

LOCALISED Glossary

The LOCALISED Glossary represents a guideline that outlines a common terminology and its application within the project communication, work, and outcomes in order to address the typical challenges of a project with members from different disciplines and fields in sustainability research (Podgórska and Zdonek 2023; Knickel et al. 2019).

This represents an attempt to standardise the terminology of the interdisciplinary project.

The harmonisation in the glossary has been implemented with some specific strategies:

- Establishing Consensus Definitions (Morss et al. 2018);
- Continuous Validation and Feedback (Lejoux et al. 2019) in coordinated exchanges, meetings, working groups, and discussions among project members from the different partners and fields to validate and agree on terminology;
- Iterative Refinement, making adjustments as necessary.

These strategies aim to enhance clarity collectively and to facilitate effective collaboration and communication.



Adaptation Measure	Infrastructure/technology, planning practice, or individual action aiming at reducing negative impacts and taking advantage of positive impacts from climate change. In LOCALISED, we have developed a database that includes both adaptation and mitigation measures.
Business Resilience	An indicator to evaluate the ability of regional business/industry to shield against de- carbonisation risk (See Decarbonisation risk to businesses).
Care Work and Domestic Responsibilities	Care work is looking after one or more other people's physical, psychological, emo- tional and developmental needs. Care work is distinguished between paid care work, usually provided by public or private health services, and unpaid care work, usually carried out by relatives, friends, or different forms of community networks. Domestic responsibilities are a part of unpaid care work. They are defined as tasks performed inside a household to ensure that the basic needs of its members are met, such as cooking, cleaning, and taking care of children or older adults and other dependent family members. Women typically spend disproportionately more time on unpaid care work than men. On account of gendered social norms that view un- paid care work as a female prerogative, women across different regions, socio-eco- nomic classes and cultures spend an important part of their day meeting the expec- tations of their domestic and reproductive roles (OIL 2007). ¹
CAST	The LOCALISED Climate Action Strategiser is a free, web-based climate planning tool for local and regional administrations on the European NUTS-3 level and below. It translates national climate action roadmaps to the regional level and provides rele- vant knowledge to support administrations and policymakers in becoming driving forces on the road to climate neutrality. The tool helps to set up a comprehensive climate action plan, tailored for your city or region, optimised in terms of cost, emis- sion cut or social equity, based on scientifically-sound decarbonisation pathways and a large database of adaptation and mitigation measures. It will also include in- formation on how the chosen measures affect SDGs, as well as a monitoring func- tion. The tool can automatically generate the relevant cornerstones of a Sustainable En- ergy and Climate Action Plan (SECAP) for the Covenant of Mayors, which can be re- fined with further input from the user. It is the first tool with an optimisation func-
	tion and has been co-created with multiple stakeholders from the field.
Citizen	In LOCALISED and the Citizen Engager, more specifically, the term "citizens" in- cludes all individuals who are affected or interested by a specific policy cycle, inde- pendently from their legally recognised national status, age, gender, sexual orienta- tion, income, and religious or political affiliations. When citizens are organised in or- ganisations, they are called "organised stakeholders," which include NGOs, trade un- ions, universities, grassroots movements, and other members of civil society.

¹ OIL (2007) EIGE definition of care work: <u>https://eige.europa.eu/publications-resources/thesaurus/terms/1145?lan-</u>

guage_content_entity=en; EIGE definition of Domestic responsibilities | European Institute for Gender Equality (europa.eu); OECD unpaid care-work definition: https://www.oecd.org/en/about/directorates/development-centre.html



