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Keywords

Pinios basin, river, hydrometeorological data, macroinvertebrates, water quality

Short description of the dataset/summary

This database contains climatic, hydrologic, water quality and biological data for the river catchment of Pinios in Thessaly Greece, that were compiled during the European FP7 funded project MARS. The database is a compilation of datasets that contain mostly information on precipitation, air temperature, river discharge, river nutrient concentrations, macroinvertabrates and fish of river Pinios in Greece. The majority of the data listed in the database were obtained by the Ministries of Agriculture and Environment, the Public Power Corporation of Greece, and other published sources.

General information

dataset entry ID:	MARS_08
name of the dataset:	
full name of the dataset:	Pinios catchment (Greece)
dataset short name:	GRPN
type of dataset:	species (taxonomic group) per site database including environmental information
data type:	point data/observation data
science keywords according to GCMD:	
topic:	Agriculture, Biosphere, Climate Indicators, Terrestrial Hydrosphere
keywords:	water quality/water chemistry, nutrients, surface water, discharge/flow, rivers/streams, aquatic ecosystems, river/stream habitat, drought indices, macroinvertebrates, fish
ISO topic category according to ISO 19115:	
	Farming, Biota, Environment, Inland Waters

Technical and administrative specifications

data format: Excel
operating system: Win 7
data language: English
current availability: internal
web address (URL): not available
currently available through GBIF: no
exchange planned: no
update level: update planned
documentation:
type: others/specify
others/details: no documnetation available
Do you plan to publish the data on the BioFresh data portal: no
contact details:
metadata contact person:
first, last name: Yiannis Panagopoulos
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Intellectual property rights and citation

dataset publisher: not published
dataset creator (data compiler):
contact name: Yiannis Panagopoulos
contact email: ypanag@chi.civil.ntua.gr
contact institution: National Technical University of Athens
data contributors to/owners of this dataset: multiple
number: 2
data contributor/owner 1:
contact name: Spyros Tasoglou
contact email: s.tasoglou@prv.ypeka.gr
contact institute: Ministry of Environment, Energy and Climate Change
criteria for using this part of the database: The dataset needs to be requested from dataset creator with specific conditions of use.

data contributor/owner 2:

contact name:	Ioannis Kouvopoulos
contact email:	i.kouvopoulos@dei.com.gr
contact institute:	Power Public Corporation
criteria for using this part of the database:	The dataset needs to be requested from dataset creator with specific conditions of use.

citation of this dataset:

author(s):	Panagopoulos Yiannis, Stefanidis Konstantinos and Mimikou Maria
title:	Database of Pinios basin
year:	2014

citation of the metadata:

author(s):	Panagopoulos Y., Stefanidis K. & Mimikou M.
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year:	2014
doi:	http://dx.doi.org/10.15504/fmj.2014.3

General data specifications

regional coverage of the dataset:

scale of the dataset:	regional
countries:	Europe: Greece

world climatic regions according to Köppen:
Group C: temperate/mesothermal climates

freshwater ecoregions of the world (FEOW) according to WWF:
Europe: Aegean Drainages, Vardar

European ecoregions according to Illies (WFD):
Hellenic Western Balkan (ER6)

ecosystem type: rivers, groundwater

covered timeframe: 1975 - 2013

comments: Timeframe varies between different data types (e.g. climatic, hydrologic, water quality, biological etc...). Biological data (macroinvertebrates) are available from 2004. Climate and hydrological data are available from older period (1975 to date).

Site specifications

coordinate system/grid data: latitude/longitude, format: DD
projected, UTM

datum (e.g. WGS84):	WGS84
grid data available:	no

ecosystem type classification:

rivers (classification according to WFD):
altitude typology
mid-altitude: 200 to 800 m
size typology based on catchment area
large: 1000-10000 km^2, very large: 10000-100000 km^2
geology

calcareous

site coding available: no

number of sites: <100

Climate and environmental data

climate related data:

available parameters per site:

mean annual temperature January, July
data source: weather station, Ministry of Environment
mean annual temperature for each month
data source: weather station, Ministry of Environment
minimal, maximal and mean winter and summer temperatures
data source: weather station, Ministry of Environment
daily air temperatures
data source: weather station, Ministry of Environment
mean annual precipitation
data source: weather station, Ministry of Environment
winter and summer precipitation
data source: weather station, Ministry of Environment
mean discharge
data source: Power Public Corporation

comments: For more information of climate and hydrology of the catchment please consult the articles of Panagopoulos et al. 2014a and Panagopoulos et al. 2014b

environmental data:

available parameters per catchment:

