Metadata for

Global pesticide pollution risk

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Description
Five global maps are included in this data set: (1) the pesticide risk scores map showing the exposure of agricultural land to pesticide pollution, (2) the active ingredient counts map quantifying the number of active ingredients posing pollution risk to agricultural land and showing the exposure of environment to pesticide mixtures, (3) the regions of concern map identifying areas susceptible to pesticide pollution, (4) the data certainty index resulting from parameter sensitivity analysis, and (5) the data quality index showing the quality of the estimates.

A zip folder containing an example of risk score calculation is attached together with this data set. Details of the methods used to produce these maps and the tabulated data can be found in Tang F.H.M, Lenzen M., McBratney A., and Maggi F. (2021). Risk of pesticide pollution at the global scale, Nature Geoscience.

Data products

Global pesticide risk scores Units : [-] Value range: 0 – 6.1 File name: Global_pesticide_risk_scores.tif (Geotiff)	**Global active ingredient counts** Units : [-] Value range: 0 – 43 File name: Global_active_ingredient_counts.tif (Geotiff)
Global regions of concern Units : concern level Value range: 1 – 4 (1 = area of highest concern; 4 = area of no concern) File name: Global_regions_of_concern.tif (Geotiff)	**Data certainty index (*CI*)** Units : [-] Value range: 0 – 1, high certainty = 1, low certainty = 0 File name: Certainty_index.tif (Geotiff)
Data quality index (*QI*) Units : [-] Value range: 0 – 1, high quality = 1, low quality = 0 File name: Quality_index.tif (Geotiff)	**Code.zip** "CAL_RS.m" – matlab script for risk score calculation "AI_Properties.mat" – pesticide properties data "DATA_px1136_py668.mat" – georeferenced data for application rates, hydroclimatic, soil, and groundwater properties

Maps details
Resolution: 5 arc-min (10 km at the equator)
Pixel resolution: 1681 by 4306
Coordinates: standard WGS84
Bounding box: 180°E-180°W; 56°S-84°N
Value for non-agricultural land: -1
Value for water/no data: -2

Recommended Citation
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Use Agreement