Semantic Glossar

Team NextGen Books

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# Über dieses Projekt

Dies ist eine laufende Demonstration eines Workflows für die Erstellung von Glossaren, die Speicherung von Linked Open Data, die Ausgabe in mehreren Formaten und die Verwendung von Glossaren für die Datenanalyse - zum Beispiel für die Suche in Open-Literature-Beständen.

Weitere Informationen über die Entwicklung des Workflows finden Sie [hier](https://github.com/TIBHannover/semantic-glossar).

Ein in Bearbeitung befindliches Beispiel [(semantisches Glossar)](cosite001.ipynb) ist ebenfalls enthalten. Bei dieser Demonstration handelt es sich um ein Glossar, das mit Hilfe einer verknüpften offenen Datenspeicherung verwaltet wird.

Als Maßstab wurde das Glossar [Climate Change Terms](resources/cct.qmd) der US Environmental Protection Agency, EPA (2013), verwendet. Die EPA verwendet einen [Terminologieservice und Leitfaden](https://www.epa.gov/web-policies-and-procedures/web-standard-glossaries) zur Erstellung und Speicherung ihrer Webglossare.

# Co-Site

### 360-Grad-Video

Video, das in alle Richtungen gleichzeitig aufgenommen wird, sodass sich die Zuschauer:innen in jede Richtung umsehen können. Diese Videos bieten ein immersives Erlebnis, bei dem Betrachter:innen das Gefühl haben, mitten im Geschehen zu sein, wenn sie das Video auf einem Bildschirm oder mit einer VR-Brillen betrachten.

**Verwandt:**  [VR-Brille](#vr-brille), [Immersion](#immersion)

### Agenda 2030

siehe Sustainable Development Goals

**Verwandt:**  [sustainable development goals](#sustainable-development-goals), [SDG](#sdg)

### Agilität

Agilität ist die Fähigkeit einer Organisation, sich schnell an Veränderungen und Ereignisse anzupassen. Dies beinhaltet Flexibilität in Strukturen, Prozessen und Arbeitsweisen, um auf neue Anforderungen und Ressourcenverfügbarkeit zu reagieren. Dadurch können kontinuierliche Verbesserungen erzielt, Herausforderungen bewältigt und das gemeinsame Zielverständnis reflektiert und angepasst werden.

### Akteur:innen

Proaktiv oder aktiv handelnde Personen, Institutionen oder Organisationen im Wirkungsfeld des Reallabors oder eines Teilbereichs (Thema, Standort etc.) davon.

### Akteursnetzwerkanalyse

Eine Analyse der Beziehungen der Interessens- und Anspruchsgruppen. Sie dient als Arbeitsgrundlage zur Erfassung und Einbindung relevanter Akteur:innen, zur Erstellung von Wissen, das gesellschaftlich akzeptiert und tragfähig ist, sowie zur Akzeptanz der entwickelten Lösungsansätze.

### Allgemeine Weiterbildung

Allgemeine Weiterbildung bezeichnet Bildungsmaßnahmen, die sich nicht direkt auf berufliche Anforderungen beziehen, sondern darauf abzielen, die allgemeinen Kenntnisse, Fähigkeiten und das Wissen von Menschen zu erweitern. Diese Art der Weiterbildung fördert sowohl die persönliche als auch die gesellschaftliche Entwicklung und richtet sich an eine breite Zielgruppe.

### Ambiguität

Mehrdeutigkeit eines Begriffs oder Sachverhalts. Beinhaltet auch situative Unsicherheiten und entscheidungsrelevante Uneindeutigkeiten, wenn verschiedene Möglichkeiten offenstehen und eine eindeutige Antwort oder ideale Lösung nicht offensichtlich ist.

### Anfälligkeit

siehe Vulnerabilität

**Synonyme:**  [Vulnerabilität](#vulnerabilität)

### Anpassungsfähigkeit

bezieht sich auf die Fähigkeit, verfügbare Ressourcen und Strategien, die Schäden von stressauslösenden Rahmenbedingungen und Entwicklungen zu bewältigen.

### AR-Brille

Eine AR-Brille (Augmented Reality-Brille) ist ein tragbares Gerät (HMD), das wie eine Brille getragen wird und digitale Informationen in die reale Welt einblendet. Diese Brillen projizieren virtuelle Elemente, wie Bilder oder Texte, in das Sichtfeld des Benutzers und ermöglichen so interaktive und erweiterte Erfahrungen.

**Verwandt:**  [Augmented Reality](#augmented-reality)

**Unterbegriff von:**  [Head-Mounted Display](#head-mounted-display)

### Augmented Reality

**(AR)**

Virtuelle Inhalte (z.B. starre oder bewegte Objekte), die mit der realen Umgebung überlagert werden (dt. augmentierte Realität, auch erweiterte Realität genannt). Diese überlagerte Zusatzinformation wird in Echtzeit von einem Gerät wie einem Smartphone, Tablet oder speziellen AR-Brillen angezeigt.

**Verwandt:**  [Virtual Reality](#virtual-reality)

### Augmented Virtuality

**(AV)**

Augmented Virtuality (dt. augmentierte Virtualität) bezeichnet eine teils virtuelle Umgebung, in der reale Inhalte eingefügt werden. Dabei werden Informationen aus der realen Welt, wie zum Beispiel Objekte oder Personen, in eine virtuelle Welt integriert.

**Unterbegriff von:**  [Extended Reality](#extended-reality)

### Balanced Scorecard

**(BSC)**

Die Balanced Scorecard ist ein Konzept zur Messung, Dokumentation und Steuerung der Aktivitäten einer Organisation in Bezug auf ihre Vision und Strategie. Sie kombiniert Indikatoren aus verschiedenen Perspektiven und fördert dadurch die Transparenz sowie die strategische Ausrichtung der Unternehmungen.

### Bedarfsanalyse

Eine Bedarfsanalyse ermittelt systematisch Lücken und künftige Handlungsfelder in einem Themenfeld, einer Organisation oder Ziel- bzw. Dialoggruppe. Ziel ist es, basierend darauf, ziel- und themenorientierte Maßnahmen zu entwickeln und diese nachfrageorientiert anzubieten.

**Verwandt:**  [Prospektive Evaluation](#prospektive-evaluation)

### Begleitforschung

Synonym für formative Evaluation.

**Synonyme:**  [Formative Evaluation](#formative-evaluation)

### Berufliche Weiterbildung

Berufliche Weiterbildung bedeutet, dass eine Person nach ihrer Ausbildung zusätzliche Fähigkeiten erwirbt. Entweder, um bestehendes Wissen zu vertiefen (Fortbildung), sich auf eine höhere Position vorzubereiten (Aufstiegsweiterbildung) oder eine neue berufliche Richtung einzuschlagen (Umschulung).

### Best Practices

Praktiken, Methoden und Verhaltensweisen, die in der Praxis zum Einsatz kommen und erprobt, verbreitet und (besonders) positiv evaluiert sind.

**Einfache Beschreibung:**  In der Praxis erprobte, verbreitete und positiv evaluierte Praktiken, Methoden und Verhaltensweisen.

**Unterbegriff von:**  [Practices](#practices)

### Betriebliche Weiterbildung

Bei betrieblicher Weiterbildung handelt es sich um organisierte und vollständig oder teilweise vom Arbeitsgeber finanzierte Weiterbildungsmaßnahmen in unterschiedlichen Lernformaten (Lernvideos, digitale oder analoge Workshops, Hackathons, Barcamps…)

### Bevölkerungsschutz

Der Bevölkerungsschutz beschreibt als Oberbegriff alle Aufgaben und Maßnahmen der Kommunen und der Länder im Katastrophenschutz sowie des Bundes im Zivilschutz.

### Bildung für Nachhaltige Entwicklung

**(BNE)**

Bildung, die Menschen zu zukunftsfähigem Denken und Handeln befähigt, indem sie ermöglicht die Auswirkungen des eigenen Handelns auf die Welt zu verstehen. Sie berücksichtigt dabei explizit planetare Grenzen. Abkürzung: BNE

### Blackout

Ungeplanter, großflächiger und langanhaltender Stromausfall.

### Blaue Infrastruktur

Netzwerk aus wassergeprägten Flächen und Elementen, die strategisch zur Bewältigung von Problemen im Wasserkreislauf (z.B. Wasseraufbereitung, Dürren, Regenwasserbewirtschaftung) angelegt werden. Natürliche Systeme sind u.a. Seen oder Flüsse; geplante Systeme umfassen Retentionsflächen, oder Flussrenaturierungen. Oft Schnittstellen zur grünen Infrastruktur.