- Citizen Engagement The term "citizen engagement" - in LOCALISED used interchangeably with the terms "citizen participation" and "public participation" - refers to the opportunity for affected and interested people to be involved and voice their interests and concerns at any stage in the policy cycle. Citizens can be involved in the development, implementation and evaluation of plans, programs, policies, or legal acts, as well as public service design and delivery. At the same time, citizen engagement encompasses all efforts and actions of public institutions to take into account the perspectives and inputs from citizens and any other organised stakeholders (see also the definition of Citizen).
- **Citizen Engager** The Citizen Engager is a toolbox and step-by-step guide to citizen engagement in the field of climate policy, that aims at enabling the co-creation of climate policies between citizens and local decision makers in a socially just way. It guides the reader through the steps of identifying, reaching out and engaging with the specific citizen groups, as well as through the actions to be taken after the engagement process. The steps and methods described are tailored to be used at the local and regional scales and are adaptable to different experience levels. The step-by-step guide is enriched by learnings gathered from applied case studies in three partner cities and regions: the City of Vienna, the City of Barcelona, and the Metropolitan Area of Gdańsk-Gdynia-Sopot (MAGGS). The primary target group of the Citizen Engager are local and regional decision makers across Europe, such as elected representatives, politicians, and civil servants. However, the toolbox is also addressed to every professional who is working in the field of citizen engagement or plans to do so in the future.
- **Climate Action** Actions taken in response to an experienced or projected climate threat, risk or impact, allowing either to mitigate climate change or adapt to the impacts by building resilience to climate change impacts. Climate actions are often planned and delivered as part of local, regional, or national climate plans or policies.²

Climate Analogue The concept behind climate analogue is to be able to create a "weak" anticipation of what may happen to a location in the future by comparing it to a location with such a climate at the present time. It is a comparative methodology of the projected statistical characteristics of a climate from a specific location to a base case with similar characteristics, but at a different time. However, in case there is interest to learn about climate analogues, there is this <u>website</u> available, prepared by scholars to inform users on climate analogues.

Climate Change Adaptation In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects, human intervention may facilitate adjustment to expected climate and its effects (IPCC 2022).³

² European Commission, https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/climate-sustainable-development_en.htm

³ <u>https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_Annex-II.pdf</u>



Climate Change Mitigation	Climate change mitigation refers to actions or activities that limit emissions of greenhouse gases (GHGs) from entering the atmosphere and/or reduce their levels in the atmosphere. Mitigation includes reducing the GHGs emitted from energy production and use (e.g., that reduces use of fossil fuels), and land use, and methods to mitigate warming, for example, by carbon sinks, which remove emissions from the atmosphere through land-use or other (including artificial) mechanisms (IPCC 2022).
Climate Extreme	The occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense.
Climate Impact	The consequences of realised risks on natural and human systems, where risks result from the interactions of climate-related hazards (including extreme weather/climate events), exposure, and vulnerability. Impacts generally refer to effects on lives, liveli- hoods, health and well-being, ecosystems and species, economic, social and cultural assets, services (including ecosystem services) and infrastructure. Impacts may be referred to as consequences or outcomes, and can be adverse or beneficial (IPCC 2022).
Climate Policy	Climate policy refers to the strategies and actions taken by governments, organisa- tions, and other entities to address and mitigate the impacts of climate change. It encompasses a wide range of measures and instruments. ⁴
Climate-related Hazard	A Climate-related Hazard is "the potential occurrence of a natural or human-in- duced physical event or trend that may cause loss of life, injury, or other health im- pacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resource" (IPCC 2022, p. 5). Climate change can alter the frequency, magnitude, and duration of extreme weather events, which are especially relevant for a climate risk context. ⁵
Concentration Scenario	A plausible representation of the future development of atmospheric concentrations of substances that are radiatively active (e.g., greenhouse gases (GHGs), aerosols, tropospheric ozone), plus human-induced land-cover changes that can be radiatively active via albedo changes, and often used as input to a climate model to compute climate projections (IPCC 2022).
Data Quality	Accessibility, reliability, consistency, and predictive quality of data produced by LO-CALISED as an integral part of tools' development.
Decarbonisation Risk to Businesses	Decarbonisation risk to businesses refers not to the act of reducing emissions itself, which is an imperative for long-term resilience and competitiveness, but to how the transition to a low-carbon economy may impact businesses. This risk arises from the lack of preparedness in business operations with high emission intensity, but it also

