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European Commission

INCEPTION IMPACT ASSESSMENT

Inception Impact Assessments aim to inform citizens and stakeholders about the Commission's plans in order to allow them to provide feedback on the intended initiative and to participate effectively in future consultation activities. Citizens and stakeholders are in particular invited to provide views on the Commission's understanding of the problem and possible solutions and to make available any relevant information that they may have, including on possible impacts of the options.

TITLE OF THE INITIATIVE	European Green Deal Strategy for Adaptation to Climate Change
LEAD DG (RESPONSIBLE UNIT)	DG CLIMA – A3
LIKELY TYPE OF INITIATIVE	Communication from the Commission to the European Parliament and the Council
INDICATIVE PLANNING	Q4 2020
ADDITIONAL INFORMATION	https://ec.europa.eu/clima/policies/adaptation/what_en

The Inception Impact Assessment is provided for information purposes only. It does not prejudge the final decision of the Commission on whether this initiative will be pursued or on its final content. All elements of the initiative described by the Inception impact assessment, including its timing, are subject to change.

A. Context, Problem definition and Subsidiarity Check

Context

The current EU strategy on adaptation to climate change (COM(2013)216 final) was evaluated in November 2018 (COM(2018)738). The evaluation was positive, and shows that the strategy has delivered on its objectives, with progress recorded against each of its eight individual actions. Nevertheless, several areas were identified for improvement, drawing from lessons learnt from implementation, international developments since its adoption (such as the Paris Agreement and the Sendai Framework for Disaster Risk Reduction) and climate change impacts that manifest themselves with increased scale and intensity.

A new, more ambitious Adaptation Strategy was therefore announced in the Communication on the European Green Deal in December 2019 (COM(2019)640 final). The Strategy is one of the new initiatives included in the Commission Work Programme 2020 (COM(2020)37 final). Moreover, the European Commission's proposal for an EU Climate Law (COM(2020) 80 final) provides a framework for action in pursuit of the global adaptation goal established in Article 7 of the Paris Agreement. The new adaptation strategy will be designed to support the achievement of the objectives of the EU Climate Law.

Problem the initiative aims to tackle

Climate change impacts are here and now. Global and European temperatures have repeatedly broken long-term records in recent years. The last five years were the hottest on record, with heatwaves, droughts and wildfires across Europe. The string of record-breaking heatwaves made July 2019 the hottest month ever recorded. Recent projections estimate global warming of up to 4°C by 2100 under current climate policies, and around 3°C if all countries meet the Nationally Determined Contribution targets of the Paris Agreement.

The 2020 State of the European environment report concludes that climate change has substantially increased the occurrence of climate and weather extremes. This ranges from unprecedented forest fires and heatwaves above the Arctic Circle to increasingly devastating droughts in the Mediterranean region; and from accelerating coastal erosion on the Atlantic coast to more severe flooding and decimated forests in Central and Eastern Europe. Without drastic emission abatement measures, continued climate change will increase the likelihood of severe, pervasive and irreversible consequences such as the collapse of natural ecosystems (Arctic ecosystems, coral reefs, the Amazon forest), the erosion of global food security or displacement of people . Extreme sea level events and floods will occur more frequently, with sever damages to Europe's coastal communities.

In the EU, economic losses from weather and climate-related extremes are on average already EUR 12 billion per year. The Joint Research Centre of the European Commission recently estimated economic impacts on the EU in a few sectors where economic impacts can be convincingly monetized (e.g. forest fires, river floods, coastal floods, agriculture, droughts, and human mortality). The analysis shows that exposing the present EU economy to global warming of 3°C would result in an additional annual loss of at least 170 €billion (1.36% of GDP). Even restricting warming to 1.5°C would still lead to an additional loss of at least 40 €billion/year (0.3% of GDP). Several other reports (with different assumptions) estimate even higher losses (e.g. The Economist Intelligence Unit finds 3% of GDP loss in Eastern Europe and 1.7% in Western Europe in 2050). On average, only 35% of the climate-related economic losses are insured, with proportions as low as 5% or less in Southern and Eastern Europe, Total insurance losses for weather-related events reached 0.1% of GDP in 2018 and are likely to start trending upwards as a share of GDP. However, adaptation efforts in Europe and globally, both public and private, have so far been far from sufficient.