**Einfache Beschreibung:**  Wasserbezogene Infrastruktur

### Blau-grüne Infrastruktur

**(BGI)**

Strategisch geplantes Netzwerk natürlicher und naturnaher Flächen bei besonderer Berücksichtigung der Wechselwirkungen mit dem natürlichen und technischen Wasserkreislauf (Wasserspeicherung, Hochwasser, Dürren, Wasseraufbereitung, Regenwasserbewirtschaftung). Primäre Elemente sind u.a. Retentionssysteme, Zisternen, Rigolen und urbane Gewässer; sekundäre Elemente sind u.a. Regengärten, Gründächer.

**Einfache Beschreibung:**  Dieses Konzept kombiniert Wasserbewirtschaftung (blau) mit Vegetation (grün), um nachhaltige und resiliente städtische und ländliche Umgebungen zu schaffen.

**Unterbegriff von:**  [Infrastruktur](#infrastruktur)

### Change Agents

Personen(-gruppen), die aktiv Transformation im Wirkbereich des Reallabors initiieren oder bestehende Prozesse voran bringen und als Vorreiter:innen und Transformationsbeschleuniger:innen für Stakeholder des Reallabors fungieren

### Citizen Science

Direkte Beteiligung von Bürger:innen am Forschungsprozess, beispielsweise beim Daten sammeln, auswerten und aufbereiten. Der Fokus liegt hierbei auf der aktiven Wissenschaftsgestaltung und -durchführung von Bürger:innen.

### Co-Design

aktive und methodengeleitete Einbindung relevanter Stakeholdergruppen in den Forschungs- und Entwicklungsprozess

**Einfache Beschreibung:**  Sinnvolle Einbindung verschiedener Stakeholder in Prozesse. Dies passiert methodengeleitet und bewusst, unterstützt durch schrittweise Reevaluation und Anpassung gemeinsam mit relevanten Personen(-gruppen). Um seinem Anspruch gemäß sinnvoll zu sein, muss Co-Design stark kontext-angepasst vorgehen: Einzelne Elemente variieren je nach Stakeholder, Situation, Ort, Ressourcen, etc..

**Unterbegriff von:**  [Co-Kreation](#co-kreation)

### Co-Kreation

Gemeinschaftliche Gestaltung eines End- oder Zwischenprodukts unter Einbezug verschiedener Interessensgruppen

### Co-kreative Wissenschaftskommunikation

Anhand der Kommunikationsbedürfnisse gesellschaftlicher Gruppen, wie Bürger:innen, werden gemeinsam Inhalte sowie Formate der Wissenschaftskommunikation erdacht, produziert und entwickelt.

### Co-kreativer Workshop

Ein methodisch strukturiertes Setting der Zusammenarbeit mehrerer Personen, welches zumeist von einer Moderation geleitet wird. Ziel ist die gemeinschaftliche Erarbeitung, Gestaltung und Entwicklung eines oder mehrer Outputs, welche sowohl abstrakter als auch gestalterischer Natur sein können.

### Controller

Ein Controller ist ein Eingabegerät, das Nutzer:innen ermöglicht, Befehle und Aktionen an ein elektronisches System, beispielsweise einen Computer, zu senden. Beispiele sind Gamepads, Joysticks oder VR-Controller.

### Co-Site

Forschungsprojekt “Co-Kreation in der Region – Systematisch und innovativ Transfer entwickeln” (Kurzform: Co-Site) der TH Köln, gefördert vom Bundesministerium für Bildung und Forschung (BMBF) innerhalb der Initiative Innovative Hochschule

### Co-Site-Glossar

Das Glossar des Projekts Co-Site erklärt zentrale Begriffe und Konzepte des Projekts Co-Site verständlich für alle Beteiligten. Es stellt die gemeinsame Basis der Kommunikation und das Verständnisses innerhalb des Projekts und darüber hinaus dar.

**Einfache Beschreibung:**  Das Glossar des Projekts Co-Site.

**Unterbegriff von:**  [Glossar](#glossar)

### Dachbegrünung

Dachbegrünung beinhaltet die Bepflanzung von Dächern und bietet ökologische, ästhetische und funktionale Vorteile. Es gibt zwei Haupttypen: extensive Begrünung und intensive Begrünung. Die Hauptvorteile sind die Verbesserung des Stadtklimas, des Wassermanagements, der Energieeffizienz und der Biodiversität sowie die Steigerung der ästhetischen Qualität und der Lebensqualität in urbanen Räumen.

### Dateiformat

Vom Inhalt (Text, Bild, etc.) der Datei abhängige Struktur einer Datei. Es zeigt an zu welcher Art von Datei es gehört (z.B. Systemdatei oder Textdatei). Beispiele für Dateiformaten sind: DOCX, DOC, XLSX, XLS, PPTX, PPT, TXT, RTF, JPEG, PNG, TIFF und BMP

### Datenerfassung

Ein Prozess der Sammlung und Messung von Informationen über bestimmte Variablen in einem etablierten System, der es ermöglicht, relevante Fragen zu beantworten und Ergebnisse zu bewerten.

### Dateninteroperabilität

Fähigkeit, die Daten sinnvoll zu kombinieren und zu formatieren, so dass sie von einem System in ein anderes übertragen werden können.

### Datenkatalog

Verzeichnis, welches Daten und Metadaten enthält und dazu dient, die in einem Unternehmen oder einem Projekt verfügbaren Datenquellen zu beschreiben und zu organisieren. Ein Datenkatalog erleichtert das Auffinden, Verstehen und Verwalten von Daten durch Dokumentation und Suchfunktionen.

### Datenvisualisierung

Die grafische Darstellung von Informationen und Daten unter Verwendung visueller Elemente wie Diagramme, Grafiken und Karten zum Verständnis von Mustern, Trends und Ausreißern in einem Datensatz

### Dezentrale Regenwasserversickerung

Versickerung von anfallendem Niederschlagswasser direkt vor Ort. Dies dient dem Erhalt des natürlichen Wasserkreislaufs sowie der Entlastung des Kanalnetzes und der Kläranlagen.

### Dialoggruppe

Eine Person oder Gruppe von Menschen, die in den Entwicklungsprozess durch aktive Teilhabe integriert werden, und die durch die Maßnahmen des Reallabors angesprochen werden sollen.

**Verwandt:**  [Zielgruppe](#zielgruppe)

### Didaktisches Design

Didaktisches Design bezeichnet den systematischen Planungs- und Gestaltungsprozess von Lernumgebungen und Weiterbildungsangeboten. Ziel ist es, Lernziele, Lerninhalte und ggf. Prüfungen so aufeinander zu beziehen, dass sie kompetenzorientiert ausgerichtet sind und den Lernenden optimale Bedingungen für den Lernerfolg bieten.

### Digitaler Zwilling

Ein Digitaler Zwilling ist ein virtuelles Modell eines physischen Objekts oder Systems, welcher dessen Merkmale und Verhalten wie bspw. physikalische Eigenschaften in Echtzeit widerspiegelt. Diese digitale Repräsentation ermöglicht Analysen, Simulationen und Optimierungen, wodurch die Leistung und Effizienz des realen Gegenstücks verbessert werden können.

**Verwandt:**  [Simulationen](#simulationen), [Urbaner Digitaler Zwilling](#urbaner-digitaler-zwilling)

### Dürre

Eine durch geringeren Niederschlag und/oder hohe Evapotranspiration verursachte Trockenheit, die stark (statistisch signifikant) von dem Normalzustand in einer gegebenen Periode abweicht . Man unterscheidet meteorologische (v.a. Niederschlag), landwirtschaftliche (v.a. Bodenfeuchtigkeit), hydrologische (v.a. Abfluss). und sozio-ökonomische Dürren (v.a Auswirkungen auf Wirtschaft und Gesundheit).

**Einfache Beschreibung:**  Meint eine Trockenheit, welche aufgrund von weniger Regen und/oder die Verdunstung von Wasser durch Pflanzen und den Boden hoch ist, was zu einem deutlich trockeneren Zustand führt als üblich.

### Dürreindex

Wert, der das Ausmaß, die Dauer und die Intensität von Dürrebedingungen angibt. Dürreindizes basieren in der Regel auf Niederschlags-, Verdunstungs-, und Bodenfeuchtigkeitsdaten einer Region. Geläufige Beispiele sind der Standardized Precipitation Evaporation Index (SPEI) oder Palmer Drought Severity Index (PDSI).

### Entsiegelung

Rückgängigmachen einer Flächenversiegelung. Zumeist im Zusammenhang mit der Schaffung von Grünland und Flächen zur Versickerung von Regenwasser und der Wiederherstellung der Bodenfunktion in und um Städte.

