

Adaptation preparedness scoreboard:

Draft country fiche for Poland

Disclaimer

This draft country fiche was prepared in the context of the implementation of the EU's Strategy for Adaptation to Climate Change (EUAS). The indicators were developed and agreed with experts from the Member States (MS). This draft version of the fiche is published as background information to the public stakeholder consultation about the evaluation of the EUAS running from early December 2017 to early March 2018. It constitutes work in progress, a particular stage of information collection and dialogue between the Commission and the Member States. It presents a snapshot of the status in the country as of September or October 2017. The fiches are planned to be finalised and published as an annex to the strategy's evaluation report in the fourth quarter of 2018, before which they will be further updated and modified. Should you have any specific comments on the draft fiche, please send it to the mailbox CLIMA-CLIMATE-CHANGE-ADAPTATION@ec.europa.eu

Please note that the assessments (yes/no/in progress) need to be read in conjunction with the narrative that accompanies them. They assess the state of play within each country. While all effort has been made to ensure the coherence across fiches in the assessment of the same indicator, it should not be directly compared across the MS. Two countries with a "yes" on the same indicator could have a different national situation leading to that assessment. Not all indicators have the "in progress" status, some can only be "yes" or "no". For a more detailed explanation of what each indicator means and how its value is determined, please refer to the description of the scoreboard, a document published alongside the country fiches.

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POLICY FRAMEWORK

Adaptation strategies

A1. National adaptation strategy

"Polish National Strategy for Adaptation to Climate Change by 2020 with the perspective by 2030" (NAS 2020)¹ was adopted by the Polish government in October 2013. Its main goal is to ensure sustainable development of Poland in the conditions of changing climate. It links directly to the EU Adaptation Strategy. The NAS 2020 sets out strategic goals for adaptation action in several sectors considered to be particularly vulnerable to climate change in Poland, namely: water management, agriculture, forestry, biodiversity and protected areas, health, energy, building industry, transport, mountain areas, coastal zone, spatial development and developed urban areas. It includes legislative, organisational and information actions as well as research programmes.

¹ Ministry of Environment (2013), Polish National Strategy for Adaptation to Climate Change (NAS 2020), https://klimada.mos.gov.pl/wp-content/uploads/2014/12/ENG_SPA2020_final.pdf

The NAS 2020, provides the high level framework that is referred to when planning adaptation action at national, regional and local level.

Many other strategic documents, at national, regional and local levels, highlight the importance of climate change adaptation in Poland (e.g. Strategy for Responsible Growth; National Environmental Policy 2018 – 2030; Energy Security and Environment – perspective up to 2020). Many were created before the NAS 2020 adoption in 2013 (e.g. Strategy for "Sustainable development of the countryside, agriculture and fisheries in 2012-2020"² that explicitly mentions adaptation in rural areas as part of its five core objectives). Most recently, at a local level, there is an ongoing public consultation of the Warsaw's Climate Change Adaptation Strategy³.

A2. Adaptation strategies adopted at subnational levels

Adaptation Strategies on a local level are being developed within the framework of the project conducted by the Ministry of Environment: "Development of Urban Adaptation Plans for cities with more than 100,000 inhabitants in Poland" (MPA) which covers 44 major Polish cities, mainly over 100 000 residents. At the same time, the local and regional (voivodeship) authorities are free to shape their adaptation policies. The Ministry of Environment has published a guidance document concerning the preparation of urban adaptation plans in 2014.

Adaptation action plans

B1. National adaptation plan

Poland has not developed, nor is planning to develop a National Adaptation Action Plan. While working on the National Adaptation Strategy, Poland has opted for a "soft-coordination model" for implementation, which is based on support, incentives, guidance, and soft measures.

B2. Adaptation plans adopted at sub-national level

In terms of climate adaptation action plans, the most prominent initiative is "Development of Urban Adaptation Plans for cities with more than 100,000 inhabitants in Poland" (Miejskie Plany Adaptacji – MPA) project⁴, which was launched in January 2017. It aims at conducting a vulnerability assessment and relevant adaptation action planning for Polish cities (44 cities are currently covered by the project). The project is coordinated by the Ministry of Environment, delivered by a consortium including state and private entities, and co-founded from the Cohesion Fund under the Infrastructure and Environment Operational Programme 2014-2020. The project consortium is led by

² Ministry of Agriculture and Rural Development (2012), Strategia zrównoważonego rozwoju wsi, rolnictwa i rybactwa na lata 2012-2020, http://www.minrol.gov.pl/Informacje-branzowe/Strategia-zrownowazonego-rozwoju-wsi-rolnictwa-i-rybactwa-na-lata-2012-2020/Dokumenty-analizy

³ ADAPTCITY website: http://konsultacje.um.warszawa.pl/konsultacja/pomysl-na-klimat-strategia-adaptacji-do-zmian-klimatu-dla-mst-warszawy

⁴ Project website: http://44mpa.pl/

the governmental research body: Institute of Environmental Protection – National Research Institute that was in charge of NAS 2020 preparation. The estimated duration of the project is 20 months for each of the 44 cities. The project aims at the vulnerability and risk assessment of each city to climate change and at planning adaptation solutions, including soft and hard measures with respect to the identified hazards. All Urban Adaptation Plans will be developed in accordance with one methodology. The project is expected to contribute to the improvement of the safety and quality of life of the citizens. It will also support the local authorities in accessing financial resources for the investments. Urban adaptation plans will have dynamic and open character, so it is expected to be easy to update or reshape some assumptions.

Another example of adaptation policy implementation at a sub-national level is CLIMCITIES – "CLIMate change adaptation in small and medium size CITIES". The project provides training to local authorities and local leaders from NGOs, media, universities and other interested stakeholders in Polish cities and towns with a population from 50.000 to 99.000 inhabitants. The training sessions are complemented by an elearning platform and an on-line library. The project started in 2017 and is supported by the European Economic Area grants, with a contribution from the state budget. It complements the MPA project dedicated to preparation of climate change adaptation strategies for larger cities.

B3. Sectoral adaptation plans

In 2015, the Polish government has amended the 2003 law on the Coastal Protection Programme⁵. The amendment reflected the NAS 2020 vulnerability assessment with regard to Polish coastal zones, and amplified protection of Polish cost against, among others, floods, erosion, and cliff degradation. The programme implementation is coordinated by the Ministry of Marine Economy.

The "Development of drought impacts prevention plans for the river basins" project⁶ is carried out under the Infrastructure and Environment Operational Programme 2014-2020 (priority axis 2: 2.Environmental protection including adaptation to climate change) and co-founded by the Cohesion Fund (13.6 mln PLN out of the total project budget of 16 mln PLN, ca. 4 mln EUR). The project is coordinated by the National Water Management Authority and will be running between 2016 and 2020. The drought impacts prevention plans are developed by regional water management authorities. There are also flood risk management plans adopted recently for several river basins (e.g. Flood Risk Management Plan for Odra River Basin adopted in October 2016⁷).

The Srategic project "Infrastructure for rural development" within the Strategy for Responsible Development contains adaptation to climate change elements in rural and agriculture sector, especially on water management and infrastructure.

