



Fundusze Europejskie
Infrastruktura i Środowisko



Państwowe
Gospodarstwo Wodne
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Unia Europejska
Fundusz Spójności



*Project: The review and update of the flood hazard maps and flood risk maps
Project no.: POIS.02.01.00-00-0013/16*

METHODOLOGY FOR THE DEVELOPMENT OF FLOOD HAZARD MAPS AND FLOOD RISK MAPS IN THE 2nd PLANNING CYCLE

ANNEX no. 3

DESCRIPTION OF THE CARTOGRAPHIC VERSION OF FLOOD HAZARD MAPS AND FLOOD RISK MAPS

Contractor:

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Partner: ARCADIS sp. z o.o. in Warsaw

Warsaw, June 2020

Version no. 7.00

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1. FLOOD HAZARD MAPS

1.1. ELEMENTS OF THE MAP CONTENT

1) FLOOD HAZARD MAP WITH WATER DEPTH

The following elements are shown on the flood hazard map with water depths:

- water depth [m] – in four ranges: 0-0.5 m; 0.5-2 m, 2-4 m, above 4 m,
- maximum water level ordinate,
- ordinate of the top of an embankment or a side dam,
- river chainage (for sections of modelled rivers within the flood hazard area),
- special flood hazard area (for maps in the 1% and 10% scenarios) or flood hazard area (for maps in other scenarios),
- natural watercourses and canals,
- names of natural watercourses and canals,
- surface waters,
- flood embankment,
- side dam,
- place of destruction of an embankment or a side dam (for maps in the scenario of total destruction of the embankment),
- place where water overflows through an embankment or a side dam,
- name of the locality,
- commune boundary,
- district boundary,
- voivodeship boundary,
- state boundary.

2) FLOOD HAZARD MAP WITH WATER FLOW VELOCITY

The flood hazard map with water flow velocity shows the following elements:

- water flow velocity in [m/s] – in four ranges: 0-0.5 m/s; 0.5-1 m/s, 1-2 m/s, over 2 m/s,
- direction of water flow,
- maximum water level ordinate,
- ordinate of the top of an embankment or a side dam,
- river chainage for sections of modelled rivers within the boundaries of the map sheet,
- special flood hazard area (for maps in the 1% and 10% scenarios) or flood hazard area (for maps in other scenarios),
- natural watercourses and canals,
- names of natural watercourses and canals,
- surface waters,
- flood embankment,

- side dam,
- name of the locality,
- commune boundary,
- district boundary,
- voivodeship boundary,
- state boundary.

1.2. EXTRA FEATURES OF THE MAP

- title of the study (as listed in Chapter 9 of the methodology),
- the emblem of the map sheet and the name of the map sheet at a scale of 1:10,000,
- main data frame with map content,
- cartographic grid referring to the main data frame in the map layout,
- kilometre grid referring to the main data frame in the map layout,
- outlets of the UTM flat rectangular coordinate system grid,
- description of symbols,
- scale and linear pitch,
- data frame defined as a “sheet layout” with the range of the main data frame marked:
 - sheet division of topographic maps at a scale of 1:10,000, in a rectangular flat coordinate system PL-1992,
 - basic three-stage territorial division of the country,
 - area of activity of organisational units of the State Water Holding Polish Waters – regional water management boards and catchment area boards,
- information on the frames of reference,
- information on the topographical background (orthophotomap),
- information on the current status of the hydrographic study,
- information on the authorities competent to draw up and approve the map,
- logotypes: sign of the European Fund (Infrastructure and Environment), sign of the State Water Holding Polish Waters, sign of the European Union (Cohesion Fund),
- information on the map contractor,
- date and issue number: Edition IV, 2019



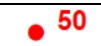








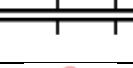





The area of activity of the organisational units of the State Water Holding Polish Waters – regional water management boards and catchment area boards – is marked according to the code system adopted in Polish Waters.

