islands La Palma: pinar disperso change map (2003-2015)	A change map for the land cover class "PINAR DISPERSO" in "La Palma" PA, obtained by the Cross Correlation Analysis algorithm (CCA) [1,2] considering at time T1 the layer "PINAR DISPERSO" from an existing land cover map dated 2003 and at time T2 a Landsat 8 image dated July 8th, 2015. The map was produced at 30 meters spatial resolution and projected in WGS84/UTM28N. The map has binary values where value 1 indicates pixels changed from PINAR DISPERSO to other	Mountains; Change detection; Canary Islands La Palma	Researchers; Management auth. of PAs	https://zenodo.org/record/2628494#.XZ-hoFUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		whereas value 0 indicates No changed/Not considered pixels.							
	Canary Islands La Palma: cloudiness timely presence (2016)	A map representing the cloudiness timely presence on "La Palma" PA from December 2015 to April 2016. The map has 10 values related as follows: Value 1 = presence of cloudiness in 1 scene Value 2 = presence of cloudiness in 2 scene Value 3 = presence of cloudiness in 3 scene Value 4 = presence of cloudiness in 4 scene Value 5 = presence of cloudiness in 5 scene the higher values correspond to higher cloudiness timely presence. The map was produced from Sentinel-2A at 60 meters spatial resolution and projected in WGS84/UTM28N.	Mountains; Cloud Cover; Canary Islands La Palma	Researchers; Management auth. of PAs	https://zenodo.org/record/2628458#.XZ-c_VUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Canary Islands La Palma: cloudiness timely presence (2015)	A map representing the cloudiness timely presence on "La Palma" PA from August to December 2015. The map was produced from Landsat 8 at 30 meters spatial resolution and projected in WGS84/UTM28N.	Mountains; Cloud Cover; Canary Islands La Palma	Researchers; Management auth. of PAs	https://zenodo.org/record/2628445#.XZ-fRFUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Canary Islands La Palma: cloud cover map (2016)	A multi-temporal cloud cover map related to 5 Sentinel-2A images in "La Palma" PA from December 2015to April 2016. The 5 layers representing the cloud cover (as OR among different temporal and spatial acquisitions in each month) were related to the following dates: December 2015, January 2016, February 2016, March 2016 and April 2016 .	Mountains; Cloud Cover; Canary Islands La Palma	Researchers; Management auth. of PAs	https://zenodo.org/record/2628429#.XZ-ehFUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		The maps was produced at 60 meters spatial resolution and projected in WGS84/UTM28N. The map has binary values where value 1 indicates cloud cover pixels whereas value 0 indicates No cloud cover pixels.							
	Canary Islands La Palma: cloud cover map (2015)	A multi-temporal cloud cover map related to 10 Landsat 8 images in "La Palma" PA from August to December 2015. The 10 layers were related to the following dates: August 9th, August 25th, September 10th, September 26th, October 12nd, October 28th, November 13rd, November 29th, December 15th, December 31st. The maps was produced at 30 meters spatial resolution and projected in WGS84/UTM28N. The map has binary values where value 1 indicates cloud cover pixels whereas value 0 indicates No cloud cover pixels.	Mountains; Cloud Cover; Canary Islands La Palma	Researchers; Management auth. of PAs	https://zenodo.org/record/2628416#.XZ-A1VUzaUl	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Phenology statistics	Yearly Estimation of Ecological Functional Attributes of vegetation using MSAVI index based on Landsat data from 2005-2010 over the Murgia Alta National Park	Murgia Alta; EO_Biophysical; arid/semi-arid	Researchers	https://zenodo.org/record/3491886#.XabvFPdS9hE	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		saverio.vicario_at_iia.cnr.it	National Research Council (CNR-IIA)
	Murgia Alta: land cover map (2018)	A land cover map in "Murgia Alta" PA, for 2018, obtained by considering 4 multi-seasonal Sentinel-2 images. A Support Vector machine (SVM) classifier was used for a 13 classes problem. The images were atmospherically corrected.	Arid-semi arid; Murgia Alta;: land	Researchers; Management auth. of PAs	https://zenodo.org/record/3491867#.XabrjFUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		The map was produced at 10 meters spatial resolution and projected in WGS84/UTM33N.The Overall Accuracy (OA) of the map was: OA=97.37%±0.09%.The map has 14 values related as follows in LCCS-FAO taxonomy:	cover map						
	Murgia Alta: grassland change map (1990-2018).	A binary change map for the land cover class "GRASSLAND" in "Murgia Alta" (Italy) PA, detected by the Cross-Correlation Analysis (CCA) [1,2] algorithm considering at time T1 the two layers "NATURAL GRASSLAND" (land cover) and "PASTURES" (land use) from CORINE LAND COVER dated 1990 and at time T2 a Sentinel-2A image dated 19 July 2018, at 10 meters spatial resolution, projected in WGS84/UTM33N. The map has binary values where value 1 indicates pixels changed from GRASSLAND to other whereas value 0 indicates No changed/Not considered pixels.	Arid-semi arid; Murgia Alta; Change detection	Researchers; Management auth. of PAs	https://zenodo.org/record/3491805#.XabsNVUzaUk	Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020		cristina.tarantino_at_iia.cnr.it	National Research Council (CNR-IIA)
	Montado: grassland change map (2012-2016)	A binary change map for the class "GRASSLAND" on Montado (Portugal) PA, detected by the Cross Correlation Analysis (CCA) [1,2] algorithm considering at time T1 the layer "GRASSLAND" from COPERNICUS Service layer dated 2012 and at time T2 a Sentinel-2A image dated 18 August 2016, at 20 meters spatial resolution, projected in WGS84/UTM29N.