Ustawa z dnia 28 marca 2003 r. o ustanowieniu programu wieloletniego "Program ochrony brzegów morskich" http://isap.seim.gov.pl/DetailsServlet?id=WDU20030670621

⁶ KZGW website: http://www.kzgw.gov.pl/pl/Opracowanie-planow-przeciwdzialania-skutkom-suszy-na-obszarach-dorzeczy.html
⁷ Governmental Council (2016), Rozporządzenie Rady Ministrów z dnia 18 października 2016 r. w sprawie przyjęcia Planu zarządzanie ryzykiem powodziowym dla obszaru dorzecza Odry (Dz. U. z 2016 r. poz. 1938), http://powodz.gov.pl/biblioteka/PZRP/Rozporzadzenie RM 18-10-2016 w sprawie przyjecia PZRP dla OD Odry.pdf

PKP Polskie Linie Kolejowe S.A., a company with majority stock held by the State Treasury, has been making significant efforts to create the best conditions possible for providing rail transport services for the country will held an expertise on climate change adaptation in railway sector. An Expert Opinion will prepare the railway network for a changing climate: the Opinion is expected to be ready in 2018.. The document will identify possible directions and ranges of activities needed for good line maintenance, efficient trains and investment. Prepared expertise will include the planning, execution, operation and maintenance of the railway lines. Analysed impacts will include, among others, the following climatic factors.: heavy rains and storms, strong winds, high and low temperatures, floods and landslides. The works will include a variety of data, including: satellite imagery, meteorological and climatic data, analysis of existing climate scenarios up to minimum of 2070, including scenarios of the International Panel on Climate Change.

The General Directoriate of The State Forests coordinates two significant projects on climate change adaptation of forests and forestry to climate change - low retention and counteracting water erosion in lowland areas and mountain areas (2016 – 2022). The aim of the projects is to strengthen resilience to threats related to climate change in lowland and mountain forest ecosystems. The actions will be directed to the prevention or minimization of the negative effects of natural phenomena such as the effects of flood waters, floods and flooding, drought and fires.

SCOREBOARD

Step A: preparing the ground for adaptation

1. Coordination structure

1a. A central administration body officially in charge of adaptation policy making

Yes / No

The Ministry of Environment has prepared the NAS (that was subsequently adopted by the Polish government) and is a *de facto* coordinator of adaptation action in Poland. Its role implies from its competencies in environmental protection and water management. Adaptation to climate change is mentioned in the Act on Environmental Law only once, in the context of redistribution of funds by the National Fund for Environmental Protection and Water Management done with the approval of the Ministry of Environment⁸. The Ministry of Environment prepares adaptation strategies, feeds into the Climate-ADAPT website, reports to the EC and UNFCCC, and supports adaptation initiatives such as CLIMCITIES⁹ building capacity among regional and local policy makers. The ministry

http://climcities.ios.gov.pl/

⁸ Art. 410e, Act on Environmental Law, consolidated version of 10.02.2017, http://isap.sejm.gov.pl/Download?id=WDU20010620627&type=3

fulfils most of its adaptation action through a state research institute IOS-PIB (pl. Instytut Ochrony Środowiska – Państwowy Instytut Badawczy).

1b. Horizontal (i.e. sectoral) coordination mechanisms exist within the governance system, with division of responsibilities

Yes / In progress / No

See analysis below at 1c.

1c. Vertical (i.e. across levels of administration) coordination mechanisms exist within the governance system, enabling lower levels of administration to influence policy making.

Yes / In progress / No

While adaptation initiatives are developed in different sectors, no sign of coordination mechanism to align them could be found. Neither is there an obvious coordination structure in place between the different levels of public authorities. Since June 2015, multi-level and cross-sectoral governance is supported however by a Working Group on Climate Change Adaptation. The group aims at:

- supporting the implementation of NAS 2020, mainstreaming of adaptation at regional level by indicating directions of adaptation action to be included in the regional strategic documents that will further be reflected in the local adaptation
- facilitating the knowledge sharing between the levels of governance,
- supporting monitoring and reporting of adaptation action at regional and local
- creating a cooperation and experience exchange platform between national, regional, and local level stakeholders and international cooperation platform, and
- supporting implementation of MPA project dedicated to adaptation action in Polish cities (of minimum 100 thousand inhabitants).

The working group has been created as part of the project supporting activities of the "Partnership: Environment for growth" network bringing together the environmental protection institutions and the EU fund managing authorities¹⁰. The working group received support under the Technical Assistance Operational Programme 2007-2013 (cofounded from the Cohesion Fund) that is continued under the current programming period.

The local and regional (voivodeship) authorities are free to shape their adaptation policies as long as they are in line with the national legislation. The Ministry of Environment has published a quidance document on the preparation of urban adaptation plans in 2014¹¹. No evidence has been found of national or regional level coordination of cities in the framework of the Covenant of Mayors.

¹⁰ www.gdos.gov.pl » Ruszyła Grupa Robocza ds. Adaptacji do Zmian Klimatu, http://www.gdos.gov.pl/ruszyla-grupa-robocza-

ds-adaptacji-do-zmian-klimatu

11 Minstry of Environment (2014), Podręcznik adaptacji dla miast - wytyczne do przygotowania Miejskiego Planu Adaptacji do zmian klimatu. https://klimada.mos.gov.pl/wp-content/uploads/2015/09/Podrecznik-adaptacji-dla-miast1.pdf

2. Stakeholders' involvement in policy development

2a. A dedicated process is in place to facilitate stakeholders' involvement in the preparation of adaptation policies

Yes / No

The involvement of civil society in environmental policy making is rather limited in Poland. No evidence of significant stakeholder involvement could be found with respect to the preparation of the NSA 2020. As a result of the state run project KLIMADA, the NAS 2020 was created by staff members of the IOŚ-PIB, a governmental research institute working on environmental protection issues, and affiliated experts. The KLIMADA project website was created only after the NSA 2020 was adopted; the "public dialogue" feature it contains calls for stakeholder contributions including best practices sharing.

The abovementioned Working Group on Climate Change Adaptation can be seen as a stakeholder involvement platform even if limited in scope (the working group meetings are in principle open to the participants who are not registered in the network but their participation has to be approved beforehand by the chair of the working group). In practice, according to the information collected from the General Inspectorate of Environmental Protection, an executive agency of the Ministry of Environment that hosts the working group sessions, external participants join the session "very rarely". By the end of April 2017 six working group sessions have taken place, with only three formal interventions from non-public authorities: the floor was open to one university, one private company (presenting experience from an urban adaptation project in Radom), and a foundation dedicated to sustainable development¹².

Since 2015, under the actions of ENEA network working group on Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA), a series of training courses have taken place for stakeholders on considering climate change in investment projects.

There are sporadic cases of structured stakeholder engagement such as the ongoing public consultation of the Warsaw's Climate Change Adaptation Strategy¹³. The city encourages a wide range of inputs, including voices on possible individual actions, under the headline of "IDEAS for CLIMATE" and organises a dozen of consultation meetings. The consultation is a part of a wider ADAPTCITY project, co-founded by LIFE+ and the National Fund for Environmental Protection and Water Management¹⁴.

¹² http://sdr.gdos.gov.pl/SitePages/ZmianyKlimatu.aspx

¹³ http://konsultacje.um.warszawa.pl/konsultacja/pomysl-na-klimat-strategia-adaptacji-do-zmian-klimatu-dla-mst-warszawy

2b. Transboundary cooperation is planned to address common challenges with relevant countries

Yes / No

There is no apparent cross-border cooperation on climate change adaptation in Poland. However, in the area of flood protection Poland cooperates on a regular basis with its neighbours: Slovakia, Czech Republic, Germany, Lithuania, and Ukraine¹⁵.