Example:


















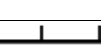
FIELD OF ACTIVITY OF ORGANISATIONAL UNITS
THE STATE WATER HOLDING POLISH WATERS:
Regional Water Management Board in Wrocław
Zielona Góra Catchment Board (WR.7)

1.3. DESCRIPTION OF SYMBOLS

FHM SYMBOL LIST

| Znak | Objaśnienie znaku w języku polskim | Objaśnienie znaku w języku angielskim |
|---|--|---|
| Symbol | Description of the map symbols in Polish | Description of the map symbols in English |
| Tytuł mapy w języku polskim | MAPA ZAGROŻENIA POWODZIOWEGO Z GŁĘBOKOŚCIĄ WODY [np.] OBZARY, NA KTÓRYCH PRAWDOPODOBIENSTWO WYSTĄPIENIA POWODZI JEST ŚREDNIE I WYNOŚI 1% (RAZ NA 100 LAT) | |
| Tytuł mapy w języku angielskim | FLOOD HAZARD MAP WITH WATER DEPTH AREAS WHERE THE PROBABILITY OF FLOODING IS MEDIUM WHICH CORRESPONDS TO 1% (ONCE PER 100 YEAR) | |
|  | maksymalna rzędna zwierciadła wody | maximum water level |
|  | rzędna korony wału przeciwpowodziowego lub zapory bocznej | top of embankment elevation |
|  | kilometr rzeki | chainage |
|  | obszar szczególnego zagrożenia powodzią (dla scenariuszy 1% i 10%) lub obszar zagrożenia powodziowego (dla scenariusza 0,2%) | special flood hazard area (for 1% and 10% scenarios) or flood hazard area (for 0,2% scenario) |
|  | głębokość wody $h \leq 0,5$ [m] | water depth $h \leq 0,5$ [m] |
|  | głębokość wody $0,5 < h \leq 2,0$ [m] | water depth $0,5 < h \leq 2,0$ [m] |
|  | głębokość wody $2,0 < h \leq 4,0$ [m] | water depth $2,0 < h \leq 4,0$ [m] |
|  | głębokość wody $h > 4,0$ [m] | water depth $h > 4,0$ [m] |
|  | cieki naturalne i kanały | watercourses and canals |
|  | wody powierzchniowe | surfaces water |
|  | wał przeciwpowodziowy | embankment |
|  | zapora boczna | side dam |
|  | miejsce przelania się wody przez wał przeciwpowodziowy lub zapórę boczną | location of embankment overflow |
|  | granica gminy | commune boundary |
|  | granica powiatu | district boundary |
|  | granica województwa | voivodeship boundary |
|  | granica państwa | country border |
| | | |