The map has binary values where value 1 indicates pixels changed from GRASSLAND to other whereas value 0 indicates No changed/Not considered pixels. | Arid-semi arid; Montad o; Change detection | Researchers; Management auth. of PAs | https://zenodo.org/record/3491725#.XabZtFUzaUk | Available on Zenodo: https://zenodo.org/communities/ecopotentialh2020 | | cristina.tarantino_at_iia.cnr.it | National Research Council (CNR-IIA) |
| | Gran Paradiso - | A vegetated/not vegetated binary map for the Nivolet area in Gran Paradiso (Italy) PA, detected by a | Mountai ns; Gran | | https://zenodo.org/record/349 | Available on Zenodo: | | cristina.tarantino_at_iia.cnr.it | National Research |

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Nivolet: binary map vegetated/not vegetated (2016)	thresholding on NDVI spectral index extracted from a Sentinel-2A image dated 13 August 2016, at 10 meters spatial resolution, projected in WGS84/UTM32N. The map has binary values where value 1 indicates pixels of vegetation whereas value 0 indicates No vegetation pixels.	Paradiso ; EO_class ifications	Researchers; Management auth. of PAs	1704#.XabVg1 UzaUk	https://zenodo.org/communities/ecopotentialh2020			Council (CNR-IIA)
	Mediterranean Sea Surface Temperature	Sea Surface Temperature (SST) from infrared satellite imagery packaged as multitemporal series (derived from SST L4 dataset in Copernicus CMEMS service), 1km resolution, daily, from 1982 to 2016.	Med_SST	Researchers; Management auth. of PAs;Regional authorities;National and International governments ; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	D4.2, D4.5, D8.5	Ecopotential project ftp		emiliana.valentini_at_isprambiente.it	ISPRA
	Hydroperiod 2008/09 for Landsat scenes 202/34 and 202/35	Hydroperiod with number of days flooded per pixel in the mosaic of the 2 Landsat scenes that cover the Gulf of Cádiz	Hydroperiod, Donana, Flood	Researchers; Management authorities of protected sites;Regional authorities		This product is part of the analysis for a paper that is still in process. The publication will be OA		jbustamante_at_ebd.csic.es	CSIC (Agencia Estatal Consejo Superior de Investigaci

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
									ones Científicas)
	Global Fraction of Green Vegetation Cover	Global Fraction of Green Vegetation Cover from MODIS sensor, 1km, monthly, from 2001 to 2015	Fcover	Researchers; Management auth. of PAs;Regional authorities;National and International governments ; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	Filipponi, F.; Valentini, E.; Nguyen Xuan, A.; Guerra, C.A.; Wolf, F.; Andrzejak, M.; Taramelli, A. Global MODIS Fraction of Green Vegetation Cover for Monitoring Abrupt and Gradual Vegetation Changes. Remote Sens.2018, 10, 653. https://doi.org/10.3390/rs10040653	Yes, by sending a request to as indicated in the paper. ISPRA is evaluating a better solution to get free access through its portal and other open services for data products like Copernicus services		emiliana.valentini_at_isprambiente.it	ISPRA
	Evaluation of TsHARP Utility for Thermal	A spatially distributed land surface temperature is important for many studies. The recent launch of the Sentinel satellite programs paves the way for an abundance of opportunities for both large area and	land surface temperature;	Researchers; Management auth. of PAs;Regional	Remote Sensing. 11, 2304;	OA paper		karnieli_at_bgu.ac.il	Ben Gurion University