Notably Poland was <u>not</u> partnering the Baltadapt project that aims at exchange knowledge and "develop a climate change adaptation strategy and a framework for its implementation" in the Baltic Sea region¹⁶. It is however a member of HELCOM (Baltic Marine Environment Protection Commission - Helsinki Commission) for which "adaptation to climate change is a central question". HELCOM defines adaptation as "adjustment and development of the necessary new measures to protect the Baltic Sea marine environment so as to allow for reaching the vision of a healthy Baltic Sea even in a changing climate."¹⁷. Poland is also involved in the EU Strategy for the Baltic Sea Region (EUSBSR, 2009) that sets out "climate change adaptation, risk prevention and management among" its objectives¹⁸.

The NAS includes only national components. However, transboundary components are the elements of the EUSBSR and the EU Adaptation Strategy.

Step B: assessing risks and vulnerabilities to climate change

3. Current and projected climate change

3a. Observation systems are in place to monitor climate change, extreme climate events and their impacts

Yes / **In progress** / No

The Institute of Meteorology and Water Management (IMGW, a national research institute) is in charge of climate change monitoring, including keeping a log of extreme climate events. It feeds data to the Global Climate Observing System¹⁹.

A dedicated unit within the IMGW in charge of collecting data on the state of atmosphere and hydrosphere uses a complex technical infrastructure including systems for a) Observing-measurement, b) Teleinformation and communication, and c) Data processing, forecasting and warning. Additionally, monitoring of selected climate variables is carried out by a number research institutes and universities in Poland.

Apart from monitoring, the IMGW is in charge of preparation and dissemination of forecasts and warnings for general public as well as for state defence.

¹⁵ National Water Management Authority website: http://www.kzgw.gov.pl/pl/Wspolpraca-z-Republika-Federalna-Niemiec.html

¹⁶ http://www.baltadapt.eu/index.php

¹⁷ HELCOM (2013), Climate change in the Baltic Sea Area HELCOM thematic assessment in 2013, http://www.helcom.fi/Lists/Publications/BSEP137.pdf

¹⁸ EC (2017), European Union Strategy for the Baltic Sea Region ACTION PLAN, COM(2009) 248

¹⁹ http://www.wmo.int/pages/prog/gcos/index.php?name=ObservingSystemsandData

Ensuring an effective system of protecting the country against extraordinary threats is particularly important due to the growing number of such events and the increasing scale of both economic and social effects that they cause. It is becoming increasingly important to improve the effectiveness of flood risk management. Because of that, IT system of the Country's Protection Against Extreme Harazds (ISOK) was developed. The ISOK system is a tool which constitutes the widest collection of expertise and information about water management in Poland. Majority of products facilitating assurance of safety and risk management have already been prepared, including flood hazard maps, flood risk maps and meteorological hazard maps.

The analysis of climatic trends in Poland shows that a number of phenomena such as whirlwinds, hurricanes, droughts, heat waves increased in intensity and frequency over recent decades. For precipitation, the trends are not clear with expected increase in winter precipitation and reduction of summer precipitation at the end of the century, extended periods without rainfall, increased number of maximum rainfalls and shortening the period of snow cover.²⁰.

There is no open database for that data available. Data and track records of extreme events are available in the Ministry of the Interior and Administration and The Institute of Meteorology and Water Management – National Research Institute (IMGW-PIB).

3b. Scenarios and projections are used to assess the economic, social and environmental impacts of climate change, taking into account geographical specificities and best available science (e.g. in response to revised IPCC assessments)

Yes / **In progress** / No

Under both KLIMADA and KLIMAT (assessing "Impact of the climate change on environment, economy and society")21 projects a series of scenarios and projections have been produced. The KLIMADA website refers to simulations undertaken for the EU project ENSEMBLES which used SRES A1B emission scenario from IPCC 2000²². Scenarios and projections in project KLIMAT were prepared for the years 2011-2030 using model supporting calculations for the fourth assessment by the IPCC AR4 (reference scenario used experiment 20C3M and projections used scenarios SRES A2, A1B and B1)²³. Geographic specificities were considered in the modelling work.

Moreover, between 2011 and 2015, the Institute of Soil Science and Plant Cultivation (a state research institute) has been developing an information system on climate change impacts for agriculture and adaptation methods²⁴. The projects outcome fine tune the available climate change models to the Polish agricultural sector needs.

http://klimat.imgw.pl/

²¹ KLIMAT project website: http://klimat.imgw.pl/

²² IPCC, URL: http://www.ipcc.ch/ipccreports/sres/emission/index.php?idp=0, Accessed: 16/05/2018

²³ KLIMAT, 2012, Warunki klimatyczne i oceanograficzne w Polsce i na bałtyku południowym, URL: http://klimat.imgw.pl/wp-content/uploads/2013/01/tom1.pdf?edmc= 24 IUNG "System informacji o wpływie zmian klimatycznych

na rolnictwo oraz metodach adaptacji" official website, http://www.klimat.iung.pulawy.pl/o-systemie

3c. Sound climate risks/vulnerability assessments for priority vulnerable sectors are undertaken to support adaptation decision making

Status Pending

Climate risks and vulnerability assessment for selected sectors were undertaken under the KLIMADA project that led to the NAS 2020 adoption.

The following sectors have been covered in the risk assessments: agriculture, forestry, biodiversity, human health, water, coastal areas, mountain areas, transport, energy, built environment, spatial planning/urban planning. The ministries responsible for a given sector coordinated the risk assessment for their sector. Moreover the KLIMAT project developed by the IMGW has assessed the long-term climatic pressures on agriculture and forestry, water management, energy security as well as broader socio-economic conditions.

The assessment is based on different data sets that will soon become outdated as the most recent ones end on year 2010.

After the publication of this fiche on 7 December 2017, the Commission services received the following text proposal from the Polish authorities as additional information. The proposal will be analysed and used by the Commission services as appropriate in updating the fiche before its finalisation in the 2nd half of 2018.

'The project "Development and implementation of a strategic adaptation plan for the sectors and areas vulnerable to climate change" with the acronym KLIMADA has been implemented from September 2011 until the end of 2013. The results of this project will form the basis for the preparation of a strategic plan for adapting the country to climate change and was divided into two time scales – from now on till 2030 and the period 2070-2100. The scope of work includes:

- Assessment of expected climate changes in Poland,
- The assessment of climate change impacts and vulnerability of society and the economy to these changes,
- Define the necessary of adaptation to the changes of climatic conditions of various economy and social life sectors and the estimation the necessary costs,
- Mainstreaming the adaptation to climate change into socio-economic national policy,
- Increasing the awareness of the different levels decision makers of risks related to climate impacts.

As a result, the 2013 Polish National Strategy for contains both sensitivity and impact analysis and climate change scenarios for Poland and it was published in 2013.'

3d. Climate risks/vulnerability assessments take transboundary risks into account, when relevant

Yes / In progress / No

Transboundary risks are taken into assessment in the collaborative effort undertaken by Poland and its neighbouring countries with regards to flood prevention and flood-related damage mitigation²⁵. The NAS 2020 explicitly mentions that organisational adaptation actions should "take into account the cross-border aspects". There are relatively few signs however of systematic consideration of transboundary risks.