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| Znak | Objaśnienie znaku w języku polskim | Objaśnienie znaku w języku angielskim |
|---|--|---|
| Symbol | Description of the map symbols in Polish | Description of the map symbols in English |
| Tytuł mapy w języku polskim | MAPA ZAGROŻENIA POWODZIOWEGO Z PRĘDKOŚCIĄ PRZEPŁYWU WODY [np.] OBSZARY, NA KTÓRYCH PRAWDOPODOBIENSTWO WYSTĄPIENIA POWODZI JEST ŚREDNIE I WYNOŚI 1% (RAZ NA 100 LAT) | |
| Tytuł mapy w języku angielskim | FLOOD HAZARD MAP WITH WATER FLOW VELOCITY AREAS WHERE THE PROBABILITY OF FLOODING IS MEDIUM WHICH CORRESPONDS TO 1% (ONCE PER 100 YEAR) | |
|  | maksymalna rzędna zwierciadła wody | maximum water level |
|  | rzędna korony wału przeciwpowodziowego lub zapory bocznej | top of embankment elevation |
|  | kilometr rzeki | chainage |
|  | kierunek przepływu wody | water flow direction |
|  | obszar szczególnego zagrożenia powodzią (dla scenariuszy 1% i 10%) lub obszar zagrożenia powodziowego (dla scenariusza 0,2%) | special flood hazard area (for 1% and 10% scenarios) or flood hazard area (for 0,2% scenario) |
|  | prędkość przepływu wody $v \leq 0,5$ [m/s] | water flow velocity $v \leq 0,5$ [m/s] |
|  | prędkość przepływu wody $0,5 < v \leq 1,0$ [m/s] | water flow velocity $0,5 < v \leq 1,0$ [m/s] |
|  | prędkość przepływu wody $1,0 < v \leq 2,0$ [m/s] | water flow velocity $1,0 < v \leq 2,0$ [m/s] |
|  | prędkość przepływu wody $v > 2,0$ [m/s] | water flow velocity $v > 2,0$ [m/s] |
|  | cieki naturalne i kanały | watercourses and canals |
|  | wody powierzchniowe | surface water |
|  | wał przeciwpowodziowy | embankment |
|  | zapora boczna | side dam |
|  | granica gminy | commune boundary |
|  | granica powiatu | district boundary |
|  | granica województwa | voivodeship boundary |
|  | granica państwa | country border |
| Tytuł mapy w języku polskim | MAPA ZAGROŻENIA POWODZIOWEGO Z GŁĘBOKOŚCIĄ WODY OBSZARY NARAŻONE NA ZALANIE W PRZYPADKU CAŁKOWITEGO ZNISZCZENIA WAŁU PRZECIWPOWODZIOWEGO | |
| Tytuł mapy w języku angielskim | FLOOD HAZARD MAPS WITH WATER DEPTHS AREAS EXPOSED TO FLOODING IN THE EVENT OF THE FLOOD EMBANKMENT FAILURE | |
|  | maksymalna rzędna zwierciadła wody | maximum water level |

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| Znak | Objaśnienie znaku w języku polskim | Objaśnienie znaku w języku angielskim |
|--------|---|--|
| Symbol | Description of the map symbols in Polish | Description of the map symbols in English |
| | kilometr rzeki | chainage |
| | obszar zagrożenia powodziowego przy wyznaczeniu którego przyjęto przepływ o prawdopodobieństwie wystąpienia 1% (raz na 100 lat) | flood hazard area estimated for the flow with the 1% probability of occurrence |
| | głębokość wody $h \leq 0,5$ [m] | water depth $h \leq 0,5$ [m] |
| | głębokość wody $0,5 < h \leq 2,0$ [m] | water depth $0,5 < h \leq 2,0$ [m] |
| | głębokość wody $2,0 < h \leq 4,0$ [m] | water depth $2,0 < h \leq 4,0$ [m] |
| | głębokość wody $h > 4,0$ [m] | water depth $h > 4,0$ [m] |
| | cieki naturalne i kanały | watercourses and canals |
| | wody powierzchniowe | surface water |
| | miejsce zniszczenia wału przeciwpowodziowego lub zapory bocznej | location of embankment failure |
| | granica gminy | commune boundary |
| | granica powiatu | district boundary |
| | granica województwa | voivodeship boundary |
| | granica państwa | country border |

1.4. NAMES AND RESOLUTIONS OF PDF AND GEOTIFF FILES

The file name is associated with the division into types and scenarios of the FHM, the emblem of the sheet and the version of the file. The file name is in accordance with the template below:

sheet_emblem_type_of_map_flooding_scenario_version_file_type.extension

- emblem of the sheet – in accordance with the sheet division of topographic maps at a scale of 1:10,000, in the rectangular flat coordinate system PL-1992, referred to in the rules of the national spatial reference system;
- type of map – depending on the type of flood hazard map takes the form of:
 - ZG for a map with water depth,
 - ZP for a map with water flow rate;
- flood scenario – as indicated in the table below:

| Designation of scenario | Description of flood scenario | Probability of occurrence | Example of the name of FHM |
|-------------------------|---|---------------------------|--|
| 02 | baseline scenario: areas with a low probability of flooding of 0.2% (once every 500 years) | 0,2% | N34062Ab1_ZG_02_2019v1.pdf N34062Ab1_ZP_02_2019v1.pdf N34062Ab1_ZG_02_2019v1_GEOTIFF.tif N34062Ab1_ZP_02_2019v1_GEOTIFF.tif |
| 1 | baseline scenario: areas with a medium probability of flooding of 1% (once every 100 years) | 1% | N34062Ab1_ZG_1_2019v1.pdf N34062Ab1_ZP_1_2019v1.pdf N34062Ab1_ZG_1_2019v1_GEOTIFF.tif N34062Ab1_ZP_1_2019v1_GEOTIFF.tif |
| 10 | baseline scenario: areas with a high probability of flooding of 10% (once every 10 years) | 10% | N34062Ab1_ZG_10_2019v1.pdf N34062Ab1_ZP_10_2019v1.pdf N34062Ab1_ZG_10_2019v1_GEOTIFF.tif N34062Ab1_ZP_10_2019v1_GEOTIFF.tif |
| 1WZZ | scenario of total destruction of the embankment | 1% | N33060Aa1_ZG_1WZ_2019v1.pdf N33060Aa1_ZG_1WZ_2019v1_GEOTIFF.tif |

- year and version of the map – determined by adding the year to the name of the year, when the development was carried out and the v1 segment, which denotes the version of the sheet, updated in a given year. In case of several updates in a given year the version number will be increased accordingly;
- file type – for rasters with georeferenced GEOTIFF suffix, for pdf rasters without georeference – no suffix;
- extension – *.tif or pdf.

Pdf files are prepared in 300 dpi resolution in RGB colour palette, with JPEG compression parameter equal to 85.

Geotiff rasters are prepared in the PL-1992 reference system, with a 300 dpi resolution in the RGB colour palette, with LZW lossless compression.

2. FLOOD RISK MAPS

2.1. ELEMENTS OF THE MAP CONTENT

1) FLOOD RISK MAP – POTENTIAL ADVERSE CONSEQUENCES FOR HUMAN LIFE AND HEALTH, AND THE VALUE OF POTENTIAL FLOOD DAMAGES

A flood risk map showing the potential adverse consequences for human life and health, and the value of potential flood damages shall include the following elements:

- residential buildings in a flood hazard area [water depth in m] below and over 2 m,
- buildings of social importance in the flood hazard area [water depth in m] below and above 2 m,
- buildings of social importance are designated as follows:
 - nursery – żłb.,
 - kindergarten – przedszk.,
 - school – szk.,
 - police units – P,
 - fire protection units – rem.,
 - Border Guard units – SG,
 - hospital – szpit.,
 - sanatorium – san.,
 - social welfare home, nursing home, hospice – d.op.,
 - shopping and service centre – c. han.,
 - hotel – H,
 - holiday home – d.wyp.,
 - educational care facility – d. wych.,
 - penitentiary, correctional or custodial facility – z.kar.,
- values of potential flood damages [PLN/m²],
- river chainage (for sections of modelled rivers within the boundaries of the map sheet),
- special flood hazard area (for maps in the 1% and 10% scenarios) or flood hazard area (for maps in other scenarios),
- natural watercourses and canals,
- names of natural watercourses and canals,
- surface waters,
- flood embankment,
- side dam,
- place of destruction of an embankment or a side dam (for maps in the scenario of total destruction of the embankment),
- name of locality
- commune boundary,
- district boundary,
- voivodeship boundary,

- country boundary,
- boundary of the part of the village located in the flood hazard area,
- boundary of the locality in the flood hazard area,
- name of the city and the estimated number of inhabitants exposed to the hazard of flooding,
- name of the village and the estimated number of inhabitants exposed to the hazard of flooding,
- name of the part of the city or village and the estimated number of inhabitants exposed to the hazard of flooding.