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Sharpening of Sentinel-3 Satellite Images Using Sentinel-2 Visual Imagery	long-term studies. However, the spatial resolution of Sentinel-3 thermal images is not suitable for monitoring small fragmented fields. Thermal sharpening is one of the primary methods used to obtain thermal images at finer spatial resolution at a daily revisit time. In the current study, the utility of the TsHARP method to sharpen the low resolution of Sentinel-3 thermal data.	image sharpening; TsHARP; thermal remote sensing; Sentinel-3; Sentinel-2	authorities;National and International governments; NGOs;Env. consultant companies	doi:10.3390/rs11192304				of the Negev
	Multispectral Approach for Identifying Invasive Plant Species Based on Flowering Phenology Characteristics	Invasive plant species (IPS) are the second biggest threat to biodiversity after habitat loss. The current study aims at identifying and mapping the aggressive IPS of Acacia salicina and Acacia saligna, to understand better the key factors influencing their distribution. Our results demonstrate how the integration of remote-sensing data with different data sources can assist in determining IPS proliferation and provide detailed geographic information for conservation and management efforts to prevent their future spread.	imaging spectroscopy; phenology; machine learning; biodiversity conservation; flowering detection	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	Remote Sensing, 11, 953; doi:10.3390/rs11080953.	OA paper		karnieli_at_bgu.ac.il	Ben Gurion University of the Negev
	Multi-task linear learning for predicting	In the current study, we investigated the performance of a linear multi-task learning algorithm based on a regularized dirty model for modeling and predicting several key soil properties using field spectroscopy	visible-near infrared and	Researchers; Management auth. of PAs;Regional	Remote Sensing. 9, 1099.	OA paper		karnieli_at_bgu.ac.il	Ben Gurion University

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	soil properties using field spectroscopy	(350–2500 nm) as an integrated approach. Our results highlight the use of LMTL in field spectroscopy analysis that can improve the generalization performance of regression models for predicting soil properties.	shortwave infrared (VNIR/SWIR); soil measurement; dirty model; partial least squares regression (PLS-R); regularization;	authorities;National and International governments; NGOs;Env. consultant companies;Citizen scientists	doi:10.3390/rs9111099				of the Negev
	LAST-EBD Flood mask, Water Turbidity an NDVI VLab Model	Our service consists in the generation of a series of tematic rasters from a Landsat scene: NDVI, water turbidity, and flood mask. The process first generates a normalized (*) image based on pseudo-invariant areas (PIAs) and, based on it, the indicated products. In a last step, flood masks are used to compute the annual hydroperiod. The model is dependent on the PIAs that have to be defined, so currently it is only applicable to the Landsat scene 202/34 where the Doñana Natural Area is located. For new areas PIAs have to be defined and tested. A reference scene for normalization needs to be se	Donana, Flood Mask, NDVI, Water Turbidity, VLAB	Researchers; Management auth. of PAs;Regional authorities; NGOs;Env. consultant companies	https://vlab.geodab.org/workflows	Yes, the product is freely available through the Ecopotential VLAB	5	diegogarcia_at _ebd.csic.es	CSIC

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
	Remote sensing in the reflective spectrum: a powerful and applied technology for terrestrial ecosystem science	OTHER: Review paper Combining remote sensing techniques and methods with ecosystem science is challenging since the former has several notable benefits that offer a great number of advanced applications to terrestrial ecology in both spatial and temporal domains. The review is focused on the reflective part of the spectrum, that is, the visible, near-, and shortwave infrared regions; however, other regions, such as the thermal and microwave, are excluded. Moreover, the review mainly describes the spectral dimension of remote sensing, leaving the related image analysis techniques for another document.	Spaceborne platforms and instrumentation, Spectral indices and algorithms, Narrowbands, Hyperspectral, Spectral analysis	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies	Chabbi A. and Loescher H.W. (Eds.) Terrestrial Ecosystem Research Infrastructures: Challenges, New developments and Perspectives. CRC Press, Boca Raton, 234-277. ISBN 9781498751315 - CAT# K27248	OA paper		karnieli_at_bgu.ac.il	Ben Gurion University of the Negev
	rtsa (Raster Time Series Analysis)	OTHER: R software library The 'rtsa' (Raster Time Series Analysis) package for R programming language is a collection of analytics to perform spatial - temporal analysis from raster time series and freely available for R software language. Since some techniques for spatio-temporal analysis can not deal with missing values raster time series, a selection of gap-filling methods are included.	rtsa	Researchers; Management auth. of PAs;National and International governments; NGOs;Env. consultant companies	D4.5	Yes, https://github.com/ec-ecopotential/rtsa	4	federico.filipponi_at_isprambiente.it	ISPRA
	ECOPOTENTIAL4SCHOOLS	OTHER: Dissemination and education		National and International governments	http://ecopotential4schools.lifewatchitaly.eu	YES	1	Francesco.cozzoli_at_unisalento.it	University of Salento