A climate emergency has now been recognised by the European Parliament, several Member States and more than 1,000 cities worldwide. Moreover, according to the latest special Eurobarometer on climate change, 93% of Europeans believe that climate change is a serious problem, and they are ready to take action to tackle it: 70% of Europeans agree that adapting to the impacts of climate change can have positive outcomes for citizens.

Moreover, even stopping all greenhouse gas emissions would not stop the climate impacts that are already occurring, and which are likely to continue for decades. Temporary decreases of greenhouse gas emissions, like those caused by the 2008 financial crisis (or the current economic disruption from the Covid-19 pandemic) have little effect on the evolution of the planetary climate (and emissions can bounce back quickly).

When it comes to the economic effects of the current health crisis, we must "build-back-better" or "recover better". The urgency of action in the short term must not deter from moving towards climate-readiness, and the recovery is an opportunity to increase the resilience of our society across the board, and especially in relation to climate impacts. Adaptation efforts are even more important against the background of the severe socio-economic consequences of the Covid-19 pandemic, to ensure that policies aim at both social and environmental sustainability.

A new EU Strategy would scale up existing efforts and identify further areas and instruments where the EU can bring the greatest added value in protecting Europe (its people, nature and prosperity) from the impacts of climate change, ensuring a just adaptation, and supporting partner countries in doing the same.

Basis for EU intervention (legal basis and subsidiarity check)

The initiative is in an area of shared competence with relevant cross border and transnational problems to address. Adaptation to climate change is mainstreamed in a number of policy areas such as management of water catchments, civil protection, biodiversity, and marine and terrestrial ecosystems-based services, where implementation has a clear EU added value and transnational governance. Member State adaptation strategies ensure subsidiarity. A Communication is an appropriate means to present a new EU Strategy.

B. Objectives and Policy options

The European Commission's proposal for an EU Climate Law sets Europe on a path towards the global adaptation goal (Article 7 of the Paris Agreement), so that by 2050, the Union will be a climate-resilient society, fully adapted to the unavoidable impacts of climate change, with reinforced adaptive capacity and minimal vulnerability. The Communication will describe the new Strategy and the way forward; it will focus and prioritise policy areas and actions where EU interventions can be most effective and provide the most added value. It will include an external dimension in support of global adaptation efforts.

Building on the positive evaluation of the 2013 Strategy and other related initiatives, policy options will be considered that maintain, reinforce, and add to the current actions. The new strategy will expand and add to the objectives of the 2013 strategy (i.e. promoting action by Member States, promoting better-informed decision-making, and promoting adaptation in key vulnerable sectors). Policy actions that will be expanded, compared to the 2013 strategy, could be for instance: the further mainstreaming of adaptation considerations in EU legislation and instruments, continuing to encourage resilience building in cities, closing further adaptation-relevant knowledge gaps, influencing public and private investments, including on nature-based solutions, promoting measures in support of a just adaptation, and financially supporting adaptation actions. Additionally, some reinforced mainstreaming is expected in some areas where further adaptation actions are necessary such as the water sector, insurance, health(as in the "One Health" approach), agriculture, urban environments, oceans and disaster risk management and reduction.

Moreover, the new strategy will also include new areas of action. These may include the development of a new, international dimension to the current strategy to align and contribute to the global goal on adaptation, including reporting, transparency and monitoring actions in the context of the Paris Agreement implementation and its global stock take (the first one being scheduled for 2023). More broadly, the "European Green Deal" Adaptation strategy will be more ambitious, given the mounting intensity of climate impacts, and must build on, and expand on the wealth of experience accumulated thus far. It should aim to help all levels of government and stakeholders (the EU Institutions, Member States, the private sector, non-state actors, international partners and individuals) in the EU and globally, to:

- improve knowledge of climate impacts (e.g. through increased awareness and better access to knowledge of individual and collective climate risks);
- reinforce planning and climate risk management in the public and private sector (e.g. through risk assessments and helping to close the climate protection gap via risk-transfer mechanisms);
- accelerate action with a focus on solutions (in addition to understanding), on deploying innovation (in addition to research), on implementation (in addition to planning), and on prevention (in addition to ex-post).