2) FLOOD RISK MAP – POTENTIAL NEGATIVE CONSEQUENCES FOR THE ENVIRONMENT, CULTURAL HERITAGE AND ECONOMIC ACTIVITY

A flood risk map showing the potential negative consequences for the environment, cultural heritage and economic activity shall include the following elements:

- land use classes:
 - residential areas,
 - industrial areas,
 - communication areas,
 - forests,
 - recreation and leisure areas,
 - arable land and permanent crops,
 - grassland,
 - other areas,
 - surface waters;
- groundwater abstractions;
- surface water abstractions;
- protection zones of water abstraction (surface and ground);
- bathing waters;
- zoos;
- cultural heritage areas and objects:
 - area, monumental object,
 - UNESCO-listed object,
 - extermination memorial,
 - open-air museum, museum,
 - library, archive;
- forms of nature conservation:
 - national park,
 - nature reserve,
 - Natura 2000 area:
 - special bird protection area,
 - special habitat protection area;
- potential sources of pollution:






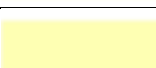
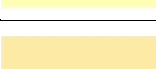
- industrial plants:
 - installations which may, in the event of flooding, cause significant pollution of individual natural elements or of the environment as a whole, for the operation of which it is required to obtain the integrated permit, referred to in article 181, paragraph 1, point 1 of the Act – Environmental Protection Law, in the following categories of industrial activity:
 - energy industry,
 - metallurgical,
 - mineral industry,
 - chemical industry,
 - waste management,
 - other activities,
 - industrial establishments with installations that do not require the permit, referred to in point 1 and may pose a threat, including establishments with a high risk of accidents or an increased risk of accidents within the meaning of article 248, section 1 of the Environmental Protection Law;
- landfills (municipal, industrial, mixed);
- wastewater treatment plants;
- wastewater pumping stations;
- cemeteries;
- river chainage (for sections of modelled rivers within the boundaries of the map sheet);
- special flood hazard area (for maps in the 1% and 10% scenarios) or flood hazard area (for maps in other scenarios);
- natural watercourses and canals;
- names of natural watercourses and canals;
- flood embankments;
- side dams;
- place of destruction of an flood embankment or a side dam (for maps in the scenario of total destruction of the embankment);
- name of the locality;
- commune boundary;
- district boundary;
- voivodeship boundary;
- country boundary.

2.2. EXTRA FEATURES OF THE MAP

- title of the study (as listed in Chapter 9 of the methodology),
- emblem of the map sheet and the name of the map sheet at a scale of 1:10,000,
- main data frame with map content,
- cartographic grid referring to the main data frame in the map layout,
- kilometre grid referring to the main data frame in the map layout,
- outlets of the UTM flat rectangular coordinate system grid,
- symbol descriptions,
- scale and linear pitch,
- data frame defined as a “sheet layout” with the range of the main data frame marked,
 - sheet division of topographic maps at a scale of 1:10,000, in a rectangular flat coordinate system PL-1992,
 - basic three-stage territorial division of the country,
 - area of activity of organisational units of the State Water Holding Polish Waters: regional water management boards and catchment area boards,
- information on the reference systems,
- information about the topographical background (orthophotomap),
- information on the current status of the hydrographic study, for FRM from stage I: 2018 and for stage II and III FRM: 2019,
- information on the authorities competent to draw up and approve the map,
- logotypes: sign of the European Fund (Infrastructure and Environment), sign of the State Water Holding Polish Waters, sign of the European Union (Cohesion Fund),
- information on the map contractor,
- date and issue number: Edition IV 2019