4. Knowledge gaps

4. Work is being carried out to identify, prioritise and address the knowledge gaps

Yes / In progress / No

The NAS 2020 notes that reinforcement of research in the area of adaptation is important and there is a need to create programmes and finance research in: energy, construction, geology, transport, agriculture and forestry management, water and maritime management. To date, however, there is no sign of systematic processes employed for tackling the knowledge gap regarding adaptation in Poland.

5. Knowledge transfer

5a. Adaptation relevant data and information is available to all stakeholders, including policy makers (e.g. through a dedicated website or other comparable means)

Yes / In progress / No

KLIMADA website, created in as a run up to the NAS 2020 preparation is regularly updated with information about adaptation activities in Poland and EU. As a source of information on climate adaptation it is far from comprehensive; while it provides some data and updates about climate change and adaptation activities, the information presented lacks detail and sources from which it was taken. The website does not offer linkages to other sources containing relevant information, such as the IMGW website.

The website created for the project "Development of Urban Adaptation Plans for cities with more than 100,000 inhabitants in Poland" is another official source of information available to all stakeholders. More detailed information on the adaptation of cities will be published on the website as the project progresses¹.

The new project led by the Institute of Environmental Protection - National Research Institute, concerning "Knowledge base on climate change and adaptation to their effects" (see Indicator 4a) aims to provide the necessary knowledge in the field of climate change and its impact, to improve the effectiveness and efficiency of adaptation activities in sectors and areas vulnerable to climate change¹. The project is nationwide and is directed at decision makers in the central administration who should take actions related to the selection and implementation of climate adaptation activities and measures.'

²⁵ National Water Management Authority website: http://www.kzgw.gov.pl/pl/Wspolpraca-z-Republika-Federalna-Niemiec.html

5b. Capacity building activities take place; education and training materials on climate change adaptation concepts and practices are available and disseminated

Status Pending

There are some systematic actions on capacity building for urban areas that are not driven by the NAS. A promising attempt to share adaptation knowledge among the stakeholders is the CLIMCITIES "CLIMate change adaptation in small and medium size CITIES"²⁶ project providing training to local authorities and local leaders from NGOs, media, universities and other interested stakeholders in Polish cities and towns (with population from 50.000 to 99.000 inhabitants). The training sessions are complemented by e-learning platform and an on-line library. The project started in 2017 and is supported by the EEA Grants, with a contribution of the Poland's state budget. It complements the MPA and ADAPTCITY projects dedicated to preparation of climate change adaptation strategies for larger cities.

The Ministry of Environment also published two guidance documents relevant to adaptation: Guidance on preparing investment that takes into account climate change mitigation and adaptation including resilience to natural disasters²⁷, and City Adaptation Handbook – guidance on preparation of Urban Adaptation Plans²⁸. It has also released a

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'Guide to investment preparation respecting climate change mitigation and adaptation as well as resilience to natural disasters" which describes how to take climate change into consideration during the process of environment impact assessment. Under the actions of the ENEA network and Ministry of the Environment, a series of training courses in the field of considering climate change in investment projects is taking place since 2015.'

Step C: identifying adaptation options

- 6. Adaptation options' identification
- 6a. Adaptation options address the sectoral risks identified in 3c, the geographical specificities identified in 3b and follow best practices in similar contexts

Yes / No

²⁶ http://climcities.ios.gov.pl/rekrutacja

²⁸ Ministry of Environment (2014), op. cit

²⁷ Ministry of Environment (2015), Pordadnik przygotowania inwestycji z uwzględnieniem zmian klimatu, ich łagodzenia i przystosowania do tych zmian oraz odporności na klęski żywiołowe, http://klimada.mos.gov.pl/blog/2015/10/30/poradnik przygotowania inwestycj/

The NAS 2020 identifies adaptation options based on climate risks and vulnerability assessment for selected sectors undertaken under the KLIMADA project (water management, agriculture, forestry, biodiversity and protected areas, health, energy, building industry, transport, mountain areas, coastal zone, spatial development and urban areas). The assessment has been made based on climate change scenarios developed at the Interdisciplinary Centre for Mathematical and Computational Modeling of the Warsaw University. The scenarios cover period 2001-2030; divided into two time perspectives: 2001-2010 and 2021-2030. The KLIMADA project methodologies include modelling (atmosphere and hydrodynamic models), expert judgment, and desk research²⁹.

6b. The selection of priority adaptation options is based on robust methods (e.g. multi-criteria analyses, stakeholders' consultation, etc.) and consistent with existing decision-making frameworks

Yes / No

The NAS 2020 identifies risks and a range of relevant adaptation options. A quasi prioritisation mechanism is in place that helps understand the option selection process. The NAS 2020 established three general principles taken into account when identifying the options; option identified should be able to:

- reduce vulnerability to risk associated with climate change, inter alia, by taking this aspect into account at the investment planning stage,
- develop rapid response plans in the event of climate disasters (floods, droughts, heat waves),
- determine priority actions in terms of the cost-effectiveness prioritising threats to health and life of humans and permanent loss and damages.

The actions are divided between four categories: **legislation**, **organisation**, **information**, **and research** and formulated to match the overarching NAS 2020 objectives:

Objective 1: Ensuring the energy security and good environmental status

Objective 2: Efficient adaptation to climate change in rural areas

Objective 3: Development of transport in the conditions of climate change

Objective 4: Ensuring the sustainable regional and local development with consideration to climate change

Objective 5: Stimulating innovations conducive to adaptation to climate change

Objective 6: Development of social behaviour conducive to adaptation to climate change

Preparing a list of actions matching the objectives was a multi-stage process based on expert assessments. The preliminary list of adaptation options was assessed and complemented by the relevant ministries. The outcome was compared with the

²⁹ Ministry of Environment (2015), Pordadnik przygotowania inwestycji z uwzględnieniem zmian klimatu, ich łagodzenia i przystosowania do tych zmian oraz odporności na klęski żywiołowe,

orientations set out in the government strategies and submitted to experts for reassessment.

6c. Mechanisms are in place to coordinate disaster risk management and climate change adaptation and to ensure coherence between the two policies

Status Pending

No evidence was found of a mechanism coordinating disaster risk management and climate change adaptation is in place, on methods to include climate projections in disaster risk management or vice versa.

After the publication of this fiche on 7 December 2017, the Commission services received the following text proposal from the Polish authorities as additional information. The proposal will be analysed and used by the Commission services as appropriate in updating the fiche before its finalisation in the 2nd half of 2018.

'The Minister of the Environment, whose competences include issues related to climate change and water management, cooperates with other public administration entities for the implementation of the Disaster Risk Management, but does not have the coordination functions for this process.

The Government Centre for Security is institution responsible for the coordination of activities in the area of monitoring, prevention and counteracting threats, as well as launching procedures related to crisis management.'