Potential new actions that will be addressed in the new strategy could include:

- The development of an observatory on social/health vulnerability to help identify health and social/distributional risks linked to climate change in early stages, securing the health and wellbeing of European citizens through improved risk assessment and surveillance and enhanced preparedness of health

and social services;

- Aligning EU action on adaptation and contribute to the new international context and shaping the international adaptation agenda, through external action that increasingly addresses climate resilience and adaptation needs in partner countries;
- A review of incentives/disincentives to resilience investments and natural disaster insurance penetration through EU and Member State policy frameworks;
- An extended use of EU climate proofing guidance, aligned with the latest IPCC reports and scientific findings.
- More open access to climate loss and risk data from private and public sources, to allow all actors to take ownership of adaptation action and provide a more solid basis to research, innovation, policy-making and implementation;
- A greater focus on the development and deployment of adaptation solutions through the Horizon Europe mission on Adaptation and Societal Transformation and other EU Funds (e.g. cohesion policy, which has already invested more than EUR 7 billion in climate change adaptation in the 2014-2020 period);
- More support to the resilience of forests and other ecosystems, to enhance their resilience through the conservation and enhanced used of existing genetic resources, as well as restoration and sustainable management measures.

Some of these possible actions will be conducted in relation with other policy developments announced in the European Green Deal, such as the Renewed Sustainable Finance Strategy, the Climate Pact, the Forest strategy or the Biodiversity Strategy.

C. Preliminary Assessment of Expected Impacts

Likely economic impacts

On a macroeconomic level, the new strategy would lead to an increase in financial and economic resilience by better risk management and reduction, including through closing the climate protection gap, climate proofing investments, and incorporating climate change costs and risks into fiscal frameworks. Adequate risk management and risk reduction will thus contribute to minimising impact of major climate disasters on balance sheets, production capacity, business continuity and poverty, thereby improving the financial resilience of the EU. Climate proofing investments will assure that new infrastructure will not hinder mitigation efforts and improve resilience towards current and future climate impacts. Climate change adaptation can be very cost-effective to reduce economic damage, e.g. adaptation in coastal areas can reduce projected damage by around 90%.

Lastly, better preparing and equipping the EU and national budgets to withstand possible shocks to macroeconomic stability from climate events will allow the EU to continuously provide investment into vulnerable sectors, support sustainable economic growth and provide social protection to its citizens. Positive impacts will also be felt by other stakeholders e.g. SMEs (who would have easier access to improved climate projects). Others include farmers and forest owners (who would be better equipped to protect their assets from climate impacts), workers (e.g. in circular economy sectors who would support reskilling and provide improved working conditions and occupational health and safety standards); or citizens (who will be better informed and protected, including their property, from direct impacts such as forest fires, heatwaves or flooding). Moreover, actions such as the better integration of climate change adaptation in decision-making will help ensure the future-proofing of projects and avoid maladaptation and stranded assets. A similar type of impact is expected in partner countries supported by EU external action on adaptation.

Likely social impacts

An increased preparedness of Member States and of vulnerable citizens towards climate risks and increased solidarity and fairness across and within Member States (as stressed in the European Climate Law) will allow them to be less exposed to climate change impacts and deal with them in a more preventive manner and will increase social cohesion. For example, a health and climate observatory will help to decrease climate-related health problems. It would also contribute to implement preventive early actions regarding the spread of new diseases (a priority highlighted by the Covid-19 crisis). It could also help identify specific social/distributional risks linked to climate change in early stages. Improving adequate and affordable insurance coverage for climate related risks to property and businesses will provide social protection and inclusion to citizens, workers and SMEs. Additionally, building climate smart cities that provide protection from the urban heat-island effect will protect workers in outdoor-labour sectors like construction. The Horizon Europe mission on Adaptation to Climate Change, including Societal Transformation, will be designed to accelerate the deployment of innovations and foster behavioural changes to increase Europe's resilience, preparedness and inclusiveness.

Globally, supporting partner countries in building resilience, reducing vulnerability, strengthening cohesion, and preparing for the impacts of climate change will not only support the achievement of the Sustainable Development Goals, but will also help reduce and manage the cascading risks for interconnected economies and societies, whether through trade, security, or population displacement and international mobility.