2.3. DESCRIPTION OF SYMBOLS

FRM SYMBOL LIST

| Znak | Objaśnienie znaku w języku polskim | Objaśnienie znaku w języku angielskim |
|---|--|---|
| Symbol | Description of the map symbols in Polish | Description of the map symbols in English |
| Tytuł mapy w języku polskim | MAPA RYZYKA POWODZIOWEGO – POTENCJALNE NEGATYWNE SKUTKI DLA ŻYCIA I ZDROWIA LUDZI ORAZ WARTOŚCI POTENCJALNYCH STRAT POWODZIOWYCH [np.] OBSZARY, NA KTÓRYCH PRAWDOPODOBIENSTWO WYSTĄPIENIA POWODZI JEST ŚREDNIE I WYNOŚI 1% (RAZ NA 100 LAT) | |
| Tytuł mapy w języku angielskim | FLOOD RISK MAPS - POTENTIAL ADVERSE CONSEQUENCES FOR HUMAN HEALTH AND LIFE AND VALUES OF POTENTIAL FLOOD DAMAGES AREAS WHERE THE PROBABILITY OF FLOODING IS MEDIUM WHICH CORRESPONDS TO 1% (ONCE PER 100 YEAR) | |
|  | budynek mieszkalny w obszarze zagrożenia powodziowego, głębokość wody ≤ 2,0 [m] | residential building in the flood hazard, water depth ≤ 2,0 [m] |
|  | budynek mieszkalny w obszarze zagrożenia powodziowego głębokość wody > 2,0 [m] | residential building in the flood hazard, water depth > 2,0 [m] |
|  | budynek o znaczeniu społecznym w obszarze zagrożenia powodziowego, głębokość wody ≤ 2,0 [m] | building of social importance in the flood hazard, water depth ≤ 2,0 [m] |
|  | budynek o znaczeniu społecznym w obszarze zagrożenia powodziowego, głębokość wody > 2,0 [m] | building of social importance in the flood hazard, water depth > 2,0 [m] |
| <p>żłb. przedszk. szk. P rem. SG szpit. san. d. op.</p> <p>c. han. H d. wyp. d. wych. z. kar.</p> | <p>oznaczenie budynku o znaczeniu społecznym:</p> <ul style="list-style-type: none"> - żłobek, - przedszkole, - szkoła, - jednostki Policji, - jednostki ochrony przeciwpożarowej, - jednostki Straży Granicznej, - szpital, - sanatorium, - dom pomocy społecznej, dom opieki, hospicjum, - centrum handlowo-usługowe, - hotel, - dom wypoczynkowy, - dom wychowawczy, - zakład karny, zakład poprawczy, areszt śledczy | <p>building of social importance:</p> <ul style="list-style-type: none"> - nursery, - kindergarten, - school, - police station, - fire station, - border guard, - hospital, - health resort, - social care centre, nursing home, hospice, - shopping and service centre, - hotel, - resort, - educational care facility, - penitentiary, correctional or custodial facility |
| wartości potencjalnych strat powodziowych: | | value of potential flood losses: |
|  | obszary, dla których nie oblicza się strat | areas with no estimation of damages |
|  | ≤ 1 [zł/m ²] | ≤ 1 [zł/m ²] |
|  | 2-50 [zł/m ²] | 2-50 [zł/m ²] |

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| Znak | Objaśnienie znaku w języku polskim | Objaśnienie znaku w języku angielskim |
|--------------------------------|---|---|
| Symbol | Description of the map symbols in Polish | Description of the map symbols in English |
| | 51-150 [zł/m ²] | 51-150 [zł/m ²] |
| | 151-300 [zł/m ²] | 151-300 [zł/m ²] |
| | 301-600 [zł/m ²] | 301-600 [zł/m ²] |
| | > 600 [zł/m ²] | > 600 [zł/m ²] |
| | obszar szczególnego zagrożenia powodzią (dla scenariuszy 1% i 10%) lub obszar zagrożenia powodziowego (dla pozostałych scenariuszy) | special flood hazard area (for 1% and 10% scenarios) or flood hazard area (for other scenarios) |
| | cieki naturalne i kanały | watercourses and canals |
| | wody powierzchniowe | surface water |
| | wał przeciwpowodziowy | embankment |
| | zapora boczna | side dam |
| | granica części miejscowości znajdującej się w obszarze zagrożenia powodziowego | boundary of a town or village part within a flood hazard area |
| | granica miejscowości znajdującej się w obszarze zagrożenia powodziowego | boundary of a town within a flood hazard area |
| | granica gminy | commune boundary |
| | granica powiatu | district boundary |
| | granica województwa | voivodeship boundary |
| | granica państwa | country border |
| KALISZ 1380 | nazwa miasta i szacunkowa liczba mieszkańców zagrożonych powodzią | town name and indicative number of inhabitants potentially affected |
| Chotów 52 | nazwa wsi i szacunkowa liczba mieszkańców zagrożonych powodzią | village name and indicative number of inhabitants potentially affected |
| <i>Rypinek</i> 15 | nazwa części miasta lub wsi i szacunkowa liczba mieszkańców zagrożonych powodzią | settlement name and indicative number of inhabitants potentially affected |
| Tytuł mapy w języku polskim | MAPA RYZYKA POWODZIOWEGO – POTENCJALNE NEGATYWNE SKUTKI DLA ŚRODOWISKA, DZIEDZICTWA KULTUROWEGO I DZIAŁALNOŚCI GOSPODARCZEJ [np.] OBSZARY, NA KTÓRYCH PRAWDOPODOBIENSTWO WYSTĄPIENIA POWODZI JEST ŚREDNIE I WYNOŚI 1% (RAZ NA 100 LAT) | |