### Entwicklungsteam

Besteht aus Expert:innen verschiedener Disziplinen mit unterschiedlichen Fähigkeiten, die ein Produkt planen, gestalten und umsetzen. Ziel ist es, effizient zusammenzuarbeiten, um Lösungen zu entwickeln, Anforderungen zu erfüllen und Projektdokumentationen zu erstellen. Sie nutzen oft agile Methoden zur Organisation und kontinuierlichen Verbesserung ihres Arbeitsauftrags und ihrer Zusammenarbeit.

### Erweiterte Realität

Siehe Augmented Reality

### Evaluation

Evaluation stellt die systematische und empirische Analyse von Konzepten, Bedingungen, Prozessen und Wirkungen zielgerichteter Aktivitäten dar (siehe Hager, Patry & Brezing, 2000). Ziel ist es, Wirkungen zu planen sowie Erkenntnisse über Wirksamkeiten zu gewinnen und aus diesen zu lernen.

### Evapotranspiration

Gesamtwasserverlust einer Fläche an die Atmosphäre über eine bestimmte Zeit. Sie setzt sich aus der Evaporation (Verdunstung) von Oberflächenwasser und der Transpiration von Wasser durch Lebewesen (v. a. Pflanzen) zusammen.

**Einfache Beschreibung:**  Verdunstung aus Wasser- und Landoberflächen sowie aus der Tier- und Pflanzenwelt.

### Expertisegruppe

Eine Expertisegruppe ist ein Team von Fachleuten und Expert:innen, die über spezifisches Wissen und Erfahrung in einem bestimmten Bereich verfügen. Diese Gruppe findet sich zusammen, um tiefgehende Analysen, Bewertungen oder Entwicklungen zu einem bestimmten Thema durchzuführen. Expertisegruppen werden eingesetzt, um fundierte Entscheidungen zu unterstützen und komplexe Probleme zu lösen.

### Exposition

Die Situation von Personen, Infrastruktur, Gebäude, Industrie und anderen essentiellen Dienstleistungen in gefährdeten Bereichen.

### Exposition

Exposition beschreibt die Verortung einer Person, eines Gebäudes, einer Stadt oder eines Ökosytsems gegenüber einer Gefahr. Eine hohe Exponiertheit begünstigt das Risiko.

### Extended Reality

**(XR)**

Extended Reality (XR) umfasst alle Technologien, die die reale mit der digitalen Welt verschmelzen, einschließlich der folgenden: VR - Virtuelle Realität, AR - Erweiterte Realität, MR - Gemischte Realität.

### Externe Wissenschaftskommunikation

Kommunikation über wissenschaftliche Inhalte und Ergebnisse zwischen der Wissenschaft und anderen gesellschaftlicher Akteur:innen.

**Verwandt:**  [Interne Wissenschaftskommunikation](#interne-wissenschaftskommunikation)

**Unterbegriff von:**  [Wissenschaftskommunikation](#wissenschaftskommunikation)

### Extremereignis

Ein außergewöhnliches Ereignis, das sehr selten ist und in seiner Ausprägung deutlich vom bisherigen Mittelwert abweicht. Kann zu hohen Schäden führen (z.B. Hitzewelle, Starkregen oder Blackout).

**Einfache Beschreibung:**  Ein außergewöhnliches Ereignis, das zu hohen Schäden führen kann.

### Eye-Tracking

Eye-Tracking ist eine Technologie, die die Bewegungen und Positionen der Augen erfasst, um zu erkennen, wohin eine Person schaut. Dies kann in VR-Systemen verwendet werden, um das System an die Blickrichtung anzupassen und eine natürlichere Interaktion zu ermöglichen, sowie Messdaten zu sammeln.

### Fassadenbegrünung

bezeichnet die Bepflanzung von Fassaden, um ökologische, ästhetische und funktionale Vorteile zu erreichen. Hauptarten sind die direkte und indirekte Fassadenbegrünung. Hauptvorteile sind: Verbesserung des Mikroklimas, Energieeffizienz, Schallschutz, Förderung von Artenvielfalt, Gebäude- und Fassadenschutz sowie das Erscheinungsbild und die Lebensqualität in urbanen Räumen.

**Verwandt:**  [Direkte Fassadenbegrünung](#direkte-fassadenbegrünung), [Indirekte Fassadenbegrünung](#indirekte-fassadenbegrünung)

### Fernerkundung

Der vom englischen Ausdruck remote sensing abgeleitete Begriff Fernerkundung umschreibt die Gesamtheit aller Methoden, die das kontaktlose wissenschaftliche Beobachten und Erkunden eines Gebiets aus der Ferne erlauben.

### Flusshochwasser

Flusshochwasser ist das Ergebnis von starken Niederschlägen. Können die anfallenden Wassermassen durch einen gesättigten, gefrorenen oder versiegelten Boden nicht aufgenommen werden, fließen sie aus dem Einzugsgebiet in den Fluss. Fließen die Wassermassen dort nicht schnell genug ab, tritt der Fluss über seine Ufer.

### Fluviale Überflutung

Gewässerzustand, bei dem der Wasserstand deutlich über dem normalen Pegelstand liegt und meist zu Überflutungen führt.

**Einfache Beschreibung:**  Überflutung durch überlaufende Gewässer

### Formative Evaluation

Formative Evaluation findet prozessbegleitend statt, d.h. sie ist wichtiger Bestandteil der Projektumsetzung. Durch den kontinuierlichen Vergleich aktueller Entwicklungen mit der ursprünglichen Zielsetzung ermöglicht sie die frühzeitige Entdeckung von Fehlentwicklungen und damit die Anpassungsfähigkeit an (veränderte) Bedarfe. Auch als Synonym für Begleitforschung und Wirkungsmonitoring

**Unterbegriff von:**  [Evaluation](#evaluation)

**Synonyme:**  [Wirkungsmonitoring](#wirkungsmonitoring)

### Fortbildung

Fortbildungen sind berufsbezogene Weiterbildungsangebote, die dazu dienen, die Fähigkeiten und Kenntnisse im aktuell ausgeübten Beruf zu erweitern (Anpassungsfortbildung) oder den beruflichen Aufstieg innerhalb desselben beruflichen Feldes zu fördern (Aufstiegsfortbildung).

### Fühlbarer Wärmestrom

Fluss von thermischer Energie, der als Änderung von Temperaturen direkt gemessen (gefühlt) werden kann (z.B. Erhitzung der Luft über einer heißen Asphaltoberfläche).

### Future Skills

Future Skills sind Zukunftskompetenzen, die für aktuelle und künftige berufliche, gesellschaftliche und persönliche Herausforderungen bedeutend sind. Dazu zählen u. a. Kompetenzen, um Zukunft zu gestalten, mutig Neues anzugehen, Veränderungen zu bewirken, neue Lösungen zu entwickeln.

### Game-Based Learning

**(GBL)**

“Game-Based Learning” (dt. „spielebasiertes Lernen“) steht für das Lernen mit Spielen, sowohl mit Lernspielen als auch mit „normalen“ Spielen. Durch interaktive Elemente können komplexe Themen auf spielerische Weise verständlich gemacht werden. GBL fördert aktive Teilnahme und kann in verschiedenen Bildungskontexten, von Schulen bis zur beruflichen Weiterbildung, eingesetzt werden.

### Gamification

Gamification beschreibt die Handlung, Spielmethoden oder -elemente in spielfremden Anwendungen, Umgebungen oder Prozessen einzubinden.

### Gefahr

Zustand, Umstand oder Vorgang, durch dessen Einwirkung ein Schaden an einem Schutzgut entstehen kann.

### Gefahrenabwehr

Staatliche Maßnahmen zur Abwehr von Gefahren für die öffentliche Sicherheit oder Ordnung. Dazu arbeiten Polizei, Feuerwehr, Katastrophenschutz und andere Behörden zusammen, um Schaden und Gefährdungen von Menschen, Sachgütern und Umwelt zu verhindern oder zu minimieren.

### Gefahrenkarte

**(GK)**

Beschreibt die räumliche Ausdehnung eines Events oder Phänomens, zum Beispiel einer Naturgefahr, das mögliche negative Auswirkungen auf das gezeigte Gebiet hat.

### Gemeinwohlorientierung

Gemeinwohlorientierung fokussiert darauf, Entscheidungen und Maßnahmen zu treffen, die das Wohl der gesamten Gesellschaft im Fokus haben. Dabei steht nicht der individuelle oder wirtschaftliche Nutzen im Vordergrund, sondern der positive Einfluss auf das Gemeinwesen. Dies kann insbesondere, aber nicht ausschließlich, die Stärkung von benachteiligten Gruppen bedeuten.

**Verwandt:**  [Impact](#impact)

### Geodaten

Alle Daten mit direkten oder indirekten Bezug zu einem bestimmten Standort auf der Erdoberfläche.