7. Funding resources identified and allocated

7. Funding is available to increase climate resilience in vulnerable sectors and for cross-cutting adaptation action

Yes / In progress /No

NAS 2020 provides an overview of funds available for adaptation to climate change in the 2014-2020 period. These include domestic, EU and international sources of finance. Domestic funds include the National and Regional Funds for Environmental Protection and Water Management including funds from Green Investment Scheme (income from sale of Annual Allocation Units under the Kyoto Protocol³⁰), local and regional governments' budgets, and state budget. Included in NAS 2020 identification of EU funds available to climate change adaptation in Poland is very limited and general (referring broadly to "national and regional operational programmes". The strategy mentions LIFE but fails to name the main sources of funds, namely the European Fund for Regional Development, the Cohesion Fund, the European Social Fund. Among international sources of funding the NAS 2020 lists World Bank and International Monetary Fund. It does not provide any details on any of the sources of funding it mentions, including

p://klimada.mos.gov.pl/blog/2015/10/30/poradnik_przygotowania_inwestycj/"http://klimada.mos.gov.pl/blog/2015/10/30/poradnik_przygotowania_inwestycj/

evidence of disbursements under those funds (an attempt to provide an overview of EU funds available for adaptation has been published on the KLIMADA website³¹ but it is not a complete list of possible adaptation action funding sources). It should be noted however, that in 2014 a Partnership Agreement³² was signed by the European Commission and Poland to set out plans on the use of ESI Funds in Poland over the 2014-2020 period. The agreement refers to NAS 2020 in several instances, and includes an estimate that some €1.2 billion will be dedicated to all of the adaptation actions listed in NAS 2020, covering around 35% of the adaptation investment needs in the water sector. Furthermore, the Partnership Agreement includes a commitment to take a horizontal approach to adaptation action framed by the NAS 2020 by considering it in each sector and thematic objective co-funded by ESI Funds. While this has been decided after the adoption of the NAS 2020, no update was made to reflect ESI Funds role in the NAS 2020 implementation, and only sporadic relevant information is available on KLIMADA website. The EU funds availability is however a major factor encouraging adaptation action in Poland.

Step D: Implementing adaptation action

8. Mainstreaming adaptation in planning processes

8a. Consideration of climate change adaptation has been included in the national frameworks for environmental impact assessments

Yes / No

In 2015 the Law on Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) was updated to reflect climate change adaptation needs³³.

In terms of EIA, the need for such assessment of an undertaking is established based on, among others, the scientific knowledge about the risk it bears in terms of major accidents or natural disasters taking into account climate change (art. 63). The environmental report preceding any undertaking requiring such assessment has to include information about the risk of climate change as well as its potential contribution to climate change adaptation (art. 66).

The provisions regarding SEA have not been amended to reflect climate change adaptation needs specifically. They do not include any other reference to climate change than the general requirement for SEA to determine, analyse and assess (i) environmental protection aims and environmental issues subject to international, EU, and national level policies that are relevant to the assessed strategic document, and (ii) expected

GDOS

nt (2014), op. cit

^{(?) &}lt;a href="https://www.gdos.gov.pl/files/artykuly/5437/Lagodzenie_zmian_klimatu_i_adaptacja_do_zmian_klimatu_w_ocenie_oddzialywania_na_srodowisko.pdf">https://www.gdos.gov.pl/files/artykuly/5437/Lagodzenie_zmian_klimatu_i_adaptacja_do_zmian_klimatu_w_ocenie_oddzialywania_na_srodowisko.pdf

^{14-2020/}

³² Minstry of Infrastructure and Development (2014), Programowaniie perspektywy fiinansowej 2014 -2020 - Umowa Partnerstwa, https://ec.europa.eu/info/sites/info/files/partnership-agreement-poland-may2014_pl.pdf

³³ Ustawa z dnia 3 października 2008 r. o udostępnianiu informacji o środowisku i jego ochronie, udziale społeczeństwa w ochronie środowiska oraz o ocenach oddziaływania na środowisko, http://isap.sejm.gov.pl/Download;jsessionid=FB3ECA4E089934F164109A10995E20A5?id=WDU20081991227&type=3

interactions between biodiversity, people, animals, plants, water, air, soil, landscape, climate, natural resources, heritage, and material goods (art. 51).

The General Directorate for Environmental Protection, in charge of EIA and SEA in Poland, has issued a brochure "Climate change mitigation and adaptation in the environmental impact assessment"³⁴. The brochure explains broadly the modalities of EIA in terms of climate change mitigation and adaptation.

In 2015 the Ministry of Environment published a "Guidance on preparing investment that takes into account climate change mitigation and adaptation including resilience to natural disasters"³⁵. The guidance aims mainly to support potential beneficiaries of the EU co-founding in the 2014-2020 programming period.

8b. Prevention/preparedness strategies in place under national disaster risk management plans take into account climate change impacts and projections

Yes / No

Projections of future climate impacts, and the extent to which climate change is currently affecting climate risks, are not incorporated in the Polish National Risk Management Plan³⁶.

8c. Key land use, spatial planning, urban planning and maritime spatial planning policies take into account the impacts of climate change

Yes / No

According to the National Spatial Development Concept 2030³⁷ (NSDC 2030) adopted in 2015, Polish spatial policy will be "striving to increase space capacity to adapt to climate change impacts". It notes further however that "expected climate change until 2030 will have only moderate impact on spatial planning in Poland". The impacts are foreseen in settlement networks, agriculture, and several other sectors in the coastal areas, river valleys and mountain areas. Indirect impacts of climate change are expected, according to the NSDC, are an outcome of legislative and regulatory changes including increased spending on water management infrastructure and recovery from extreme climatic events.

³⁴ GDOS

^(?)https://www.gdos.gov.pl/files/artykuly/5437/Lagodzenie zmian klimatu i adaptacja do zmian klimatu w ocenie oddzialyw ania na srodowisko.pdf

³⁵ Ministry of Environment (2015), Pordadnik przygotowania inwestycji z uwzględnieniem zmian klimatu, ich łagodzenia i przystosowania do tych zmian oraz odporności na klęski żywiołowe, http://klimada.mos.gov.pl/blog/2015/10/30/poradnik_przygotowania_inwestycj/

³⁶ Governmental Security Centre (2012), Krajowy Plan Zarzadzania Kryzysowego, http://rcb.gov.pl/wp-content/uploads/KPZK-2013-2015.ti ...pdf

³⁷ Ministry of Development (2011), Koncepcja przestrzennego Zagospodarowania Kraju, Uchwała Nr 239 Rady Ministrów z dnia 13 grudnia 2011 r. w sprawie przyjęcia Koncepcji Przestrzennego Zagospodarowania Kraju 203, http://isap.sejm.gov.pl/DetailsServlet?id=WMP20120000252&min=1

The implementation of the NSDC 20130 is coordinated by the Ministry of Development³⁸. It is unclear what the level of implementation is with regards to adaptation to climate change.

8d. National policy instruments promote adaptation at sectoral level, in line with national priorities and in areas where adaptation is mainstreamed in EU policies

Yes / In progress / No

At sectoral level adaptation is promoted by one central instrument: the Partnership Agreement between EU and Poland for the period 2014-2020³⁹ adopted in May 2014. Most recently, integration of adaptation into sectoral policy making has further been confirmed in a horizontal strategy ("Strategy for Responsible Growth"⁴⁰) adopted by the Polish government in February 2017.

The Partnership Agreement for Poland covers the European Regional Development Fund (ERDF), the Cohesion Fund (CF), the European Social Fund (ESF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF). This was a key driver of climate adaptation inclusion in the sectoral policies in Poland; as most of them are delivered through or significantly affected by the operational programmes disbursing EU funds. The partnership priorities focus on business environment, entrepreneurship and innovation, social cohesion, active labour market participation, network infrastructure, environment and resource efficiency. Adaptation action is promoted mainly through environment and resource efficiency priority action but it is mainstreamed to some extent through all of them. According to some experts, it is the regional operational programmes that play the key role in NAS 2020 implementation⁴¹.

8e. Adaptation is mainstreamed in insurance or alternative policy instruments, where relevant, to provide incentives for investments in risk prevention

Yes / No

No evidence was found on adaptation being mainstreamed in insurance or alternative policy instruments in Poland.