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		SERIOUS GAME TARGETED TO HIGH SCHOOL STUDENTS AND ONLINE PLATFORM		; NGOs;Citizen scientists					
	Earth Observation for Environmental Management. Science for post 2020 Environmental targets: Insights from Earth Observation of Protected Areas	OTHER: Science Policy Brief

The Brief highlights the findings of the ECOPOTENTIAL project which support the use of EO in Protected Areas throughout Europe. Based on an outline of existing policies, various policy recommendations were developed in the brief targeting decision-makers regarding an uptake of EO in policies on different levels. | policy, recommendation, decision-making | Regional authorities;National and International governments | The Science Policy Brief was developed in WP 12 and was part of deliverable 12.12 "Science-policy briefing at the European Parliament (UNEP)". | File available on Zenodo https://zenodo.org/communities/ecopotentialh2020 | | matthias.jurek_at_un.org | UNEP |
| | RainFARM Julia library and collection of interface tools implementing the RainFARM stochastic precipitation downscaling | OTHER: Downscaling software/tool

RainFARM.jl is a Julia library and a collection of command-line interface tools implementing the RainFARM (Rainfall Filtered Autoregressive Model) stochastic precipitation downscaling method. Adapted for climate downscaling according to (D'Onofrio et al. 2018) and with fine-scale orographic weights (Terzago et al. 2018).

RainFARM (Rebora et al. 2006) is a metagaussian stochastic downscaling procedure based on the extrapolation of the coarse-scale Fourier power | precipitation, mountains, downscaling, software | Researchers | Deliverable D8.1 (WP8) | Openly available on Github at this link: https://github.com/jhardenberg/RainFARM.jl | | s.terzago_at_isac.cnr.it | National Research Council (CNR-ISAC) |

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		spectrum of a spatio-temporal precipitation field to small scales.							
	Optimizing sampling effort and information content of biodiversity surveys	OTHER: R code to optimize field surveys We sampled nine 20 m × 20 m-plots. Each plot consisted of 100 2 m × 2 m-subplots. Species richness and Shannon diversity were quantified for different sizes and quantities of subplots. We simulated larger subplot sizes by unifying adjacent 2 m × 2 m-subplots. Shannon's information entropy was used to quantify information content among richness and diversity values resulting from different subplot sizes and quantities. The optimal size and number of subplots is the lowest size and number of subplots returning maximal information. This optimal subplot size and number was determined by Mood's med		Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	https://doi.org/10.1016/j.ecoinf.2019.03.003	https://doi.org/10.1016/j.ecoinf.2019.03.003		samuel.hoffmann_at_uni-bayreuth.de	University of Bayreuth
	Uniqueness of Protected Areas in th EU	OTHER: Dataset Protected areas (PAs) constitute major tools in nature conservation. In the European Union (EU), the Birds and Habitats Directives are the most important policies for conservation strategy, legally preserving Europe's characteristic, rare, endemic and threatened biota. We used occurrence data for species listed in the directives' Annexes to assess the uniqueness of major PAs in the EU (National Parks, Biosphere Reserves); this is important for preserving the EU's focal species. We developed a novel, multifunctional		Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and	doi:10.1038/s41598-018-24390-3	doi:10.1038/s41598-018-24390-3		samuel.hoffmann_at_uni-bayreuth.de	University of Bayreuth