catchment size
data source: Ministry of Environment
catchment geology
data source: Ministry of Environment
catchment land cover/land use
data source: CORINE 2000, Ministry of Environment
presence of barriers/dams/reservoirs (fragmentation)
data source: Ministry of Environment, Power Public Corporation
hydrological regime/flow regime
data source: Ministry of Environment, Power Public Corporation

available parameters per site: catchment land use upstream of sampling site
data source: CORINE 2000
information on water uses (e.g., irrigation, fish ponds)
data source: Ministry of Environment
river length
distance to source
distance to mouth
stream order (according to Strahler)
slope
altitude
hydrological regime/flow regime
discharge
current velocity
maximum depth

data source: National Monitoring Programme, MEECC
mean depth
data source: National Monitoring Programme, MEECC
wetted width
data source: National Monitoring Programme, MEECC
substrate composition
data source: National Monitoring Programme, MEECC
information on instream habitat (incl. information on modification)
data source: National Monitoring Programme, MEECC

comments: The number of environmental parameters per each site varies. For example discharge is not available for all the sites included in the database.

physico-chemistry data: total P, ortho P, nitrate, nitrite, ammonium, oxygen content, BOD5 (biochemical oyxgen demand), water temperature, pH, conductivity, suspended solids, substrate

availability of physico-chemical data, if there is more than one sample per site: per sample

stressors influencing the sites:

reference sites available: no

no stressor data available

Biological data

biological data origin: from sampling

specify project: PhD thesis of Chatzinikolaou Y., national monitoring programme in line with WFD

organism group addressed: fish, macro-invertebrates (Ephemeroptera, Odonata, Plecoptera, Coleoptera, Trichoptera, Chironomidae), macrophytes

Sample specifications/sample resolution

fish:

sample information:

covered timeframe: 2012 - 2013

historical data: no

palaeo data: no

season: spring, summer, autumn

temporal resolution/frequency of sampling: Samplings were performed in summer and autumn of 2012 and spring and autumn of 2013

time series data: no

taxonomic resolution:

level: species

percentage of species level data: 95

taxonomic coding:

taxalist according to: no standardised taxalist available

coding system: taxa are listed with full species name

example: Barbus sperchiensis

sample specifications:

type: quantitative (abundance data)
replicate samples: no
number of samples: 53
specification of method(s) used for sampling and sorting:
electrofishing

macro-invertebrates:

sample information:

covered timeframe: 2004 - 2013
historical data: no
palaeo data: no
season: spring, summer, autumn
temporal resolution/frequency of sampling:
Samplings were performed in summer and autumn of 2004, spring of 2005, spring 2012 and summer of 2013
time series data: no
comments: For more information on macroinvertebrate samplings in river Pinios please consult the doctorate thesis of Chatzinikolaou Y. (Chatzinikolaou Y., 2007. Effect of management practices on the water quality and ecology of rivers in Greece, Pinios river
as a case study).

taxonomic resolution:

level: family

taxonomic coding:

taxalist according to: no standardised taxalist available
coding system: family name is used
example: Ancylidae

sample specifications:

type: semi-quantitative, presence/absence
replicate samples: no
number of samples: 146
specification of method(s) used for sampling and sorting:
3 minutes kick and sweep
sample type (e.g. habitat specific samples, composite samples etc.):
Samples were collected based on specific habitats according to the Greek Habitat Richness Matrix (Chatzinikolaou, 2007).

macrophytes:

sample information:

covered timeframe: 2012 - 2013
historical data: no
palaeo data: no
season: spring, summer, winter
temporal resolution/frequency of sampling:
Samplings were performed in summer and winter of 2012 and in spring, summer and winter of 2013
time series data: no

taxonomic resolution:

level: other
other taxonomic levels: life forms
comments: The information regarding macrophytes concerns only abundances of helophytes and hydrophytes within the channel and the riparian zone. There are not any taxonomic data available.

taxonomic coding:

taxalist according to: not applicable
coding system: not applicable
example: not applicable

sample specifications:

type: qualitative
replicate samples: no
number of samples: 66
specification of method(s) used for sampling and sorting:
The total covarage % of hydrophytes within the channel was visually estimated. Similarly the total coverage % of riparian vegetation was estimated for the left and right bank seperately.
The canopy cover % was also estimated.

Other specifications

GIS layers, shapes related to the dataset:

hydrological information (as HydroSHEDS)
catchments, river-sub-basins
land use
dams/reservoirs/barriers

availability of photos: yes
availability of maps: yes
quality control procedures:

Were any quality control procedures applied to your dataset?
no

References

Chatzinikolaou Y., 2007. Effect of management practices on the water quality and ecology of rivers in Greece. Pinios river as a case study. Doctorate thesis. Department of Biology, Aristotle University of Thessaloniki

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