⁴ https://consensus.app/questions/definition-climate-policy/ ⁵ <u>https://handbook.climaax.eu/CRA_steps/beforeyoustart/beforeyoustart.html</u>



signals opportunities for adaptation of clean technologies and streamlining business practices. Decarbonization risk is driven by three interlinked dimensions:

	 Scenario - A decarbonisation pathway and its required pace of GHG emissions reduction (e.g., meeting "Fit for 55" or net-zero-by-2050 targets). A scenario is defined by assumptions about future decarbonisation policy, market conditions, and technological changes that will affect businesses. Exposure - The degree to which a sector or region contributes to current GHG emissions. It determines how businesses are likely to be affected by each "scenario". Regions hosting "hard-to-abate" activities (steel, cement, chemicals) are considered most exposed to decarbonisation efforts, as these businesses are most likely to need to sharply reduce their emissions under decarbonization scenarios. Vulnerability - The (lack of) readiness and resilience of businesses to absorb transitional pressures, including policy compliance, access to low-carbon technologies, financing capacity, workforce skills, and institutional support. Vulnerability highlights the areas in business operations where improvements are most needed.
Decarbonisation	The decarbonisation scenario indicates the set of decarbonisation pathways consid-
Scenario	ered to meet the climate objectives. In the context of the EU, this can be repre- sented by the climate initiatives within the "EU Green Deal" policy package, as well as the national long-term strategy (LTS) for achieving the Paris Agreement's temper- ature objectives. The level of ambition of the target can affect industries differently, pushing some to make drastic changes to their operations and business models.
Distributive Justice	Distributive justice encompasses a fair and equal distribution of environmental goods and benefits across society. In the context of climate change and in relation to the concept of a just transition, distributive justice considers how the impacts of the low-carbon transition are distributed across society. In adaptation planning, practices of distributive justice often address the varying degrees and forms of social vulnerability to ensure the protection of all communities from climate impacts and to analyse the consequences of adaptation action for different groups (Breil et al. 2018; Brisley et al. 2012; Reckien et al. 2018). A fair distribution should particularly consider aspects such as income, wealth, education, and access to energy, mobility, green space (and a healthy environment more generally), health and social care, and should also consider people's subjective well-being.
Diversity	Diversity refers to the presence of differences within a specific context. These dif- ferences could range from visible and invisible characteristics such as age, ethnicity, and gender to skills and abilities.
Emerging Technologies	Emerging technologies in the context of decarbonisation refer to new or developing technologies that enable significant reductions in GHG emissions or improve the efficiency of energy use, thereby supporting the transition to a low-carbon economy. These technologies play a critical role in enabling businesses and economies to achieve their decarbonisation targets.