9. Implementing adaptation

9a. Adaptation policies and measures are implemented, e.g. as defined in action plans or sectoral policy documents

Yes / In progress / No

38 http://mr.bip.gov.pl/strategie-rozwoj-regionalny/17847_strategie.html

³⁹ https://ec.europa.eu/info/publications/partnership-agreement-poland-2014-20 en
40 Ministry of Development (2017), Strategia na rzecz Odpowiedzialnego Rozwoji https://www.mr.gov.pl/media/35716/SOR 2017 maly internet03 2017.pdf

⁴¹ Wisniewska, M (2014), Adaptacja do zmian klimatu, http://www.reo.pl/assets/dokumenty/wiadomosci/lipsiewrz14/raport-adaptacja.pdf

It's unclear whether there is coordinated implementation of the NAS 2020. Nevertheless, Polish authorities engage in a range of adaptation actions that are in line with the NAS 2020, mainly through European Structural and Investment Funds. A non-comprehensive of on-going adaptation measures in Poland includes:

- Developing and adopting flood and drought prevention plans for the river basins by the national and regional water management authorities,
- Capacity building
 - "Good climate for Counties" project, supported by LIFE + financial instrument was running between 2010 and 2015 engaging local actors in a series of climate adaptation actions including creating of County Network for Climate and Network of Local Civil Society Initiators, signing declarations, organising debates and conferences⁴².
 - CLIMCITIES project⁴³
- Guidelines for Urban Adaptation Plans preparation
- Developing adaptation action plans for cities (MPA project⁴⁴)
- Fostering research and innovation e.g. PREPARED project in the area of waste water management⁴⁵, projects supported by the National Science Centre⁴⁶
- Changes in legislation relative to EIA, coastal management, rain water collection
- "Guide to investment preparation respecting climate change mitigation and adaptation as well as resilience to natural disasters" developed by the Ministry of Environment in 2015 (see 8a.)
- Creating of an information system on climate change impacts for agriculture and adaptation methods⁴⁷ by the Institute of Soil Science and Plant Cultivation

9b. Cooperation mechanisms in place to foster and support adaptation at relevant scales (e.g. local, subnational)

Yes / No

In terms of supporting adaptation at subnational level, the most prominent initiative is "Development of Urban Adaptation Plans for cities with more than 100,000 inhabitants in Poland" (Miejskie Plany Adaptacji – MPA) - project, launched in January 2017. It aims at vulnerability assessment and relevant adaptation action planning for Polish cities (around 44 cities are currently covered by the project). The project is coordinated by the Ministry of Environment, delivered by a consortium including state and private entities, and cofunded from the Cohesion Fund under the Infrastructure and Environment Operational Programme 2014-2020. The project consortium is led by the governmental research body: Institute of Environmental Protection – National Research Institute that was in charge of NAS 2020 preparation. The estimated duration of the project is 20 months for each of the 44 cities.

http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3773

Project official website:

⁴³ http://climcities.ios.gov.pl/

⁴⁴ http://klimada.mos.gov.pl/projekt-mpa/

http://pwik.gliwice.pl/7-program-ramowy-prepared.html

⁴⁶ E.g. https://www.ncn.gov.pl/finansowanie-nauki/przyklady-projektow/oleksyn

⁴⁷ IUNG "System informacji o wpływie zmian klimatycznych

na rolnictwo oraz metodach adaptacji" official website, http://www.klimat.iung.pulawy.pl/o-systemie

9c. Procedures or guidelines are available to assess the potential impact of climate change on major projects or programmes, and facilitate the choice of alternative options, e.g. green infrastructure

Yes / No

Guidelines assessing the potential impact of climate change on projects are included in "Guide to investment preparation respecting climate change mitigation and adaptation as well as resilience to natural disasters". It describes, analyses and gives instructions, including methodologies, on how to take into consideration climate change adaptation and mitigation during project preparation and development, including in particular EIA and SEA analysis and procedures.

The aim of the guide is to provide methodologies and hints concerning the way in which climate issues should be included in /integrated into the process of developing of investments and projects at the stage of:

- SEA and EIA in relation to: climate mitigation, climate adaptation and resilience including eco-system based approaches
- Cost Benefit Analysis, including calculation of shadow costs and external costs of GHG emissions, carbon footprint analysis, sensitivity and vulnerability analysis of projects in relation to climate changes and natural disasters
- Risk analysis including climate-related risks;
- Climate options analysis and assessment, including climate impact on projects and projects impacts on climate.

The guide addresses

- EU funds beneficiaries under 2014-2020 financial perspective;
- Managing, intermediary and implementing authorities (responsible for appraisal of the applications/projects submitted under EU funding);
- State/local budget beneficiaries;
- Relevant government authorities issuing or consulting decisions and consents.

9d. There are processes for stakeholders' involvement in the implementation of adaptation policies and measures

Yes / No

There seems to be limited or no stakeholder involvement in implementation of adaptation action. However, the public consultation preceding adoption of the Warsaw's Climate Change Adaptation Strategy⁴⁸ is an encouraging signal that the civil society and wide range of non-public administration stakeholders gets to be engaged in adaptation action planning and delivery.

⁴⁸ http://konsultacje.um.warszawa.pl/konsultacja/pomysl-na-klimat-strategia-adaptacji-do-zmian-klimatu-dla-mst-warszawy

Step E: Monitoring and evaluation of adaptation activities

10. Monitoring and reporting

10a. NAS/NAP implementation is monitored and the results of the monitoring are disseminated

Status Pending

Monitoring of NAS 2020 implementation by the Ministry of the Environment is foreseen in the NAS 2020 but it has not been undertaken yet.

The strategy, alongside the strategic objectives, sets out a number of relevant monitoring indicators. Adaptation-relevant monitoring data can be found on the STRATEG website managed by the Polish Statistical Office⁴⁹ and The KLIMADA website is a platform that includes information on wider trends but does not seem to include information specifically dealing with Polish implementation of climate change adaptation.

⁴⁹ http://strateg.stat.gov.pl/

After the publication of this fiche on 7 December 2017, the Commission services received the following text proposal from the Polish authorities as additional information. The proposal will be analysed and used by the Commission services as appropriate in updating the fiche before its finalisation in the 2nd half of 2018.

Monitoring and evaluation of NAS 2020 implementation process started in December 2017 and is coordinated by the Ministry of the Environment. Collected information related to climate issues and extreme weather events, will include actions on national, regional and local level. Different sectoral Ministries, Marshall Offices and Provincial Governors received request to summarize the effects of NAS 2020 implementation in specific questionnaire. Individual parts of the Questionnaire relate to specific measures identified in NAS2020 document. The Evaluation process will be carried out by the end of the first half of this year.

At the same time, comprehensive monitoring system for adaptation policy is currently being developed in connection with the work on National Environment Policy 2018 - 2030 and will be implemented with the adoption of the document at the turn of 2018/2019. Document will contain an adaptation and mitigation component and it will be implemented and coordinated in line with NAS 2020.

Furthermore, in the Ministry of the Environment the concept of study on the integrating of adaptation issues in projects financed from Operational Programme Infrastructure and Environment (OPIE) 2014-2020 is being carried out. Main product will be analysis of taking into consideration in the projects implemented in OPIE 2014-2020 aspects of adaptation to climate change, mitigation and increasing the resistance of infrastructure investments to the effects of climate change and natural disasters. Together with the analysis, a package of recommendations will be created for the EU's financial perspective and domestic financing after 2020.