### Geodatenbank

Eine Datenbank, die das Speichern, Abfragen und Analysieren von Geodaten (Punkt, Linie, Polygon) ermöglicht.

### Geodatendienste

Dienste, die den Zugang zu und die Verarbeitung von Geodaten über das Netz ermöglichen (Karte, Web Map Service, Web Feature Service).

### Geodatenformat

Standard für die Kodierung geografischer Informationen in einer Computerdatei als spezielles Dateiformat (.shp,.tif,.geojson) zur Verwendung in geografischen Informationssystemen (GIS) und anderen raumbezogenen Anwendungen.

### Geodateninfrastruktur

Infrastruktur, bestehend aus Geodaten, Metadaten, Geodiensten, gemeinsamen Vereinbarungen, Netzdiensten und Technologien, die den Zugang zu Geoinformationen und deren Verwaltung erleichtern

### Geodatensatz

eine Sammlung von Daten, die verwandten geografischen Merkmalen entsprechen

### Geodatenverarbeitung

Verwendung eines Rahmens oder einer Reihe von Werkzeugen zur Bearbeitung von Geodaten, um ein abgeleitetes Geodatenprodukt zu erhalten

### Geoinformationssystem

**(GIS)**

Informationssystem zur Erfassung, Speicherung, Verarbeitung, Visualisierung und Analyse von Geodaten. Es wird auch zur räumlichen Verknüpfung nicht-räumlicher Datensätze verwendet.

### Geokodierung

Der Prozess der Umwandlung von Adressen (z. B. einer Straßenadresse) in geografische Koordinaten (z. B. Breiten- und Längengrad).

### GeoNode

Webbasierte Anwendung und Geospatial Content Management System (CMS), eine Plattform für die Verwaltung und Veröffentlichung von Geodaten. Es ermöglicht nicht spezialisierten Nutzern, Daten gemeinsam zu nutzen und interaktive Visualisierungen (Karten, Geostories, Dashboards) zu erstellen.

### Geoportal

Ein Webportal, das dazu dient, geografische Informationen und damit verbundene geografische Dienste (Visualisierung, Verarbeitung, Analyse usw.) über das Internet zu finden und abzurufen.

### Georeferenzierung

Der Prozess der Verknüpfung eines digitalen Rasterbildes oder einer Vektordatenbank mit einem Koordinatenreferenzsystem.

### GeoServer

Ein Open Source-Webserver auf Java-Basis, der es Benutzern ermöglicht, Geodaten unter Verwendung der vom Open Geospatial Consortium (OGC) definierten offenen Standards zu visualisieren und zu bearbeiten.

### Geostories

Ein Tool in GeoNode, das dem Benutzer die Möglichkeit bietet, durch die Kombination von Text, interaktiven Karten und anderen multimedialen Inhalten wie Bildern und Videos oder anderen Inhalten von Drittanbietern fesselnde Geschichten zu erstellen.

### Global Change

Anthropogen ausgelöste, umfassende und langfristige Veränderungen des Erdsystems. Dies umfasst Klimawandel, Landnutzungsänderungen, Urbanisierung, Verlust der Biodiversität und Verschmutzung. Die Auswirkungen sind global und betreffen Umwelt, Gesellschaft und Wirtschaft.

**Einfache Beschreibung:**  Weltweite Veränderungen der natürlichen Prozesse (z.B. Klimawandel, Wüstenbildung), die durch die Aktivität des Menschen auf der Erde hervorgerufen wurden bzw. werden, und ihre wechselseitigen Einflüsse auf den Menschen.

### Glossar

Eine strukturierte Sammlung von Begriffen mit Bedeutungserklärungen, die im Kontext des Glossars Gültigkeit haben und für alle Beteiligten verständlich sind. Ein Glossar wird kooperativ erstellt und fortlaufend gepflegt.

**Einfache Beschreibung:**  Eine strukturierte Sammlung von Begriffen mit Bedeutungserklärungen.

### Green Skills

Green Skills umfasst Handlungswissen und -kompetenzen sowie Werte, die für die Gestaltung einer nachhaltigen Gesellschaft und Wirtschaft erforderlich sind, um ressourceneffiziente, nachhaltige Wirtschafts- und Arbeitswelten sowie lebenswerte Umgebungen zukunftsfähig zu gestalten.

### Grün-blaue Infrastruktur

**(GBI)**

Netzwerk aus Vegetationselementen (grün) in einem Flächenplan, das auch Wasserkomponenten (blau) integrieren kann. Die Flächen sind naturnah angelegt oder bereits natürlich vorhanden. Grüne Elemente wie Parkanlagen fördern die Biodiversität, den Erhalt von Ökosystemdienstleistungen. Blaue Elemente wie Überflutungs- und Retentionsflächen betreffen eher den Wasserkreislauf.

### Grundhochwasser

Bei normalen Wasserstand fließt Grundwasser in Richtung von Flüssen ab. Bei Flusshochwasser strömt jedoch Flusswasser in Richtung des Landes, weshalb das Grundwasser nicht mehr abfließen kann. Das nicht abfließende Grundwasser seigt an und führt zu Überflutungen durch Grundhochwasser.

### Grüne Infrastruktur

**(GI)**

Netzwerk aus strategisch geplanten angelegten Strukturen von natürlichen und naturnahen Flächen. Sie fokussieren sich meist auf städtische Bereiche einer Landschaft und dienen zur Erhaltung oder Erstellung von Biodiversitätskorridoren und bieten Ökosystemleistungen. Darunter fallen Maßnahmen wie Dach-/Fassadenbegrünung, Stadtbäume, Alleen, Parks und Stadtwälder.

**Verwandt:**  [Blau-grüne Infrastruktur](#blau-grüne-infrastruktur)

### Hand-Tracking

Hand-Tracking im VR/AR-Bereich bezieht sich auf die Technologie, die es ermöglicht, die Bewegungen und Positionen der Hände eines Benutzers in Echtzeit zu erfassen und in der virtuellen oder erweiterten Umgebung darzustellen. Dies erfolgt meist durch Kameras, welche Handgesten und deren Position präzise erkennen, um Interaktionen ohne physische Controller zu ermöglichen.

**Verwandt:**  [Eye-Tracking](#eye-tracking)

### Härtung

Durch Härtung können Organisationen und Institutionen ihre Infrastrukturen, Systeme und Prozesse widerstandsfähiger gegen Bedrohungen machen. Es werden die Auswirkungen von Risiken verringert sowie die Fähigkeit auf Zwischenfälle oder negative Ereignisse zu reagieren und sich davon zu erholen verbessert.

### Head-Mounted Display

**(HMD)**

Ein Head-Mounted Display ist ein tragbares visuelles Anzeigesystem, das vor den Augen des Benutzers positioniert wird und visuelle Informationen direkt in das Sichtfeld projiziert. Oft in Form einer Brille oder eines Helms genutzt, ermöglichen HMDs immersive Erlebnisse in Virtual Reality (VR) und Augmented Reality (AR). Sie enthalten kleine Displays oder Projektoren zur Darstellung der Inhalte.

### Hochwasser

Hochwasser ist eine zeitlich beschränkte Überschwemmung von normalerweise nicht mit Wasser bedecktem Land, insbesondere durch oberirdische Gewässer oder durch in Küstengebiete eindringendes Meerwasser. Davon ausgenommen sind Überschwemmungen aus Abwasseranlagen.

**Einfache Beschreibung:**  Hochwasser ist eine zeitlich beschränkte Überschwemmung von normalerweise nicht mit Wasser bedecktem Land.

### Hochwassergefahrenkarte

**(HWGK)**

Informiert über die mögliche Ausdehnung und Tiefe einer Überflutung, durch Pegelanstieg von i.d.R. Oberflächengewässern und der zu erwartenden Fließgeschwindigkeit; informiert allein über die mögliche Gefahr

### Hochwasserrisikokarte

**(HWRK)**

Zeigt, wo Schäden durch ein Hochwasser entstehen können, also jene Gebiete, die von einer Hochwassergefahr betroffen sind unter Berücksichtigung von Einwohnerzahl, Schutzgebieten, Industrieanlagen und Kulturstätten

### Immersion

Immersion bezeichnet das Erleben des Eintauchens in eine virtuelle oder künstlich geschaffene Umgebung. In diesem Zustand fühlen sich die Benutzenden so, als wären sie tatsächlich Teil dieser Umgebung, was durch Technologien wie bspw. VR-Brillen, hochwertige Grafiken und räumlichen Sound erreicht wird.

### Impact

Impact bezeichnet Veränderungen auf gesellschaftlicher Ebene, die durch Projektaktivitäten erreicht wurden. Impact ist die vierte von vier Stufen des IOOI-Wirkungsmodells.