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| Znak | Objaśnienie znaku w języku polskim | Objaśnienie znaku w języku angielskim |
|--------------------------------|--|---|
| Symbol | Description of the map symbols in Polish | Description of the map symbols in English |
| Tytuł mapy w języku angielskim | FLOOD RISK MAPS - POTENTIAL ADVERSE CONSEQUENCES FOR ENVIRONMENT, CULTURAL HERITAGE AND ECONOMIC ACTIVITY AREAS WHERE THE PROBABILITY OF FLOODING IS MEDIUM WHICH CORRESPONDS TO 1% (ONCE PER 100 YEAR) | |
| klasy użytkowania terenu: | land use types: | |
| | tereny zabudowy mieszkaniowej | residential areas |
| | tereny przemysłowe | industrial areas |
| | tereny komunikacyjne | transportation areas |
| | lasy | forests |
| | tereny rekreacyjno-wypoczynkowe | recreational areas |
| | grunty orne i pola uprawne | arable land |
| | użytki zielone | grassland |
| | tereny pozostałe | other areas |
| | wody powierzchniowe | surface water |
| | kąpielisko | bathing waters |
| | ujęcie wody podziemnej | groundwater abstraction |
| | ujęcie wody powierzchniowej | surface water abstraction |
| | strefa ochronna ujęcia wody | abstraction protection zone |
| | ogród zoologiczny | zoo |
| | obszar, obiekt zabytkowy | area, object of cultural heritage |
| | – obiekt wpisany na listę światowego dziedzictwa UNESCO | – listed as a UNESCO World Heritage Site |
| | pomnik zagłady | extermination monuments |
| | skansen, muzeum | open-air museum, museum |
| | biblioteka, archiwum | library, archives |
| | park narodowy | national park |
| | rezerwat przyrody | nature reserve |

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| Znak | Objaśnienie znaku w języku polskim | Objaśnienie znaku w języku angielskim |
|----------------------|---|--|
| Symbol | Description of the map symbols in Polish | Description of the map symbols in English |
| | obszar Natura 2000 – obszar specjalnej ochrony ptaków | Nature 2000 site – Special Protection Area (birds) |
| | obszar Natura 2000 – specjalny obszar ochrony siedlisk | Nature 2000 site – Special Area of Conservation (habitats) |
| zakłady przemysłowe: | | industrial facilities: |
| | instalacje mogące powodować znaczne zanieczyszczenie poszczególnych elementów przyrodniczych albo środowiska jako całości | installations which may cause significant pollution to some parts of the environment or the environment as a whole (IED) |
| | zakłady stwarzające zagrożenie wystąpienia poważnej awarii przemysłowej | plants may cause major industrial accident hazards (Seveso) |
| | przemysł energetyczny | energy industry |
| | produkcja i obróbka metali | metallurgical industry |
| | przemysł mineralny | mineral industry |
| | przemysł chemiczny | chemical industry |
| | gospodarka odpadami | waste management |
| | inne rodzaje działalności | other activities |
| | składowisko odpadów komunalnych | municipal landfill |
| | składowisko odpadów przemysłowych | industrial landfill |
| | składowisko odpadów mieszanych | mixed landfill |
| | cmentarz | cemetery |
| | oczyszczalnia ścieków | wastewater treatment plant |
| | przepompownia ścieków | wastewater pumping station |
| | obszar szczególnego zagrożenia powodzią (dla scenariuszy 1% i 10%) lub obszar zagrożenia powodziowego (dla pozostałych scenariuszy) | special flood hazard area (for 1% and 10% scenarios) or flood hazard area (for other scenarios) |
| | kilometr rzeki | chainage |
| | cieki naturalne i kanały | watercourses and canals |
| | wał przeciwpowodziowy | embankment |
| | zapora boczna | side dam |
| | granica gminy | commune boundary |
| | granica powiatu | district boundary |
| | granica województwa | voivodeship boundary |