Likely environmental impacts

A systemic and integrated approach, in line with the European Green Deal, would bring benefits in environmental areas like biodiversity (through, for example, the implementation of nature-based solutions), air quality,

preservation of water body status, protection against desertification and floods, or urban heat. Nature based solutions for adaptation, especially in regards of afforestation, reforestation and forest restoration, as well as restoration of vegetated coastal ecosystems will have additional climate change mitigating effects. Protecting and increasing (genetic) biodiversity will increase the resilience of ecosystems, and contribute to food security. Healthy ecosystems in vulnerable regions will provide additional benefits to local citizens as e.g. healthy and resilient soils with increased soil organic carbon and ensured agricultural activity, the restauration of wetlands can improve protection against increasing risks of flooding in coastal and river areas. A similar approach will be applied to partner countries supported by EU external action, where environmental protection and conservation are at risk.

Likely impacts on fundamental rights

An improved access to climate risk data including data on climate hazards, environmental information and climate-related loss data will allow citizens to make informed decisions when conducting businesses, acquire property and provide for their families. Helping to make cities climate-smart and put the health and social wellbeing of their citizens in their centre of attention will protect their fundamental rights to work and live in a healthy environment that provides equal treatment to all.

Likely impacts on simplification and/or administrative burden

Administrative burden would not be increased because of the new strategy, and where it could foreseeably be expected to increase (e.g. through the application of climate proofing for infrastructure investments), the additional cost would be outweighed by the benefits.

D. Evidence Base, Data collection and Better Regulation Instruments

Impact assessment

The detailed reasoning and the content of the reviewed Strategy will be based in part on the comprehensive evaluation of 2018. This provides a good basis for areas for improvements, areas to be scaled down and new areas to be included, as well as the assessment of potential impacts for the baseline scenario of continuation as under the current Adaptation Strategy. As an initiative of the European Green Deal with significant impact on the Union, the Strategy will benefit from an impact assessment. The impact assessment will assess the impacts of the different policy options under a selection of warming scenarios equivalent to around 1.5, 2, 3 and 4.5 degrees of global temperature increase. Examining the impact of the policy options under these scenarios will provide greater nuance on their potential impact and suitability given the emerging mitigation / temperature increase trajectories. This may also lend itself to an expanded monitoring and evaluation framework, which could be used to trigger additional, even more ambitious measures under the Strategy if warranted.

The assessment will estimate the costs and benefits of strategic adaptation actions against the cost of non-action, i.e. climate damages that can be expected in Europe in different warming scenarios. Using existing research and publications, as well as dedicated modelling using Integrated Assessment Models will enable mainly qualitative but where possible also estimations of the likely impacts of raising the ambition of the current Adaptation Strategy and expanding it to new areas.

Evidence base and data collection

There is already a wealth of authoritative research on climate change impacts in Europe and worldwide. Among others, the EEA Climate-ADAPT platform, DRMKC, European Marine Observation and Data Network, and Copernicus Climate Change Services will provide both climate and economic data needed for the impact assessment. The PESETA IV reports from the Joint Research Centre as well as several EU-funded research projects, will provide data on the costs of climate change and the cost-benefits of adaptation measures in sectors most threatened by climate change like coastal and river areas, agriculture and cities. Additionally, official reports (IPCC, IPBES, Arctic Council, EEA, EASAC, UN bodies, Global Commission on Adaptation) and an ongoing study on the state of the art in adaptation modelling will provide relevant information, data and tools.

An external study will provide inputs to the Impact Assessment based on desk research, Commission and stakeholder consultation, the development of analytical reports on relevant themes, qualitative and quantitative data collection and analysis, and modelling. The study will assess the potential impact of the policy options under a range of different climate scenarios, with the modelling work, based on the GINFORS-E and TINFORGE models providing estimates of the economic impact on GDP and employment.

Consultation of citizens and stakeholders

An extensive consultation of stakeholders will be conducted in 2020 as part of the strategy definition process, including a 12-week public consultation in early 2020. Stakeholder interviews will be conducted to close knowledge gaps that will arise during the public consultation as part of the impact assessment. It is envisaged to carry out the consultation on the basis of a blueprint for the new Strategy.

Will an Implementation plan be established?

The new EU Adaptation Strategy will not be a legislative measure, so an implementation plan is not required.