### InfoTool

Eine webbasierte Plattform zur Speicherung, Visualisierung, Analyse und gemeinsamen Nutzung von räumlichen und nicht-räumlichen Daten zur Unterstützung der Klimaanpassung auf kommunaler Ebene im Rahmen des CoSite-Projekts.

### Infrastruktur

Materielles, institutionelles und personelles Fundament einer funktionierenden Gesellschaft oder eines funktionierenden Systems. Unterschieden wird häufig zudem in technische und soziale Infrastruktur.

**Einfache Beschreibung:**  Materielles, institutionelles und personelles Fundament einer funktionierenden Gesellschaft.

### Input

Ressourcen, wie z.B. Arbeitskräfte, Sach- und Finanzmittel, die im Projekt eingebacht werden können. Input ist die erste von vier Stufen des IOOI-Wirkungsmodells.

### Interdependenz

Interaktion oder gegenseitige Beeinflussung zwischen verschiedenen kritischen Infrastrukturen.

### Interne Wissenschaftskommunikation

Kommunikation über wissenschaftliche Inhalte und Ergebnisse, die zwischen Wissenschaftler:innen stattfindet.

### Kapazität

Die Kombination aller Stärken, Eigenschaften und Ressourcen, die innerhalb einer Organisation, Gemeinschaft oder Gesellschaft vorhanden sind, um Katastrophenrisiken zu bewältigen und zu verringern und die Widerstandsfähigkeit zu stärken.

**Verwandt:**  [Katastrophe](#katastrophe)

### Kartenprojektion

ist ein mathematisches Verfahren, welches genutzt wird, um die dreidimensionale Erdoberfläche als zweidimensionale (ebene Fläche) darstellen zu können. Da es verschiedene Kartenprojektionen gibt, wie z.B. winkel- oder flächentreue Projektionen, kommt es zu Verzerrungen. Die Auswahl einer Projektion hängt daher vom Zweck und der Region ab.

### Kaskadeneffekt

Ein kaskadierender Ausfall liegt vor, wenn eine Störung in einer Infrastruktur den Ausfall einer Komponente in einer zweiten Infrastruktur verursacht, was wiederum zu einer Störung in der zweiten Infrastruktur führt. Verstärkt wird dieser Effekt, wenn es sich dabei um Kritische Infrastrukturen mit gegenseitiger Abhängigkeit handelt.

### Katastrophe

Eine schwerwiegende Störung des Funktionierens eines Gemeinwesens oder einer Gesellschaft auf beliebiger Ebene aufgrund von gefährlichen Ereignissen in Wechselwirkung mit den Bedingungen der Exposition, Anfälligkeit und Kapazität, die zu einem oder mehreren der folgenden Punkte führt: menschliche, materielle, wirtschaftliche und ökologische Verluste und Auswirkungen.

**Einfache Beschreibung:**  Eine Katastrophe ist ein großes Unglück, das das normale Leben stark stört. Es verursacht Schäden bei Menschen, Gebäuden, der Wirtschaft und der Umwelt. Katastrophen können zum Beispiel durch Naturereignisse wie Erdbeben oder durch menschliche Aktivitäten wie Unfälle passieren.

### Katastrophenschutz

**(KatS)**

Eine landesrechtliche Organisationsform zur Gefahrenabwehr bei Katastrophen, bei der alle beteiligten Behörden und Organisationen unter einheitlicher Führung zusammenarbeiten. Er umfasst koordiniertes Vorgehen zur Vermeidung, Bewältigung und Minimierung von Katastrophen, um Menschenleben zu schützen, Sachschäden zu begrenzen und die Funktionsfähigkeit kritischer Infrastrukturen aufrechtzuerhalten.

### Klima

Spezifisches Klima, das sich sehr lokal in bodennahen Luftschichten entwickelt und stark von vorhandenen Oberflächen beeinflusst wird. Dazu gehören Untergrund, Vegetation und Bebauung. Faktoren wie die thermischen Eigenschaften der Oberfläche spielen eine wesentliche Rolle. Unterschiede in Geländeform oder Pflanzenbewuchs können in kleinen Bereichen große Temperaturunterschiede hervorrufen.

### Klimaanpassung

Maßnahmen und Strategien, die ergriffen werden, um sich an Klimaveränderungen und deren Auswirkungen anzupassen, egal ob diese natürlichen Ursprungs sind oder durch menschliche Aktivitäten verursacht werden. Es kann sich auf langfristige Klimaveränderungen sowie auf klimatische Variabilität beziehen. Wird oft synonm zu Klimawandelanpassung verwendet.

### Klimakommunikation

Kommunikation, die darauf abzielt, die Entwicklung des (globalen) Klimas und seine Herausforderungen und Risiken gut verständlich, faktenbasiert und kontextgerecht an diverse Personengruppen zu vermitteln. Die Art und Weise wie über diese Themen gesprochen wird, ist dabei maßgeblich für die Wahrnehmung des Klimawandels und den erfolgreichen Austausch von Informationen.

### Klimaresiliente Stadt

Stadt, die als sozial-ökologisches System widerstandsfähig gegen die Folgen des Klimawandels (z.B. Starkregen, Trockenheit, Hitze) ist. Für eine klimaresiliente Stadt werden häufig Klimafolgenanpassungsmaßnahmen ergriffen.

### Klimarisiko

Das physische Risiko, welches aus den Auswirkungen des Klimawandels resultiert. Das Klimarisiko setzt sich aus den Elementen Naturgefahr, Exposition, Sensitivität und Anpassungskapazität eines betrachteten Systems zusammen.

### Klimaschutz

Maßnahmen, die dem Klimawandel entgegenwirken; zielen darauf ab das Klima in einem für den Menschen bewohnbaren Bereich zu stabilisieren. Im Fokus steht die Minimierung des anthropogenen Treibhauseffektes durch Verhindern oder Abmindern der Ursachen (z.B. mineralische Abscheidung von CO2). Klimaschutz hat auch positive Nebeneffekte auf Ökosysteme, z.B. wirkt er der Versauerung der Meere entgegen.

**Einfache Beschreibung:**  Maßnahmen, die dem Klimawandel entgegenwirken.

### Klimawandelanpassung

Die Anpassung eines Systems (z.B. Kommune, Haushalt, Landwirtschaft) an die zu erwartenden klimatischen Änderungen und Folgen des anthropogenen Klimawandels der Gegenwart und Zukunft. Berücksichtigt werden negative und positive Folgen. Aktivitäten sind technisch, infrastrukturell, sozial, kulturell, wirtschaftlich, ökologisch oder administrativ. Wird oft synonym zu Klimaanpassung verwendet.

### Kollaborativ

zusammenarbeitend; gemeinsam im Team Probleme lösen und Ideen entwickeln, sodass verschiedene Sichtweisen integriert werden können

### Kommunikation

Der Austausch oder die Übertragung von Informationen, die sowohl direkt als auch indirekt über verbale und nonverbale Signale (Sprache, Tonfall, Gesten) sowie über Medien (Schrift, Bilder) digital und analog vermittelt werden können.

**Einfache Beschreibung:**  Der Austausch oder die Übertragung von Informationen über Personen oder vermittelt durch Medien

### Koordinatensystem

Ein Referenzsystem, um die Position eines Objekts im Raum mit Hilfe von Zahlen, den Koordinaten, zu definieren.

### Krise

Vom Normalzustand abweichende Situation mit dem Potenzial für oder mit bereits eingetretenen Schäden an Schutzgütern, die mit der normalen Aufbau- und Ablauforganisation nicht mehr bewältigt werden kann, sodass eine Besondere Aufbauorganisation (BAO) erforderlich ist.

**Einfache Beschreibung:**  Eine außerordentliche und nicht vorhersagbare Situation, die nicht mit herkömmlichen Mittlen zu bewältigen ist und reputationsschädigend sein kann.

### Krisenmanagement

Prozess, um Risiken zu identifizieren, zu bewerten und zu steuern. Ziel ist es, potenzielle Gefahren oder Schäden frühzeitig zu erkennen, deren Auswirkungen abzuschätzen und geeignete Maßnahmen zu ergreifen, um diese Risiken zu minimieren oder zu kontrollieren.

### KRITIS-Branche

Die Untergliederung in einem der KRITIS-Sektoren. Der KRITIS-Sektor Energie umfasst beispielsweise die KRITIS-Branchen Elektrizität, Gas, Mineralöl und Fermwärme.