End User (of the CAST)	Specific groups of people who are supposed to use the CAST in their professional everyday life and are therefore engaged in the co-creation of the tool, e.g. local and regional climate action managers.
Energy Poverty	When a household must reduce its energy consumption (in all of its forms, e.g. heat- ing, electricity and cooling) to a degree that negatively impacts the inhabitants' health and wellbeing, it is a multidimensional aspect, as it can refer to any reason that worsens accessibility to essential energy services. Citizens might be at risk of suffering from energy poverty due to their lifestyles, their individual characteristics, or depending on how exposed they are to the externalities that might occur when changing regional infrastructures.
Exposure	Exposure refers to "the presence of people; livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected" (Oppenheimer et al. 2014, p. 1048; IPCC 2022, p. 2908).
(Business) Exposure to	Business exposure to decarbonisation refers to the extent to which businesses are subject to mandatory reductions in greenhouse gas (GHG) emissions to meet decar-
Decarbonisation	bonisation targets. It is quantified as the average direct (scope 1) GHG emissions per company in a given EU NUTS 2 region, measured in tonnes of CO_{2equiv} , within a given industry sector. Regions with a higher concentration of industries with a high emis- sion intensity relative to their size are more vulnerable to disruptions due to the transition away from fossil fuels and the need for a change in operations, mostly at the sectoral level, such as the adoption of new technologies. This makes them more exposed to decarbonisation efforts. ⁶
ETHOS.MIDAS	<u>Energy Transformation PatHway Optimisation Suite & Modular Integrated Decarbon-</u> ization <u>A</u> daptation <u>Solver</u> : A tool/model to calculate local decarbonisation plans based on disaggregated national decarbonisation pathways.
Gender	Gender describes a range of culturally and socially defined behaviours and attribu- tions associated with the biological sexes.
Impact	Difference made by some activities (change in the state). See Social Impact, Climate Impact
Inclusion	Inclusion is the appreciation and facilitation of diversity, acknowledging and considering intersectionality and creating an environment of respect, connection and community, where all perspectives and contributions are valued and expressed.
Inclusive Communication	Inclusive communication is an approach to communication which enables as many people as possible to be safely included in an interaction.

⁶ https://handbook.climaax.eu/CRA_steps/beforeyoustart/beforeyoustart.html



Indicator	Any kind of metric that describes reality. A combination of indicators is used in LO-CALISED to describe regions and is the basis for the calculation of decarbonisation plans (Look at SOIs definition).
Instrument	Instruments are climate actions taken and/or mandated by a government to acceler- ate mitigation and adaptation measures. They specify <i>how</i> a certain measure is im- plemented in order to achieve its goal (e.g., a subsidy or a regulation).
Intended Outcome	What was planned as the result of an action (as the opposite of side effects).
Intersectionality	Intersectionality is a lens through which one can critically look at the power dynamics and hierarchies and identify the collisions, intersections, and entanglements with other social variables. ⁷
Intersectional Justice	It considers various forms of social characteristics such as gender, race, ethnicity, disabilities, class and other forms of discrimination (Amorim-Maia et al. 2022; Col- lins & Bilge 2020). Neglecting these intersectional dimensions can lead to unequal
	and maladaptive processes and outcomes, emphasising the need to recognise diverse needs and ensure inclusive representation in decision-making processes (Lager et al. 2023). A wider focus on the intersectional aspect of a just transition is devoted in Chapter 4 of this deliverable, dealing with social vulnerability in the face of climate change.
Just Transition	A just transition towards a low-carbon society is defined in LOCALISED as a holistic approach that recognises the interconnectedness of climate change, energy transition, and justice concepts and integrates the principles of distributive, procedural, and intersectional justice. By incorporating these justice dimensions, public authorities, policy advisors, and researchers can work together to address the social, economic, and environmental challenges associated with a transition towards a low-carbon society.
KPI	Key Performance Indicators (KPIs) are indicators of relevance to evaluate/monitor progress. In LOCALISED, the indicators are aimed at evaluating or monitoring progress of decarbonisation, social conditions, business resilience and adaptation. It is also linked to the SOI's definition.
Low Income	Typically, a population at risk of poverty and social exclusion is defined as having a disposable income below the 60% of the median of the region. However, having a low income relates to the capability of the population to afford basic services and needs and be able to have some savings. Thus, populations who spend a high share of their income in purchasing basic services and needs and are not capable of saving a minimum amount of money would need to be potentially considered in the group.
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⁷ Term coined by Kimberlé Crenshaw (1989). The intersection of diverse characteristics, creating unique experiences and realities.



