I-ADOPT Variable Modelling Challenge

Number	Variable name	Variable description	Unit/Value	Level	Domain
1	Electron density in the solar wind	Density (particle per cm3) of electrons measured in the Solar Wind.	number/cm 3	simple	extraterrestrial environment
2	Air daily maximum temperature	Temperature of the air in a height of 1.7 meter, daily maximum	Celsius degree	simple	atmosphere
3	Cloud cover	The amount of cloudiness or clear sky at a study site.	controlled list	simple	atmosphere
4	Atmospheric boundary layer heights	Identification of height-range above valley floor influenced by boundary layer air/free troposphere.	height range	advanced	atmosphere
5	Atmosphere_optical_thickness_due_to_particulate_organic_matter_ambient_aerosol	(CF standard name) The optical thickness is the integral along the path of radiation of a volume scattering/absorption/attenuation coefficient. The radiative flux is reduced by a factor exp(-optical_thickness) on traversing the path. The atmosphere optical thickness applies to radiation passing through the entire atmosphere. A coordinate variable of radiation_wavelength or radiation_frequency can be specified to indicate that the optical thickness applies at specific wavelengths or frequencies. "Aerosol" means the system of suspended liquid or solid particles in air (except cloud droplets) and their carrier gas, the air itself. "Ambient_aerosol" means that the aerosol is measured or modelled at the ambient state of pressure, temperature and relative humidity that exists in its immediate environment. "Ambient aerosol particles" are aerosol particles that have taken up ambient water through hygroscopic growth. The extent of hygroscopic growth depends on the relative humidity and the composition of the particles. The specification of a physical process by the phrase due_to_process means that the quantity named is a single term in a sum of terms which together compose the [illegible] by omitting the phrase.	unitless	advanced	atmosphere
6	Mass_flux_of_carbon_into_soil_from_vegetation_due_to_senescence	In accordance with common usage in geophysical disciplines, "flux" implies per unit area, called "flux density" in physics. "Vegetation" means any living plants e.g. trees, shrubs, grass. The specification of a physical process by the phrase "due_to_" process means that the quantity named is a single term in a sum of terms which together compose the general quantity named by omitting the phrase. The term "senescence" means loss of living biomass excluding plant death, e.g. leaf drop and other seasonal effects. The term refers to changes in the whole plant and is not confined only to leaf drop.	kg m-2 s-1	advanced	terrestrial ecosystem
7	Maximum trunk char height	Trunk char height is a measure of the extent of fire height above ground which is measured from the base to the highest point of fire occurrence on the tree trunk. Maximum char height is measured at the community level using a 360° sweep at each sampling location.	cm	simple	terrestrial ecosystem
8	Coarse woody debris abundance per hectare	CWD abundance per hectare (m2/hectare) is the abundance of CWD measured from all the plots/transects scaled to a hectare (100 x 100 m). They are calculated using the formula (see https://www.sciencedirect.com/science/article/pii/S037811270900783X)	m2/hectare	advanced	terrestrial ecosystem
9	Foliage projective cover	The proportion of the ground area covered by foliage (or photosynthetic tissue) held in a vertical plane. Foliage Projective Cover is usually expressed as the percentage of ground covered by foliage and can be separated according to vegetation strata.	percentage	advanced	terrestrial ecosystem
10	Peak ground acceleration	Peak acceleration measured on the earth surface when facing seismic events, like earthquakes.	m/s2	simple	solid earth
11	Strike of bedding	Geographic azimuth (relative to true north) at a point observation location, of a horizontal line contained in a sedimentary rock bedding surface. The bedding surface must not be horizontal; the azimuth is reported such that the dip direction of the inclined bedding is to the right when facing in the azimuth direction.	degree	advanced	solid earth