10b. The integration of climate change adaptation in sectoral policies is monitored and the results of the monitoring are disseminated

Status Pending

Monitoring and evaluation of sectoral policies are in the competence of the associated Ministries and Institutions. The Ministry of the Environment does not collect and upload any reports about sectoral policies itself.

After the publication of this fiche on 7 December 2017, the Commission services received the following text proposal from the Polish authorities as additional information. The proposal will be analysed and used by the Commission services as appropriate in updating the fiche before its finalisation in the 2nd half of 2018.

At the end of 2017 Ministry of the Environment has prepared and forwarded to other sectoral Ministries a Questionnaire about implementation of NAS 2020 in accordance with the commitments and thematic scope of actions and measures from NAS 2020.

10c. Regional-, sub-national or local action is monitored and the results of the monitoring are disseminated

Status Pending

There is no evidence of systematic collection and dissemination of information on regional, sub-national or local adaptation action.

After the publication of this fiche on 7 December 2017, the Commission services received the following text proposal from the Polish authorities as additional information. The proposal will be analysed and used by the Commission services as appropriate in updating the fiche before its finalisation in the 2nd half of 2018.

Monitoring of NAS 2020 implementation by the Ministry of the Environment has started at the end of 2017 and is conducted at the level of Marshals and Provincial Governors. Information and data on the tasks carried out in the regions, which take into account the aspect of adaptation to climate change and resilience to natural disasters.

As part of the <u>44mpa.pl</u> project, a diagnosis of the situation regarding the climate risk analysis of 44 cities was made. It allows to state and estimate partner cities resistance to climate change and adaptation to climate change potential.

11. Evaluation

11a. A periodic review of the national adaptation strategy and action plans is planned

Status Pending

There is no evidence of planning of a periodic review of the NAS 2020.

After the publication of this fiche on 7 December 2017, the Commission services received the following text proposal from the Polish authorities as additional information. The proposal will be analysed and used by the Commission services as appropriate in updating the fiche before its finalisation in the 2nd half of 2018.

There will be only one review of the NAS 2020, because the further adaptation measures and actions will be included in the document "National Environmental Policy 2018 – 2030" which is currently being prepared in the Ministry of the Environment. Together with the document, a separate implementation system will be created.

11b. Stakeholders are involved in the assessment, evaluation and review of national adaptation policy

Status Pending

After the publication of this fiche on 7 December 2017, the Commission services received the following text proposal from the Polish authorities as additional information. The proposal will be analysed and used by the Commission services as appropriate in updating the fiche before its finalisation in the 2nd half of 2018.

At the end of 2017 Ministry of the Environment has prepared and forwarded to other sectoral Ministries a Questionnaire about implementation of NAS 2020 in accordance with the commitments and thematic scope of actions and measures from NAS 2020.

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SUMMARY TABLE

No.	Indicator	Met?
		Metr
Step A	: Preparing the ground for adaptation	
1	Coordination structure	
1a	A central administration body officially in charge of adaptation policy making	Yes / No
1b	Horizontal (i.e. sectoral) coordination mechanisms exist within the governance system, with division of responsibilities	Yes / <u>In progress</u> / No
1c	Vertical (i.e. across levels of administration) coordination mechanisms exist within the governance system, enabling lower levels of administration to influence policy making.	Yes / In progress / No
2	Stakeholders' involvement in policy	
develo	ppment	
2a	A dedicated process is in place to facilitate stakeholders' involvement in the preparation of adaptation policies	Yes / No
2b	Transboundary cooperation is planned to address common challenges with relevant countries	Yes / No
_	B: Assessing risks and vulnerabilities to e change	
3	Current and projected climate change	
3a	Observation systems are in place to monitor climate change, extreme climate events and their impacts	Yes / In progress / No
3a 3b	climate change, extreme climate events and their impacts Scenarios and projections are used to assess the economic, social and environmental impacts of climate change, taking into account geographical specificities and best available science (e.g. in response to revised IPCC assessments) Yes / In progress / No	Yes / <u>In progress</u> / No Yes / <u>In progress</u> / No
	climate change, extreme climate events and their impacts Scenarios and projections are used to assess the economic, social and environmental impacts of climate change, taking into account geographical specificities and best available science (e.g. in response to revised IPCC assessments)	
3b	climate change, extreme climate events and their impacts Scenarios and projections are used to assess the economic, social and environmental impacts of climate change, taking into account geographical specificities and best available science (e.g. in response to revised IPCC assessments) Yes / In progress / No (e.g. in response to revised IPCC assessments) Sound climate risks/vulnerability assessments for priority vulnerable sectors are undertaken to	Yes / In progress / No

Adaptation Preparedness Scoreboard				
No.	Indicator	Met?		
4	Work is being carried out to identify, prioritise and address the knowledge gaps	Yes / <u>In progress</u> / No		
5	Knowledge transfer			
5a	Adaptation relevant data and information is available to all stakeholders, including policy makers (e.g. through a dedicated website or other comparable means).	Yes / In progress / No		
5b	Capacity building activities take place; education and training materials on climate change adaptation concepts and practices are available and disseminated	Status Pending		
Step C	: Identifying adaptation options			
6	Identification of adaptation options			
6a	Adaptation options address the sectoral risks identified in 3c, the geographical specificities identified in 3b and follow best practices in similar contexts	<u>Yes</u> / No		
6b	The selection of priority adaptation options is based on robust methods (e.g. multi-criteria analyses, stakeholders' consultation, etc.) and consistent with existing decision-making frameworks	<u>Yes</u> / No		
6c	Mechanisms are in place to coordinate disaster risk management and climate change adaptation and to ensure coherence between the two policies	Status Pending		
7	Funding resources identified and allocated			
7	Funding is available to increase climate resilience in vulnerable sectors and for cross-cutting adaptation action	Yes / In progress /No		
Step D	: Implementing adaptation action			
8 proces	Mainstreaming adaptation in planning sses			
8a	Consideration of climate change adaptation has been included in the national frameworks for environmental impact assessments	<u>Yes</u> / No		
8b	Prevention/preparedness strategies in place under national disaster risk management plans take into account climate change impacts and projections	Yes / <u>No</u>		
8c	Key land use, spatial planning, urban planning	Yes / <u>No</u>		

Adaptation Preparedness Scoreboard		
No.	Indicator	Met?
	and maritime spatial planning policies take into account the impacts of climate change	
8d	National policy instruments promote adaptation at sectoral level, in line with national priorities and in areas where adaptation is mainstreamed in EU policies	Yes / In progress / No
8e	Adaptation is mainstreamed in insurance or alternative policy instruments, where relevant, to provide incentives for investments in risk prevention	Yes / No
9	Implementing adaptation	
9a	Adaptation policies and measures are implemented, e.g. as defined in action plans or sectoral policy documents	Yes / In progress / No
9b	Cooperation mechanisms in place to foster and support adaptation at relevant scales (e.g. local, subnational)	Yes / No
9c	Procedures or guidelines are available to assess the potential impact of climate change on major projects or programmes, and facilitate the choice of alternative options, e.g. green infrastructure	<u>Yes</u> / No
9d	There are processes for stakeholders' involvement in the implementation of adaptation policies and measures.	Yes <u>/ No</u>
Step E	E: Monitoring and evaluation of adaptation ies	
10	Monitoring and reporting	
10a	NAS/NAP implementation is monitored and the results of the monitoring are disseminated	Status Pending
10b	The integration of climate change adaptation in sectoral policies is monitored and the results of the monitoring are disseminated	Status Pending
10c	Regional-, sub-national or local action is monitored and the results of the monitoring are disseminated	Status Pending
11	Evaluation	
11a	A periodic review of the national adaptation strategy and action plans is planned	Status Pending
11b	Stakeholders are involved in the assessment, evaluation and review of national adaptation policy	Status Pending