**Unterbegriff von:**  [KRITIS-Sektoren](#kritis-sektoren)

### Kritische Infrastrukturen

**(KRITIS)**

Kritische Infrastrukturen sind Organisationen und Einrichtungen mit wichtiger Bedeutung für das staatliche Gemeinwesen, bei deren Ausfall oder Beeinträchtigung nachhaltig wirkende Versorgungsengpässe, erhebliche Störungen der öffentlichen Sicherheit oder andere dramatische Folgen eintreten würden. (Bundesministerium des Inneren 2009)

**Einfache Beschreibung:**  Kritische Infrastrukturen sind wichtige Einrichtungen und Organisationen. Wenn sie ausfallen oder Probleme haben, kann dies zu längeren Versorgungsengpässen, großen Störungen der öffentlichen Sicherheit oder anderen ernsthaften Folgen führen.

### KRITIS-Sektoren

Die Gesamtheit aller Sektoren, die laut Bundesamt für Bevölkerungsschutz und Katastrophenhilfe als kritische Infrastrukturen eingeordnet werden, z.B. Wasser, Energie, Ernährung, Finanz- & Versicherungswesen, Gesundheit, Informationstechnik & Telekommunikation, Siedlungsabfallentsorgung, Medien & Kultur, Stadt & Verwaltung, Transport & Verkehr.

**Einfache Beschreibung:**  Die Gesamtheit der KRITIS-Sektoren.

### Latenter Wärmestrom

Fluss von thermischer Energie, der nicht direkt proportional durch eine Änderung der Temperatur gemessen werden kann (z.B. thermische Verdunstung von Wasser aus einem Pflanzenblatt). Auch: Verborgener Wärmestrom.

### Lernsettings

Lernsettings regen Lernende darin an, sich Handlungswissen und -kompetenzen anzueignen. Beispiele gibt es viele, wie z. B.: Workshops, Barcamps, E-Learningformate, Blended Learning (Kombination aus Präsenzphasen und Online-Lernen), immersive Lernwelten, Reallabore.

### Makroebene

Ebene der Wissenschaftskommunikation mit dem Ziel der Kommunikation über das Gesamtsystem wissenschaftlicher Funktionen und Leistungen für die Gesellschaft.

### Megatrends

Tiefgreifende, langfristige Entwicklungen, die globale Auswirkungen auf Gesellschaft, Wirtschaft, Technologie und Umwelt haben. Sie beeinflussen verschiedene Lebensbereiche nachhaltig und verändern grundlegende Strukturen und Verhaltensweisen über Jahrzehnte hinweg. Beispiele für Megatrends sind Klimawandel, Digitalisierung und demografischer Wandel.

### Mesoebene

Ebene der Wissenschaftskommunikation mit dem Fokus auf die Kommunikation wissenschaftlicher Einrichtungen zu eigenen Aufgaben und Leistungen.

### Metadaten

strukturierte Daten, die Informationen über andere Daten und Datenquellen enthalten

### Mikroebene

Ebene der Wissenschaftskommunikation mit dem Fokus auf die Kommunikation einzelner Wissenschaftler:innen zu Forschungsthemen sowie Projekten (Vorhaben und Ergebnissen).

### Mixed Reality

**(MR)**

Mixed Reality deckt die Bereiche zwischen realer Umgebung und vollständig virtueller Umgebung ab, insbesondere AR und AV, und ermöglicht Interaktionen in beiden Richtungen zwischen realen und digitalen Komponenten.

### Modellregionen

Räumlich abgegrenzte Bereiche, in denen Transformation exemplarisch im regionalen Kontext erprobt und evaluiert wird.

### Monitoring

Synoym zu formativer Evaluation.

### Nachhaltigkeit

Nachhaltigkeit wird verstanden im Sinne einer nachhaltigen Entwicklung, in der Bedürfnisse der heutigen Gesellschaft so befriedigt werden, dass es zukünftigen Generationen nicht schadet oder im besten Fall nutzt. Die drei Dimensionen wirtschaftlich effizient, sozial gerecht und ökologisch tragfähig werden dabei gleichberechtigt betrachtet.

### Nachhaltigkeitsmanagement

Umfasst die Entwicklung von Strategien, Maßnahmen und Konzepten hinsichtlich der nachhaltigen Entwicklung sowie das Hinwirken auf deren Umsetzung. Ziel ist es ökonomische, ökologische und soziale Bedürfnisse in Einklang zu bringen und dabei eine intergenerationale Gerechtigkeit zu fördern.

### Nachhaltigkeitsstrategie

Konzept, welches einen strategischen und methodischen Umsetzungsplan in Richtung einer nachhaltigen Entwicklung vorweist. Die Umsetzung kann auf nationaler, regionaler und kommunaler Ebene erfolgen.

### Naturbasierte Lösung

sind Maßnahmen, die von der Natur inspiriert und durch sie unterstützt werden, sie gehen(gesellschaftliche) Herausforderungen an, bieten viele Ökosystemleistungen, einschließlich des Gewinns an biologischer Vielfalt, haben eine hohe Effektivität und weisen eine hohe wirtschaftliche Effizienz auf.

### Nature-based Solution

siehe Naturbasierte Lösung

**Verwandt:**  [Naturbasierte Lösung](#naturbasierte-lösung)

### Naturgefahren

Ein spezifisches, plötzlich eintretendes Ereignis, das die latente Gefahr tatsächlich realisiert und zu schädlichen Folgen führt.

### Next Practices

Im Gegensatz zu Best Practices sind Next Practices bisher noch nicht erprobte Praktiken, Methoden und Vorgehensweisen. Sie sind zukunftsorientiert und lösen sich von bisherigen Best Practices um neues auszuprobieren und entweder zu scheitern oder neue Best Practices zu finden.

**Einfache Beschreibung:**  Next Practices sind zukunftsorientierte Praktiken, Methoden und Vorgehensweisen, die ausprobiert werden, um neue Best Practices zu finden.

### Ökosystemdienstleistungen

Leistungen, die ein Ökosystem dem Menschen bereitstellt. Entscheidend für das menschliche Wohlbefinden und die nachhaltige Entwicklung. Können regulierender (z.B. Klimaregulierung, Bestäubung), unterstützender (z.B. Bodenbildung, Nährstoffkreislauf), kultureller (z.B. Erholung, Tourismus) und versorgender (z.B. Nahrung, Wasser) Natur sein.

### Ökosystemfunktion

Umfasst alle physikalischen, chemischen und biologischen Prozesse, die in einem Ökosystem stattfinden und dessen Selbsterhaltung und Entwicklung sicherstellen.

### Open Geospatial Consortium

**(OGC)**

Ein globales Konsortium von Experten, das sich für die Verbesserung des Zugangs zu Geodaten oder Standortinformationen einsetzt.

### Open Science

Offene Wissenschaft, die sich durch Grundsätze und Praktiken auszeichnet, die die Zugänglichkeit, Nutzbarmachung, Transparenz und Weiterverwertbarkeit von wissenschaftlichen Ergebnissen, Erkenntnissen, Forschungsdaten und Publikationen ermöglichen sowie den offenen Dialog mit anderen Wissenssystemen und die Einbindung gesellschaftlicher Akteure fördern.

### Outcome

Outcomes bezeichnen Veränderungen im direkten Projektkontext und in der Zielgruppe, die durch das Projekt bewirkt wurden. Outcome ist die dritte von vier Stufen des IOOI-Wirkungsmodells.

### Output

Outputs sind Leistungen, wie z.B. Workshops, Konzepte etc., die durch Projektaktivitäten erstehen, um Wirkungsziele zu erreichen. Ouput ist die zweite von vier Stufen des IOOI-Wirkungsmodells.

### Partizipation

Beteiligung von Personen(-gruppen) an Entscheidungen bzw. Entscheidungsprozessen, welche die Gemeinschaft betreffen

### Partizipative Wissenschaftskommunikation

Formate der Wissenschaftskommunikation, die interaktiv und partizipativ ausgerichtet sind und die Beteiligung von gesellschaftlichen Akteur:innen in den Prozess der Forschung unterstützen. Sie unterscheidet sich dadurch von der rein informierenden und wissensvermittelnden Wissenschaftskommunikation.

### Partner:innen

Als Partner:innen werden zum einen Unterstützer:innen des Projektantrages durch einen Letter of Intent bezeichnet und zum anderen →Akteur:innen, die als Teil des →Transformationsnetzwerks neu als Partner:innen gewonnen wurden und aktiv im Projekt mitwirken. Partner:innen können Institutionen, Unternehmen und Einzelpersonen aus Zivilgesellschaft, Wirtschaft, Politik und Verwaltung sein.

**Einfache Beschreibung:**  Akteur:innen, die das Projekt unterstützen und aktiv mitwirken

**Verwandt:**  [Akteur:innen](#akteurinnen)

### Permeable Oberflächen

Durchlässige Oberflächen versickern, behandeln und/oder speichern Regenwasser dort, wo es fällt. Sie können aus durchlässigem Beton, offenporigem Asphalt, durchlässigen Verbundpflastersteinen oder offenen Wiesen/Flächen bestehen.