Measure	Specific actions taken to face mitigation and/or adaptation goals, linked to specific contexts and sectors. Measures have an outcome on the indicator (changes a KPI) and can also have side effects.
Minority	The EU Commission defines a minority as a non-dominant group which is usually nu- merically less than the majority population of a State or region regarding their eth- nic, religious or linguistic characteristics and who (if only implicitly) maintain soli- darity with their own culture, traditions, religion or language. ⁸
Mitigation Measure	Infrastructure/technology, management practice, or individual behaviour aiming at reducing the sources and/or enhancing the sinks of GHG. In LOCALISED, we have developed a database that includes both mitigation and adaptation measures.
Narrative	Is "a way of presenting or understanding a situation or series of events that reflects and promotes a particular point of view or set of values."9
	Distinction from story: "A story is the series of events at issue, while narrative is the story "mediated" through how the teller presents it" (Abbott 2020, p. 21)
	So, a narrative is a "particular form of a story, or of stories, suggesting the important elements and their significance to the receiver. Narratives generally take the form of some recounting of events, whether actual or fictional, though often the specific events described are little more than bits of colour brightening a concept and making it more contagious." (Shiller 2017, p. 36)
Net-Zero	LOCALISED approach refers to the state at which all anthropogenic GHG emissions are balanced in EU regions by anthropogenic CO2-equivalent removals over a specified period (in our case, before 2050). ¹⁰
Pathway	Quantifiable system change associated with technological, behavioural and manage- ment practices implemented with the target of achieving decarbonisation over a specific time interval.
Procedural Justice	Procedural justice emphasises the importance of equal participation in decision- making processes, with a particular focus on local government decisions (Abram et al. 2022; Schlosberg 2007; Sovacool et al. 2023). In the realm of climate mitigation and adaptation, it is essential to identify and include all relevant groups in defining strategy objectives, prioritising actions, and monitoring and evaluating the imple- mented measures. Questions to be asked of relevant processes include: Who is in- volved? How are they involved (what roles and powers do they have in the decision- making process)? And when (at what stage in the decision-making process) are they involved?

⁸https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glos-sary/glossary/minority_en ⁹ https://www.merriam-webster.com/dictionary/narrative ¹⁰ based on the European Commission definition



Response

Responses to climate change usually include both adaptation and mitigation responses. The first mention of responses goes back to the Paris Agreement, which "aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty" (PA, Art. 2). ¹¹

This means, in addition to hazard, exposure and vulnerability, climate risk also depends on how a society responds to climate events. Adaptation responses (also called climate risk management interventions or options) may entail planned adaptation (physical constructions, nature-based solutions, planned relocation) or autonomous adaptation (behavioural changes or forced migration). Mitigation responses may include the reduction of GHG emissions and/ or the GHG removal from the atmosphere.

(Business) Response to the Risk of Implementing Mitigation Measures Business response to decarbonisation refers to the strategic and operational changes that businesses implement to adapt to and comply with decarbonisation policies and regulations. It encompasses the efforts made by businesses to mitigate their exposure and/or vulnerability. The response can be multifaceted, involving the adaptation of business models, investments in technology, compliance with regulation, market alignment, and financial management.

Risk

Risk is defined as "the potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems" (Reisinger et al. 2020, p. 4). Relevant adverse consequences include those on lives, livelihoods, health and well-being, economic, social and cultural assets and investments, infrastructure, services (including ecosystem services), ecosystems and species. The definition encompasses both the likelihood of an adverse event occurring and the severity of its potential impact.

In the context of climate change, risks can arise from potential impacts of climate change as well as human responses (Ara Begum et al. 2022). It can be calculated as an interplay of climate hazards (e.g. frequency and intensity of droughts) or scenario, exposure (e.g. a land area where agriculture is conducted) and vulnerability (e.g. presence or absence of irrigation). Hazards, exposure and vulnerability may each be subject to uncertainty in terms of magnitude and likelihood of occurrence, and each may change over time and space due to socio-economic changes and human decision-making. In the context of climate change responses, risks result from the potential for such responses not achieving the intended objective(s), or from potential trade-offs with, or negative side-effects on, other societal objectives, such as the Sustainable Development Goals (SDGs). Risks can arise, for example, from uncertainty in the implementation, effectiveness or outcomes of climate policy, climate-related investments, technology development or adoption, and system transitions (IPCC 2022).¹²