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| Znak | Objaśnienie znaku w języku polskim | Objaśnienie znaku w języku angielskim |
|---|--|---|
| Symbol | Description of the map symbols in Polish | Description of the map symbols in English |
|  | granica państwa | country border |

2.4. NAMES AND RESOLUTIONS OF PDF AND GEOTIFF FILES

The file name is associated with FRM types and scenarios, the worksheet emblem and the file version. The file name is consistent with the template below:

sheet_emblem_type_of_map_flooding_scenario_version_file_type.extension

- emblem of the sheet – in accordance with the sheet division of topographic maps at a scale of 1:10,000, in the rectangular flat coordinate system, referred to in the regulations on the national spatial reference system;
- type of map – depending on the type of flood hazard map takes the form:
 - RL for a map showing potential negative effects on human life and health, and the value of potential flood damages,
 - RS for a map showing potential negative effects on the environment, cultural heritage and economic activity;
- flood scenario – as indicated in the table below:

| Designation of scenario | Description of flood scenario | Probability of occurrence | Example of the name of FHM |
|-------------------------|---|---------------------------|--|
| 02 | baseline scenario: areas with a low probability of flooding of 0.2% (once every 500 years) | 0,2% | N34062Ab1_RL_02_2019v1.pdf N34062Ab1_RS_02_2019v1.pdf N34062Ab1_RL_02_2019v1_GEOTIFF.tif N34062Ab1_RS_02_2019v1_GEOTIFF.tif |
| 1 | baseline scenario: areas with a medium probability of flooding of 1% (once every 100 years) | 1% | N34062Ab1_RL_1_2019v1.pdf N34062Ab1_RS_1_2019v1.pdf N34062Ab1_RL_1_2019v1_GEOTIFF.tif N34062Ab1_RS_1_2019v1_GEOTIFF.tif |
| 10 | baseline scenario: areas with a high probability of flooding of 10% (once every 10 years) | 10% | N34062Ab1_RL_10_2019v1.pdf N34062Ab1_RS_10_2019v1.pdf N34062Ab1_RL_10_2019v1_GEOTIFF.tif N34062Ab1_RS_10_2019v1_GEOTIFF.tif |
| 1WZZ | scenario of complete destruction of the embankment | 1% | N33060Aa1_RL_1WZ_2019v1.pdf N33060Aa1_RS_1WZ_2019v1.pdf N34062Ab1_RL_1WZ_2019v1_GEOTIFF.tif N34062Ab1_RS_1WZ_2019v1_GEOTIFF.tif |

- year and version of the map – determined by adding the year to the name of the year, when the development was carried out and the v1 segment, which denotes the version of the sheet, updated in a given year. In case of several updates in a given year the version number will be increased accordingly;
- file type – for rasters with georeferenced GEOTIFF suffix, for pdf rasters without georeference – no suffix; extension – *.tif or pdf.

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The pdf files are prepared in 300 dpi resolution in RGB colour palette, with JPEG compression parameter equal to 85.

Geotiff roasters are prepared in the PL-1992 reference system, with a 300 dpi resolution in the RGB colour palette, with LZW lossless compression.