### PET-Wert

Der PET-Wert (physiologisch äquivalente Temperatur) ist ein Maß zur Bewertung des thermischen Komforts und Wohlbefindens des Menschen unter verschiedenen Umgebungsbedingungen. Die PET berücksichtigt dabei nicht nur die Lufttemperatur, sondern auch andere meteorologische Größen wie Luftfeuchtigkeit, Windgeschwindigkeit und Strahlungstemperatur sowie die physiologischen Reaktionen des Körpers.

### Pluviale Überflutung

Überflutung durch Sturzfluten aus Starkregen weit ab vom Gewässer

**Einfache Beschreibung:**  Überflutung von Flächen durch Starkregen

**Verwandt:**  [Fluviale Überflutung](#fluviale-überflutung)

### Practices

Praktiken, Methoden und Verhaltensweisen, die in der Praxis zum Einsatz kommen und mehr oder weniger erprobt, verbreitet und evaluiert sind.

**Einfache Beschreibung:**  Praktiken, Methoden und Verhaltensweisen, die in der Praxis zum Einsatz kommen.

### Prävention

Maßnahmen zur Vermeidung und Verringerung von Risiken.

**Verwandt:**  [Risiko](#risiko)

### Projektkommunikation

ist die interne und externe Kommunikation beispielsweise über Ziele, Inhalte und Aktivitäten des Projekts. Ziel ist die Einbindung von Partner:innen, dem Team und externen Dialoggruppen des Projekts. Außerdem leistet die Projektkommunikation einen Beitrag zur →Wissenschaftskommunikation.

**Verwandt:**  [Projektmarketing](#projektmarketing)

### Projektmarketing

Die externe Kommunikation beispielsweise über Ziele, Inhalte und Aktivitäten des Projekts. Ziel ist die Präsentation des Projekts durch eine werbende Darstellung, um z.B. neue Partner:innen oder Fördergeber:innen zu gewinnen.

**Verwandt:**  [Projektkommunikation](#projektkommunikation)

### Prospektive Evaluation

Eine prospektive Evaluation findet ex-ante statt, d.h. auf Grundlage erster Ideen und Konzepte und vor deren Implemetierung. Sie umfasst v.a. Bedarfs- und Konzeptanalysen und hat das Ziel potentielle Wirkungen abzuschätzen und mit den Ergebnissen Entscheidungen zur Ausgestaltung der Interventionen zu stützen.

**Verwandt:**  [Bedarfsanalyse](#bedarfsanalyse)

### Prototyp

Ein Prototyp im Kontext von Reallaboren ist eine vorläufige, experimentelle Version eines neuen Ansatzes oder Produkts. Er dient dazu, innovative Ansätze und Konzepte in einer realitätsnahen Umgebung zu testen und weiter zu optimieren.

### Qualifikation

Qualifikation bezeichnet die Summe an Wissen, Fähigkeiten und Erfahrungen, die eine Person in einem bestimmten Bereich erworben hat und die sie befähigt, bestimmte Aufgaben und Tätigkeiten kompetent auszuführen. Sie kann durch formale Bildung, Berufserfahrung oder spezifische Weiterbildung erworben werden und dient als Nachweis der Eignung für bestimmte Berufe oder Positionen.

### Qualifizierungsbedarf

Qualifizierungsbedarf beschreibt den Bedarf an Weiterbildung, der notwendig ist, um Handlungswissen und -kompetenzen einer Person oder einer Gruppe von Personen an die aktuellen Anforderungen und Herausforderungen in ihrem Berufsfeld oder Tätigkeitsbereich anzupassen bzw. zu erweitern.

### Rasterdaten

eine Darstellung von Geodaten unter Verwendung einer Matrix von Zellen (oder Pixeln), die in Zeilen und Spalten (oder einem Gitter) organisiert sind, wobei jede Zelle einen Wert enthält, der Informationen darstellt.

### Räumliche Analyse

Geoinformationssystem (GIS) Techniken zur Lösung von ortsspezifischen Problemen, zur Erkennung von Mustern und zur Bewertung von Raumdaten für die Entscheidungsfindung.

### Räumliche Auflösung

Größe der Erdoberfläche, die in einem Pixelwert eines Datenprodukts (z.B. Satellitenbild) erfasst und abgebildet wird

### Realexperiment

Zeitlich und räumlich abgeschlossene Untersuchung, die mit und ohne Co-Kreation im Reallabor durchgeführt wird. Es trägt zur Wissensproduktion und zum vielschichtigen Transfer im Themenkontext des Reallabors bei.

**Unterbegriff von:**  [Reallabor](#reallabor)

### Reallabor

Ein Reallabor ist ein instutionell-struktureller Rahmen, der zeitliche und räumliche Komponenten hat. Dadurch wird ein Rahmen erzeugt, in dem Akteur:innen aus Wissenschaft, Gesellschaft, Politik und Verwaltung gemeinsam Lösungen, Praktiken und Methoden für reale Probleme entwickeln und diese in deren realen Kontext erproben, um zur sozial-ökologischen Transformation beizutragen.

**Einfache Beschreibung:**  Ein zeitlich und räumlich abgesteckter Rahmen in dem Akteur:innen aus Wissenschaft und Gesellschaft gemeinsam Lösungen für reale Probleme entwickeln und erproben.

### Regenwasserbewirtschaftung

bezeichnet das Abführen (Versickerung, Zwischenspeicherung, Verdunstung, Behandlung) und Nutzen von anfallendem Niederschlagswasser. Ziel ist die Rückführung des Niederschlagswassers in den natürlichen Wasserkreislauf.

### Rekultivierung

Rückführung eines Landschaftsraumes in einen nutzbaren Zustand, der zuvor durch wirtschaftliche Aktivitäten des Menschen unnutzbar bzw. geschädigt wurde. Ziel ist die Wiederherstellung eines wirtschaftlich nutzbaren Ökosystems, im Gegensatz zur Renaturierung, die ausschließlich zur Schaffung neuer Lebensräume dient.

### Renaturierung

Wiederherstellung eines naturnahen Zustandes von Flächen (oft Gewässer oder landwirtschaftliche Flächen). Im Gegensatz zur Rekultivierung hat die Fläche danach keine ökonomischen Funktionen mehr (Einschränkung: Tourismus), sondern es werden naturnahe Lebensräume geschaffen in dem Nutzung und Eingriffe durch den Menschen rückgängig gemacht werden.

**Verwandt:**  [Revitalisierung](#revitalisierung)

### Resilienz

Fähigkeit von Systemen und Lebewesen, Ereignissen zu überstehen beziehungsweise sich daran anzupassen und dabei Funktionsfähigkeiten zu erhalten und das Überleben zu sichern.

### Responsive Wissenschaftskommunikation

Beteiligung von gesellschaftlichen Gruppen, wie Bürger:innen, an der Themenfindung für von Expert:innen der Wissenschaftskommunikation entwickelte Formate. Im nächsten Schritt werden diese Formate von der angesprochenen Gruppe selbst inhaltlich bespielt.

### Retentionsfläche

Natürliche oder künstlich angelegte Fläche, die bei Hochwasser oder anderen hydrologischen Spitzenbelastungen Wasser temporär speichert. Im Kontext von Fließgewässern dienen sie als Überflutungsflächen und tragen zu einer Abflussverzögerung bei, indem sie den Flussquerschnitt erweitern.

### Revitalisierung

Wiederbelebung eines Naturraums, der durch den Menschen beeinträchtigt ist.

**Verwandt:**  [Renaturierung](#renaturierung)

### Risiko

Kombination aus der Eintrittswahrscheinlichkeit eines Ereignisses und den potenziellen, negativen Folgen des Ereignisses auf ein System

### Risikokarte

Ist eine Karte, welche die Auswirkung einer Gefahr auf eine angegebene Fläche beschreibt. Dabei wird die Anzahl der betroffenen Bevölkerung, die Art der wirtschaftlichen Tätigkeiten sowie das vorhanden sein von Kulturstätten betrachtet.

### Risikomanagement

Ist der Prozess um Risiken zu identifizieren, zu bewerten und zu steuern. Ziel ist es, potenzielle Gefahren oder Schäden frühzeitig zu erkennen, deren Auswirkungen abzuschätzen und geeignete Maßnahmen zu ergreifen, um diese Risiken zu minimieren oder zu kontrollieren.

### Rückhaltevolumen

Kapazität des maximalen Wasservolumens, welches in einer technischen oder natürlichen Retentionsanlage zurückgehalten werden kann.

### Schaden

Negativ bewertete Auswirkung auf ein Schutzgut. Der Schaden kann sowohl materiell als auch ideell sein.