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		approach to calculate different metrics of conservation value that represent di		industrial services.;Citizen scientists					
	Data on alpine grassland diversity in Gran Paradiso National Park, Italy	OTHER: Dataset The diversity of alpine grassland species and their functional traits constitute alpine ecosystem functioning and services that support human-wellbeing. However, alpine grassland diversity is threatened by land use and climate change. Field surveys and monitoring are necessary to understand and preserve such endangered ecosystems. Here we describe data on abundances (percentage cover) of 247 alpine plant species (including mosses and lichens) inside nine 20 m by 20 m plots that were subdivided into 2 m by 2 m subplots. The nine plots are located in Gran Paradiso National Park, Italy. They cove		Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial and industrial services.;Citizen scientists	doi:10.1016/j.dib.2019.103942	doi:10.1016/j.dib.2019.103942		samuel.hoffmann_at_uni-bayreuth.de	University of Bayreuth
	Video: ECOPOTENTIAL Earth Observation resources for protected area management	OTHER: Dissemination A short, visual guide to free open access remote sensing and modelling tools designed for monitoring ecosystems and protected areas, made available through the Horizon 2020 ECOPOTENTIAL project (ecopotential-project.eu), including the Virtual Laboratory (VLAB), the Protected Areas from Space browser, and more.	models, Earth Observation tool, Protected Areas, natural resources management	Researchers; Management auth. of PAs;Regional authorities;National and International governments; NGOs;Env. consultant companies;Commercial	Deliverable: D12.10	https://vimeo.com/359544693/1831550372 - terms of use: CC-BY-NC-ND	9	mariasilvia.giamberini_at_igg.cnr.it	GRID Arendal / National Research Council of Italy – (CNR-IGG and IAC)

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
				and industrial services.;Citizen scientists					
	Model Selection Permutation Test	OTHER: Methodology New methodology to assess the "significance" of a model selection procedure in population modelling.	population modelling, reindeer, AIC, permutation test.	Researchers	It is described in D8.3. The methodology is also demonstrated in an accepted paper (Effects of weather and hunting on wild reindeer population dynamics in Hardangervidda National Park). A paper specifically on the subject is due to be submitted before the end of October.	Yes, if forms a chapter of D8.3.	8	e.d.wheatcroft _at_lse.ac.uk	LSE
	Methodology to define benchmark models in ecology	OTHER: Methodology In ecological modelling, it is often suggested that a null model should be included to help assess the absolute fit of a set of models. We go further by suggesting benchmark models (based purely on past	Null model, benchmark models, Hardang	Researchers	Described in 8.3, demonstrated in an accepted paper (Effects of weather and	Yes, in D8.3.	8	e.d.wheatcroft _at_lse.ac.uk	LSE

T y p e	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
		observations) that can be shown to outperform the null model. THis is demonstrated in the context of Hardangervidda and Gran Paradiso National Parks.	ervidda, Gran Paradiso		hunting on wild reindeer population dynamics in Hardangervidda National Park) and further demonstrated in a paper to be submitted shortly.				
	EnvThes (Envionmental Thessaurus)	OTHER: Vocabulary EnvThes (Environmental Thesaurus) ia a controlled vocabulary developed for the Long term ecosystem Monitoring community (LTER) in Europe. It aims to provide a unified semantic backbone for the description und harmonised provision of in-situ data. EnvThes is used by DEIMS-SDR to annotate metadata with common keywords as well as variable description. Within ECOPOTENTIAL EnvThes was evaluated and extended to link in-situ and EO data concepts.	vocabulary; long term observation; dataset; variable; ecosystem; ecopotential; LTER	Researchers; Management auth. of PAs;Env. consultant companies;Commercial and industrial services.	Magagna et al. (2018) D5.6 Harmonised delivery of data. Project deliverable. [https://ecopotential-project.eu/images/ecopotential/documents/D5.6.pdf]	yes	7	barbara.magagna_at_umweltbundesamt.at	Umweltbundesamt GmbH
	ECOPOTENTIAL Virtual Laboratory online documentation	OTHER: Capacity Building Material This contains all the necessary documentation so that researchers are able to share their own workflow through the Virtual Laboratory.	Virtual Laboratory, documentation, Capacity Building	Researchers	It is self-descriptive at https://confluence.geodab.eu/	Available at https://confluence.geodab.eu/		yaniss.guigoz_at_unepgrid.ch	University of Geneva, UNEP/GRID-Geneva, National Research

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
									Council (CNR-IIA)
	Data on CO2 Net Ecosystem Exchange (NEE) and CO2 Ecosystem Respiration (ER) from alpine grasslands in Gran Paradiso National Park (GPNP), Italy	OTHER: Dataset

