



DATA DOCUMENTATION

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population.csv

Description

Characteristics of all poultry farms on Jolly Island. A few years ago, when HPAI clade 2.3.4.4b emerged in Europe, veterinary services launched a country-wide census in collaboration with poultry organizations. As a result, the provided list is considered as exhaustive and exact as possible.

Variables

NAME	DESCRIPTION	COMMENT
farm_id	Unique identification number of poultry farms.	
county	County in which the poultry farm is located.	There are 14 counties (NUTS ¹ level 3) in Jolly Island. The geographical features of the counties can be found in the counties_32626.geojson file.
district	District in which the poultry farm is located.	There are 556 districts (local administrative units) in Jolly Island. The geographical features of the districts can be found in the district_32626.geojson file.
species	Poultry species raised in the farm.	Either duck or chicken.
production	Production type of the poultry farm.	Either layer (chickens), boiler_1 (chickens), broiler_2 (chickens), organic (ducks) or conventional (ducks).
capacity	Maximum number of birds that can be housed in the poultry farm.	
x, y	Geographical coordinates of poultry farms (in meters).	Coordinate reference system: WGS 84 / UTM zone 26N (EPSG 32626)

¹ Nomenclature of Territorial Units for Statistics

movements.csv

Description

List of all movements between stage 1 chicken broiler farms and stage 2 chicken broiler farms. Registration and notification of all movements to veterinary officials is mandatory on Jolly Island. Automated systems and a long-established trust between farmers and the authorities enabled a good compliance, making the list of movements exhaustive.

Variables

NAME	DESCRIPTION	COMMENT
date	Date at which the movement occurred.	
source_farm	Identification number of the stage 1 chicken broiler farms that sent the animals.	Corresponds to the variable farm_id from the population.csv dataset.
dest_farm	Identification number of the stage 2 chicken broiler farms that received the animals.	Corresponds to the variable farm_id from the population.csv dataset.
volume	Total number of chickens sent from the source farm to the destination farm.	At most the capacity of the destination farm, i.e., the stage 2 chicken broiler farm (see variable capacity from the population.csv dataset).

activity.csv

Description

Periods of activity of each farm, i.e., when birds are present within the farm. In-between activity periods, after birds are sent to the slaughterhouse (or culled) and before a new batch is received, farmers clean and disinfect the poultry house, after which they keep the farm empty of animals for a given amount of time (downtime) before starting a new production cycle.

Variables

NAME	DESCRIPTION	COMMENT
farm_id	Unique identification number of poultry farms.	Corresponds to the variable farm_id from the population.csv dataset.
date_start	Starting date of the activity period.	Corresponds to the date at which the batch of birds was received into the poultry house. For stage 2 chicken broiler farms, it matches the variable date from the movement.csv dataset.
date_end	End date of the activity period.	Except for stage 1 chicken broiler farms, this corresponds to the date at which the batch of birds was sent to the slaughterhouse or culled. For stage 1 chicken broiler farms, it matches the variable date from the movement.csv dataset.
volume	Total number of poultry raised in the farm during the activity period.	At most the capacity of the farm (see variable capacity from the population.csv dataset). For stage 2 chicken broiler farms, match the variable volume from the movement.csv dataset.

cases.csv

Description

Characteristics of all outbreaks in Jolly Island. Notification of highly pathogenic avian influenza outbreaks is mandatory in Jolly Island, and the state provides fair and timely compensation to the farmers. In addition, the surveillance system on the island is efficient. For all these reasons, the list of outbreak farms is considered exhaustive.

Variables

NAME	DESCRIPTION	COMMENT
farm_id	Unique identification number of poultry farms.	Corresponds to the variable farm_id from the population.csv dataset.
date_suspicious	Day at which a suspicion was raised by the farmer.	Only for outbreaks detected by passive surveillance, NA otherwise.
date_confirmed	Day at which the infection by the highly pathogenic avian influenza virus was confirmed at the national reference laboratory.	For all outbreaks irrespective of the detection method.
detection_method	How the outbreak was detected.	Either passive surveillance, contact-tracing, pre-shipment testing, post-culling detection.
cull_start	Day at which culling of the birds in the farm was initiated.	
cull_end	Day at which all birds in the farms were finally culled.	
cull_status	Status of cull at a given time	Either completed, in progress, planned, or under assessment

prev_culls.csv

Description

List of all preventively culled farms in Jolly Island (both the farms that were subsequently tested negative and those that were subsequently tested positive).

Variables

NAME	DESCRIPTION	COMMENT
farm_id	Unique identification number of poultry farms.	Corresponds to the variable farm_id from the population.csv dataset.
cull_start	Day at which culling of the birds in the farm was initiated.	For farms that were detected positive after being preventively culled, this corresponds to the variable cull_start from the cases.csv dataset.
cull_end	Day at which all birds in the farms were finally culled.	For farms that were detected positive after being preventively culled, this corresponds to the variable cull_end from the cases.csv dataset.
cull_status	Status of cull at a given time	Either completed, in progress, planned, or under assessment

counties_32626.geojson

Description

Spatial object containing the geographical features of the 14 counties of Jolly Island.

Variables

NAME	DESCRIPTION	COMMENT
country	Name of the country (Jolly Island).	
county	Name of the county.	There are 14 counties (NUTS ¹ level 3) in Jolly Island.
geometry	Multipolygon delineating the boundaries of the counties.	Coordinate reference system: WGS 84 / UTM zone 26N (EPSG 32626)

¹ Nomenclature of Territorial Units for Statistics

districts_32626.geojson

Description

Spatial object containing the geographical features of the 556 districts of Jolly Island.

Variables

NAME	DESCRIPTION	COMMENT
country	Name of the country (Jolly Island).	
county	Name of the county to which each district belongs.	There are 14 counties (NUTS ¹ level 3) in Jolly Island. The geographical features of the counties can be found in the counties_32626.geojson file.
district	Name of the district.	There are 556 districts (local administrative units) in Jolly Island.
geometry	Multipolygon delineating the boundaries of the districts.	Coordinate reference system: WGS 84 / UTM zone 26N (EPSG 32626)

¹ Nomenclature of Territorial Units for Statistics

clc_32626.geojson

Description

Land use data originated from the [CORINE Land Cover](#) (CLC) dataset. Only land use corresponding to CLC class 4 (wetlands) and 5 (waterbodies) are provided.

Variables

NAME	DESCRIPTION	COMMENT
country	Name of the country (Jolly Island).	
county	Name of the county to which polygon belongs.	There are 14 counties (NUTS ¹ level 3) in Jolly Island. The geographical features of the counties can be found in the counties_32626.geojson file.
CODE_12	Type of land cover of the polygon.	Three numbers corresponding to the three levels used in the CLC class definitions. Always starts with 4 (wetlands) or 5 (waterbodies), followed by two other numbers. See the documentation in https://land.copernicus.eu/en/products/corine-land-cover for more information.
geometry	Multipolygon delineating the boundaries of the polygon.	Coordinate reference system: WGS 84 / UTM zone 26N (EPSG 32626)

hrz_32626.geojson

Description

Boundaries of the high-risk zone (HRZ) defined by the veterinary authorities of Jolly Island.

Variables

NAME	DESCRIPTION	COMMENT
geometry	Multipolygon delineating the boundaries of the high-risk zone.	Coordinate reference system: WGS 84 / UTM zone 26N (EPSG 32626)