SDGs Sustainable

The 17 Sustainable Development Goals (SDGs) are a global blueprint for peace and prosperity for people and the planet, adopted by all UN Member States in 2015. The

 ¹¹ <u>https://handbook.climaax.eu/CRA_steps/beforeyoustart/beforeyoustart.html</u>
 <u>ADOPTION OF THE PARIS AGREEMENT - Paris Agreement text English</u>
 ¹² https://handbook.climaax.eu/CRA_steps/beforeyoustart/beforeyoustart.html



Development Goals	SDGs include: No Poverty; Zero Hunger; Good Health and Well-Being; Quality Educa- tion; Gender Equality; Clean Water and Sanitation; Affordable and Clean Energy; De- cent Work and Economic Growth; Industry, Innovation, and Infrastructure; Reduce Inequalities; Sustainable Cities and Communities; Responsible Consumption and Pro- duction; Climate Action; Life below Water; Life on Land Peace, Justice, and Strong Institutions; Partnerships for the Goals.
SECAP	The Sustainable Energy and Climate Action Plan (SECAP) is the key document that shows how a Covenant signatory will reach its commitments by 2030. The develop- ment of the SECAP primarily draws on the findings from the Baseline Emission In- ventory (BEI) and the Climate Change Risk and Vulnerability Assessment (RVA). Through the development of the BEI, the signatory is able to develop an overview of its greenhouse gas (GHG) emissions and set appropriate strategies to reach its re- duction target (of at least 40% by 2030 compared to the baseline). Similarly, the RVA identifies the most relevant climate hazards and vulnerabilities affecting the lo- cal authority, facilitating the process of addressing such risks through the develop- ment of an adaptation strategy and identification of appropriate adaptation actions. Through the combination of these aspects, the SECAP defines concrete measures for both climate mitigation and adaptation, with timeframes and assigned responsibili- ties, translating the long-term strategy into action. Signatories commit themselves to submitting their SECAPs within two years following adhesion (Bertoldi 2018).
Side Effect	In the context of the LOCALISED project, it represents an unintended positive or negative consequence or impact produced by the implementation or operationalisation of climate actions (measures). Ex.: cost, reduction of available area, variation of equity in the region ¹³
Social Impact	Social impact refers to the possible positive or negative, unbalanced effect of a measure over a specific group of people. The study and assessment of the social impact of LOCALISED is especially focused on the side effects (social impacts) of climate adaptation and mitigation measures on vulnerable groups, following the definitions of procedural justice, intersectional justice, and just transition adopted in WP6 and explained in D6.1.
SOI (SDG Oriented Indicator)	(Definition in D5.1) ¹⁴ . A set of indicators defined within the LOCALISED project that allow the report of both the SDGs and the SECAP frameworks (Ibañez Iralde et al. 2024).
Stakeholder	In the context of LOCALISED. A stakeholder is a person or group of persons who is affected by the implementation of climate policy and/or who has the power to influence the process of policy development and its implementation. ¹⁵
Strategy	A strategy is an overarching, long-term plan of how and why certain stakeholders want to achieve certain goals under uncertain conditions. It provides guidance for day-to-day operations by setting the general direction and long-term goals as well

 ¹³ <u>https://economicstermslexicon.com/definitions/s/side-effects/</u>
 ¹⁴ https://www.localised-project.eu/wp-content/uploads/2024/02/D5.1_SOIs_for_SECAP_v3.pdf
 ¹⁵ Definition provided in the Citizen Engager, Based on Freeman 1984.



as more specific objectives and targets along the way. In the SECAP framework, a strategy precedes and underlies the four elements of the plan (BEI, RVA, mitigation and adaptation actions). Among other things, it includes a "vision", overarching goals, responsible structures, an allocated budget, and a plan to involve stakeholders.