This dataset provides information about CO2 fluxes (NEE and RE) from Alpine grasslands in Gran Paradiso National Park, Italy, as a result of seasonal samplings in the vegetative season (approximatively July - Sept) from July 2016 to September 2019, carried out by researchers from IGG-CNR. Measurements have been conducted at selected plots in Noaschetta, a lateral valley of the Orco Valley, and at selected plots in Pian del Nivolet, by using the flux chamber method and collecting also other variables such as temperature and volumetric water content of soil, solar radiation, air temperature and | Gran Paradiso National Park, CO2 fluxes, flux chamber, monitoring, alpine grassland | Researchers; Management auth. of PAs;Regional authorities; NGOs;Env. consultant companies | paper in preparation | The full dataset will become available as soon as the data paper will be published, and it will be stored in a open repository | | antonello.provenzale_at_cnr.it | National Research Council (CNR-IGG) |
| | CO2 and H2O fluxes from Eddy Covariance and meteorological data from a station installed in Pian del Nivolet, Gran Paradiso National Park (GPNP) | OTHER: Dataset

This dataset provides information about CO2 and H2O fluxes from an Alpine grassland located at Pian del Nivolet in Gran Paradiso National Park, Italy, as a result of continuous long-term monitoring (30 minutes acquisition signals) from August 2019 with the Eddy Covariance technique. The data are acquired using a LI-7200 enclosed path CO2/H2O analyzer connected with a sonic anemometer. On-board data storage enables logging synchronized data from the LI-7200 CO2/H2O Analyzer and auxiliary sensors: the 3D sonic anemometer, air temperature and relative humidity, solar radiation. | Gran Paradiso National Park, CO2 and H2O fluxes, Eddy Covariance, monitoring, alpine | Researchers; Management auth. of PAs;Regional authorities; NGOs;Env. consultant companies | paper in preparation | The full dataset will become available as soon as the data paper will be published, and it will be stored in a open repository | | antonello.provenzale_at_cnr.it | National Research Council (CNR-IGG) |

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			grassland						
	Chemical-Physical data on Alpine grassland soils in Gran Pardiso National Park (GPNP), Italy	OTHER: Dataset Physical-chemical data of alpine grassland superficial soils (from 0 to about 15 cm depth) collected at different locations in GPNP (Pian del Nivolet and Noaschetta valley) during summer season in 2016-2019. The samples were analyzed by IGG-CNR for: pH, conductivity, gran size, Organic Carbon, Inorganic carbon, Total Nitrogen.	Gran Paradiso National Park, soil properties, alpine grassland	Researchers; Management auth. of PAs;Regional authorities; NGOs;Env. consultant companies	paper in preparation	The full dataset will become available as soon as the data paper will be published, and it will be stored in a open repository. Samples are stored as archive at IGG-CNR and available upon request.		antonello.provenzale_at_cnr.it	National Research Council (CNR-IGG)
	booklet "SPACED" - Using Earth Observation to Protect Natural Landscapes	OTHER: Dissemination Book containing a simple description of the research conducted in the ECOPOTENTIAL protected areas	Protected Areas; Earth Observation	Management auth. of PAs;Regional authorities;National and International governments; NGOs;Citizen scientists	https://www.ecopotential-project.eu/outreach/2nd-ed-of-spaced-book.html	https://www.ecopotential-project.eu/outreach/2nd-ed-of-spaced-book.html		antonello.provenzale_at_cnr.it	National Research Council (CNR-IGG), CREAF
	ECOPOTENTIAL photo exhibition	OTHER: Dissemination Photo Exhibition about the use of Earth Observation in research on ecosystems of 25 protected areas	ECOPOTENTIAL - Earth Observation -	Management auth. of PAs;Regional authorities;National and	D12.8 Photo Exhibition	https://www.ecopotential-project.eu/products/photoexhib.html		antonello.provenzale_at_cnr.it	National Research Council (CNR-

Type	Name of the product	Description	Tags	Potential Users/ Audience	Documentation	Access	TRL	Contact (@ is replaced by _at_)	Partner
			Protected Areas	International governments; NGOs;Citizen scientists					IGG), UNEP
	Protecting Marine Mammals in Crowded Waters: an ECOPOTENTIAL Storymap	OTHER: Dissemination and Outreach The ECOPOTENTIAL project is using cutting-edge satellite imagery, ecological modelling and local knowledge to improve the conservation of marine mammals in the Mediterranean Sea. This online storymap describes some of the approaches used by ECOPOTENTIAL researchers, in a visual, informative and accessible format that is targeted at young scientists, researchers and the general public.	Pelagos, whales, storymap	Researchers; Management authorities of protected sites;Non-governmental organisations ;Citizen scientists	This is an online document freely accessible through a web link	https://www.ecopotential-project.eu/		bjorn.alfthan_at_grida.no	GRID-Arendal