References

- ADAPTCITY website: http://konsultacje.um.warszawa.pl/konsultacja/pomysl-na-klimat-strategia-adaptacji-do-zmian-klimatu-dla-mst-warszawy
- Art. 410e, Act on Environmental Law, consolidated version of 10.02.2017, http://isap.sejm.gov.pl/Download?id=WDU20010620627&type=3
- BALTADAPt project website: http://www.baltadapt.eu/index.php
- EC (2009), WHITE PAPER Adapting to climate change: Towards a European framework for action, COM(2009) 147/4
- EC (2017), European Union Strategy for the Baltic Sea Region ACTION PLAN, COM(2009) 248
- EC website: https://ec.europa.eu/info/publications/partnership-agreement-poland-2014-20 en
- GDOS,
 brochure
 https://www.gdos.gov.pl/files/artykuly/5437/Lagodzenie zmian klimatu i adaptacja do zmian klimatu w ocenie oddzialywania na srodowisko.pdf
- Governmental Council (2016), Rozporządzenie Rady Ministrów z dnia 18 października 2016 r. w sprawie przyjęcia Planu zarządzanie ryzykiem powodziowym dla obszaru dorzecza Odry (Dz. U. z 2016 r. poz. 1938), http://powodz.gov.pl/biblioteka/PZRP/Rozporzadzenie RM 18-10-2016 w sprawie przyjecia PZRP dla OD Odry.pdf
- Governmental Security Centre (2012), Krajowy Plan Zarzadzania Kryzysowego, http://rcb.qov.pl/wp-content/uploads/KPZK-2013-2015.tj..pdf
- HELCOM (2013), Climate change in the Baltic Sea Area HELCOM thematic assessment in 2013, http://www.helcom.fi/Lists/Publications/BSEP137.pdf
- http://sdr.gdos.gov.pl/SitePages/ZmianyKlimatu.aspx
- IUNG "System informacji o wpływie zmian klimatycznych na rolnictwo oraz metodach adaptacji" official website, http://www.klimat.iung.pulawy.pl/o-systemie
- IUNG "System informacji o wpływie zmian klimatycznych na rolnictwo oraz metodach adaptacji" official website, http://www.klimat.iung.pulawy.pl/o-systemie
- KLIMADA project website: http://klimada.mos.gov.pl/o-projekcie/
- KLIMAT project website: http://klimat.imgw.pl/
- KZGW website: http://www.kzgw.gov.pl/pl/Opracowanie-planow-przeciwdzialania-skutkom-suszy-na-obszarach-dorzeczy.html
- Ministry of Agriculture and Rural Development (2012), Strategia zrównoważonego rozwoju wsi, rolnictwa i rybactwa na lata 2012-2020, http://www.minrol.gov.pl/Informacje-branzowe/Strategia-zrownowazonego-rozwoju-wsi-rolnictwa-i-rybactwa-na-lata-2012-2020/Dokumenty-analizy
- Ministry of Development (2011), Koncepcja przestrzennego Zagospodarowania Kraju, Uchwała Nr 239
 Rady Ministrów z dnia 13 grudnia 2011 r. w sprawie przyjęcia Koncepcji Przestrzennego Zagospodarowania Kraju 203, http://isap.sejm.gov.pl/DetailsServlet?id=WMP20120000252&min=1
- Ministry of Development (2017), Strategia na rzecz Odpowiedzialnego Rozwoju, <u>https://www.mr.gov.pl/media/35716/SOR 2017 maly internet03 2017.pdf</u>
- Ministry of Development (2017), Strategia na rzecz Odpowiedzialnego Rozwoju, https://www.mr.gov.pl/media/35716/SOR 2017 maly internet03 2017.pdf
- Ministry of Environment (2013), Strategiczny plan adaptacji dla sektorów i obszarów wrażliwych na zmiany klimatu do roku 2020 z perspektywą do roku 2030 (SPA 2020), https://klimada.mos.gov.pl/wp-content/uploads/2013/11/SPA-2020.pdf
- Ministry of Environment (2015), Pordadnik przygotowania inwestycji z uwzględnieniem zmian klimatu, ich łagodzenia i przystosowania do tych zmian oraz odporności na klęski żywiołowe, http://klimada.mos.qov.pl/bloq/2015/10/30/poradnik przygotowania inwestycj/
- Ministry of Environment (2015), Strategia "Bezpieczeństwo Energetyczne i Środowisko perspektywa do 2020 r.", https://www.mos.qov.pl/q2/biq/2015 09/43af1db4587a65ef8c3703ec2bf57972.pdf
- Minstry of Environment (2014), Podręcznik adaptacji dla miast wytyczne do przygotowania Miejskiego Planu Adaptacji do zmian klimatu. https://klimada.mos.gov.pl/wp-content/uploads/2015/09/Podręcznik-adaptacji-dla-miast1.pdf
- Minstry of Infrastructure and Development (2014), Programowaniie perspektywy fiinansowej 2014 2020 Umowa Partnerstwa, https://ec.europa.eu/info/sites/info/files/partnership-agreement-poland-may2014 pl.pdf Ministry of Environment (2015), Pordadnik przygotowania inwestycji z uwzględnieniem zmian klimatu, ich łagodzenia i przystosowania do tych zmian oraz odporności na klęski żywiołowe, http://klimada.mos.gov.pl/blog/2015/10/30/poradnik przygotowania inwestycj/
- MPA Project website: http://44mpa.pl/
- National Water Management Authority website: http://www.kzgw.gov.pl/pl/Wspolpraca-z-Republika-Federalna-Niemiec.html
- National Water Management Authority website: http://www.kzgw.gov.pl/pl/Wspolpraca-z-Republika-Federalna-Niemiec.html
- NFOSiGW website, http://nfosigw.gov.pl/en/priority-programmes/green-investment-scheme/

- Project official website: http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_i d=3773
- Ustawa z dnia 28 marca 2003 r. o ustanowieniu programu wieloletniego "Program ochrony brzegów morskich" http://isap.sejm.gov.pl/DetailsServlet?id=WDU20030670621
- Ustawa z dnia 3 października 2008 r. o udostępnianiu informacji o środowisku i jego ochronie, udziale społeczeństwa w ochronie środowiska oraz o ocenach oddziaływania na środowisko, http://isap.sejm.gov.pl/Download;jsessionid=FB3ECA4E089934F164109A10995E20A5?id=WDU20081 9912278type=3
- Wisniewska, M (2014), Adaptacja do zmian klimatu, http://www.reo.pl/assets/dokumenty/wiadomosci/lipsiewrz14/raport-adaptacja.pdf
- WMO website; http://www.wmo.int/pages/prog/qcos/index.php?name=ObservingSystemsandData
- www.gdos.gov.pl » Ruszyła Grupa Robocza ds. Adaptacji do Zmian Klimatu, <u>http://www.gdos.gov.pl/ruszyla-grupa-robocza-ds-adaptacji-do-zmian-klimatu</u>