12	Probablity of occurence of habitat	Part of terrestrial Ecosystem distribution of terrestrial EUNIS Habitats EBV, probability of occurence of EUNIS habitats within contiguous spatial units (grid cells of 100x100 m) across the EU over 1 year time. https://github.com/EuropaBON/EBV-Descriptions/wiki/Terrestrial-Ecosystem-distribution-of-terrestrial-EUNIS-Habitats	percentage	simple	biodiversity
13	Distance to nearest neighbour habitat patch	This variable is part of the EBV Connectivity of terrestrial ecosytem habitat types and helps to measure the degree of connection of EUNIS habitats within a landsacpe, in terms of their spatial distribution. https://github.com/EuropaBON/EBV-Descriptions/wiki/Terrestrial-Connectivity-of-terrestrial-ecosystem-habitat-types	meter	advanced	biodiversity
14	Feral-free enclosure area	The total area (in ha) of feral-free enclosures. See https://linked.data.gov.au/def/nrm/d936bfd5-d2f9-5107-bbf7-2bd18bbab42b	ha	advanced	biology
15	Foraminifera, planktic, size	Size of planktic foraminifers in surface sediments, see https://doi.pangaea.de/10.1594/PANGAEA.126730	µm	simple	biology
16	Standard metabolic rate in mg of Oxygen per hour	The measure of an ectotherm animal's baseline metabolic rate (i.e. non-active, non-stressed) measured by the milligrams of oxygen consumed in a period of time of one hour.	mg/hour	advanced	biology
17	Docosahexaenoic acid content per dry weight (DHA content/ C22:6 n-3 content)	The amount of docosahexaenoic acid relative to dry weight in an individual.	µg/100 µg	advanced	biology
18	Biological sex	Biological sex [female | male | intersex | unknown]	controlled list	advanced	biology
19	Weight specific-ingestion Carbon rate at 15 °C	The amount of carbon consumed by an organism at non-limiting concentration of food relative to the individual dry weight measured at 15°C. It is expressed as µg C mg DW−1 h−1	µg/mgh	advanced	biology
20	Concentration of DDT at site	Concentration of DDT in a given year at a site impacted by industry.	ng/g	advanced	toxicity
21	Blood pressure	Resting blood pressure systolic/diastolic in millimeters of mercury (mmHg)	mmHg	simple	health
22	Current smoking status	Smoking status current of a patient	controlled list	simple	health
23	dose of applied nanomaterial internalised by a specific cell population (or per single cell) -mass per cell area	Correlation of dose and response for nanomaterials toxicity assessment requires information on the amount of the applied dose of nanomaterial that has been internalised by a cell population (or per specific cell) and is dependent on a number of factors including the exposure time, the particle density (i.e., whether settling occurs and thus the distribution of particles in the medium is non-homogeneous affecting the local concentration at the cell surface) etc.	mass/area	advanced	health

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24	dose of applied nanomaterial internalised by a specific cell population (or per single cell) - particle number / cell area	Correlation of dose and response for nanomaterials toxicity assessment requires information on the amount of the applied dose of nanomaterial that has been internalised by a cell population (or per specific cell) and is dependent on a number of factors including the exposure time, the particle density (i.e., whether settling occurs and thus the distribution of particles in the medium is non-homogeneous affecting the local concentration at the cell surface) etc.	number/area	advanced	health
25	Dynamic shear viscosity of polystyrene PS042	Dynamic shear viscosity of polystyrene PS042 under the testing conditions of DIN 51810-1.	pascal seconds	advanced	material science
26	Sheet resistence of layer of gold	The sheet resistance of a 5-nanometer-thick layer of gold.	Ohms per square	advanced	material science
27	Concentration of isobuylene	Mass concentration of isobutylene in chloroform.	grams per liter	simple	chemistry
28	Overnight stays in hotel	Number of nights in a 3-star hotel near the sea shore	number	advanced	social science
29	Nervousity feelings I	In the past 30 days, how often did you feel nervous?	number	simple	social science
30	Date of last PCR-test	date of last COVID-19 PCR test performed by a certified laboratory	date	advanced	social science