Target Group CAST The primary target group consists of people who directly work on mitigation and adaptation planning within and/or for European cities and regions. The tool is particularly suited for cities and regions that want to develop a SECAP or a similar climate action plan (or do an assessment on SDGs compliance) but do not have the resources to develop their own from scratch. Other, secondary target groups are citizens' initiatives, NGOs, and other (local) stakeholders who want to co-create mitigation and adaptation plans for their local context or simply want to be informed about what can be done.

Vulnerability

In the sustainability context, "vulnerability" refers to the degree to which a system, community, or individual is susceptible to, and unable to cope with, adverse effects, particularly those related to environmental hazards or climate change. Vulnerability is defined as " the propensity or predisposition to be adversely affected and encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt" (IPCC 2022, p. 5). It further includes "all relevant environmental, physical, technical, social, cultural, economic, institutional, or policy-related factors that contribute to susceptibility and/or lack of capacity to prepare, prevent, respond, cope or adapt" (UNDRR 2022 p. 19). ¹⁶This concept is crucial in understanding disaster risk management and resilience building. The Climate Risk Sourcebook (Zebisch et al. 2023, p. 19) defines the reduction of vulnerability as "one of the biggest levers" for climate risk management. In the framework of LOCALISED, different types of vulnerability are addressed, such as Business Vulnerability (Vulnerability to decarbonisation for businesses) and Social Vulnerability to Climate Change (see relevant definitions).

Business Vulnerability to Decarbonisation

Business vulnerability to decarbonisation captures the (lack of) readiness and resilience of businesses to absorb transitional pressures, including policy compliance, access to low-carbon technologies, financing capacity, workforce skills, and institutional support. Vulnerability highlights the areas in business operations where improvements are most needed. It comprises six dimensions:

- Energy Reliance on fossil-fuel inputs versus the availability and integration of renewable energy sources.
- Supply Chain Flexibility of procurement networks
- Labour Workforce adaptability—including availability of green skills, retraining programs, and labour-market flexibility.
- **Technology** Ability to adopt energy-efficient processes, invest in emissions-reducing R&D, and deploy clean-tech innovations.

¹⁶ <u>https://handbook.climaax.eu/CRA_steps/beforeyoustart/beforeyoustart.html</u> <u>https://wkc.who.int/our-work/health-emergencies/knowledge-hub/community-disaster-risk-management/vulnerability-</u> <u>and-vulnerable-populations</u>



- Finance Access to capital, credit, and subsidies is needed to underwrite lowcarbon investments and infrastructure upgrades.
- Institutions Strength of regulations and standards used in business practices, as well as the governance conditions.

Socially Vulnerable Groups In LOCALISED and WP6, more specifically, vulnerable groups are defined as groups of individuals characterised by a high social vulnerability to climate change and climate policy. In other words, with the term "vulnerable groups" or "socially vulnerable groups", we refer to groups with a high risk of being directly or indirectly harmed or marginalised in the face of climate-related impacts. In the case of adaptation and mitigation, in the LOCALISED Social Impact Assessment framework, social vulnerability dimensions are: gender, migration background, income, tenancy status, educational deprivation and poor health. See the definition of social vulnerability to climate change.

Social Vulnerability to Climate Change

Social vulnerability to climate change refers to the susceptibility of certain individuals and communities to the impacts of both climate change and climate policy. In practice, it refers to individuals and groups that are more exposed to the impacts of climate change (e.g. extreme weather) and related responses, including being more easily affected by negative side-effects of mitigation and adaptation policies. The vulnerability is intersectional, which means that it is not uniform but can be shaped by several socio-economic factors, which are often interconnected and overlapping. Factors determining vulnerability to climate policy include: income, health status, and age. Additionally, power dynamics and marginalisation based on gender, race, and sexual orientation contribute to increased vulnerability. Importantly, understanding vulnerability requires considering physical and social dimensions, such as access to resources and support networks.



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