**Einfache Beschreibung:**  Negative Auswirkungen auf ein Schutzgut.

### Schutzgut

Alles, was aufgrund seines ideellen oder materiellen Wertes vor Schaden bewahrt werden soll.

### Schwammstadt

Urbanes Konzept für das Regenwassermanagement. Durch entsiegelte Flächen und Retentionsräume wird die Stadt widerstandsfähiger gegenüber extremen Wetterereignissen, verbessert die Wasserqualität und Lebensqualität. Regenwasser wird zurückgehalten, gespeichert, versickert, verdunstet, wiederverwendet oder gedrosselt und gereinigt abgeleitet. Dies wird durch grüne und blaue Infrastruktur erreicht.

### Sensitivität

Das Ausmaß, in dem ein System oder eine Art durch Klimaschwankungen oder -veränderungen beeinflusst wird. Die Auswirkung kann direkt (z. B. eine Änderung der Ernteerträge als Reaktion auf eine Änderung des Mittelwerts, der Spanne oder der Variabilität der Temperatur) oder indirekt (z. B. Schäden durch eine Zunahme der Häufigkeit von Küstenüberschwemmungen aufgrund des Meeresspiegelanstiegs) sein.

### Serious Games

Serious Games sind eine Unterkategorie von Spielen, wie Videospiele, Karten- oder Brettspiele. Sie verfolgen gezielt Bildungs- und Lernziele, anstatt ausschließlich der Unterhaltung zu dienen und nutzen spielerische Elemente und wissenschaftliche Konzepte, um den Lernprozess zu fördern und die Motivation der Nutzer zu steigern.

### Simulationen

Nachbildungen der realen Welt und ihrer physikalischen Eigenschaften mit hoher Immersion (auch Simulation Games). Sie werden für Lern- und Lehrzwecke, Trainings sowie computerbasierte Experimente genutzt. Technische Simulationen nutzen mathematische Methoden, um zukünftige Entwicklungen und Folgen vorherzusagen und darzustellen.

### Sites

Partnerkommunen des Projekts Co-Site, derzeit Stadt Leverkusen (als Großstadt), Kolpingstadt Kerpen (als Mittelstadt), Erftstadt (Mittelstadt), Rhein-Erft-Kreis (als Kreis).

**Einfache Beschreibung:**  Modellregionen des Projekts Co-Site

### Stakeholder

Zu berücksichtigende Personen oder (organisiertierte) Personengruppen im Rahmen eines Projekts. Dabei handelt es sich um alle von den Auswirkungen und der Durchführung des Projekts betroffene Gruppen oder Entitäten.

**Verwandt:**  [Dialoggruppe](#dialoggruppe), [Zielgruppe](#zielgruppe)

### Starkregen

Sehr große Niederschlagsmengen, die oftmals nur auf kleinen Gebieten und in kurzer Zeit fallen. Sie können Kanäle und Gewässer überlasten, was zu Überschwemmungen und Überflutungen führen kann.

### Starkregengefahrenkarte

**(SRGK)**

Zeigt Gefahrenbereiche außerhalb von Fließgewässern auf, die bei einem Starkregenereignis überschwemmt werden.

### Starkregenindex

**(SRI)**

Dient der Charakterisierung von Starkregenereignissen und wird auf einer Skala von 1 (niedrig) bis 12 (hoch) angegeben. Die Starkregenindices geben das Gefahrenrisiko bei Überflutungen wider.

### Starkregenrisikokarte

Zeigt, wo Schäden durch Überschwemmungen durch Starkregen entstehen können. Aufgezeigt werden die Gebiete, die von einer Starkregengefahr betroffen sind unter Berücksichtigung von Einwohnerzahl, Schutzgebieten, Industrieanlagen und Kulturstätten.

### Staudamm

Kernelement einer Stauanlage im Wasserbau und kommt zum Bau einer Talsperre oder einer Flusssperre bzw. Staustufe zur Ausführung.

### Sturmflut

Sturmfluten entstehen, wenn starke Winde Wasser von Meeren, Tiedenflüssen oder großen Seen an die Küste oder das Ufer treiben. Infolgedessen steigt der Wasser-stand und das Land wird überflutet.

### Summative Evaluation

Die summative Evaluation findet ex-post nach der Programmmplementierung statt. Sie soll einen Gesamtüberblick über Qualität, Wirksamkeit und Effizienz des Programms geben.

### Sustainable Development Goals

**(SDG)**

Die Sustainable Development Goals / Ziele für Nachhaltige Entwicklung bestehen aus 17 Zielen, die 2015 von den Vereinten Nationen verabschiedet wurden und global als Agenda für eine nachhaltige Entwicklung dienen. Sie richten sich an Regierungen, die Zivilgesellschaft, Wirtschaft und Wissenschaft.

**Verwandt:**  [Agenda 2030](#agenda-2030)

**Synonyme:**  [SDG](#sdg)

### System

Ein System ist ein strukturiertes Ganzes, das aus miteinander verbundenen und interagierenden Komponenten besteht. Diese Komponenten arbeiten zusammen, um eine bestimmte Funktion oder ein Ziel zu erfüllen. Systeme können natürlich oder menschlich geschaffen sein und variieren in ihrer Komplexität, z.B. technische Systeme, ökologische Systeme oder soziale Systeme.

### Systemwissen

Beobachtungswissen über den Ist-Zustand eines Systems

### Teilentsiegelung

ist die anteilige Entsiegelung einer Fläche. Nur Teile der gesamten Fläche werden Entsiegelt oder durch permeable Oberflächen ersetzt und somit teilentsiegelt. Teilentsiegelte Bodenbeläge lassen viel bis mäßige Versickerung von Oberflächenabflüssen zu.

### test111

test111

### Thermische Ausgleichsfunktion

Bewertungskategorie des Freiraums. Flächen mit einer thermischen Ausgleichsfunktion sind in der Regel Grün- und Freiflächen, welche besonders nachts Kaltluft produzieren oder durch ihre spezielle Lage Kaltluftströme ermöglichen. Sie tragen somit zur Minderung der Hitzebelastung bei.

### Thermische Belastung

wird anhand des PET-Wertes dargestellt, der das thermische Empfinden in verschiedenen Umgebungsbedingungen beschreibt. Sie kann durch Hitze oder Kälte verursacht werden und wird von Lufttemperatur, Luftfeuchtigkeit, Windgeschwindigkeit und Sonnenstrahlung beeinflusst. Thermische Belastung hat direkte Auswirkungen auf das körperliche Wohlbefinden (z.B. Hitzestress).

### Transdisziplinäres Arbeiten

Ziel ist die Zusammenarbeit von Wissenschaft und Akteur:innen aus der Praxis (Gesellschaft, Wirtschaft, Politik) auf Augenhöhe im Themenfeld Reallabor. Zeichnet sich insbesondere durch die Verknüpfung unterschiedlicher Sichtweisen und Fachdisziplinen der jeweiligen Akteur:innen aus.

### Transfer

Anwendung und Übertragung von wissenschaftlichem und praktischem Wissen in unterschiedlichen und insbesondere anderen Kontexten

**Verwandt:**  [Wissenstransfer](#wissenstransfer)

### Transferbeirat

Der Transferbeirat besteht zum einen aus Vertreter:innen aus der Region, um die Transformation der Region voranzutreiben und die Zusammenarbeit verschiedener Akteure zu gewährleisten. Zum anderen aus wissenschaftlichen Expert:innen aus der Reallaborpraxis, die das Team bei der praktischen Umsetzung von Projekten in der Region als Teil des Reallabors sowie der Messbarkeit der Ergebnisse beraten.

### Transfermodus 1

Wissens- und Technologietransfer für die Gesellschaft - Adressiert den linearen Transfer von Wissen und Technologie aus der Hochschule in die Gesellschaft. Die Forschungsergebnisse werden für zivilgesellschaftlichen und wirtschaftlichen Nutzen angewandt und verwertet. Der Fokus liegt dabei auf Aktivitäten mit Verwertungs- oder Kommerzialisierungsabsicht.

**Unterbegriff von:**  [Transfer](#transfer)

### Transfermodus 2a

Ideen- Wissens- und Technologietransfer mit der und für die Gesellschaft. Hochschulexterne aus mindestens einem gesellschaftlichen Teilsystem werden an einem Teil der Wissenserzeugung beteiligt. Der Fokus liegt dabei auf nutzungsorientierten Aktivitäten.

**Unterbegriff von:**  [Transfer](#transfer), [Wissenserzeugung](#wissenserzeugung)

### Transfermodus 2b

Ideen-, Wissens- und Technologietransfer in der, mit der und für die Gesellschaft. Am gesamten Prozess der Wissenserzeugung werden Hochschulexterne aus verschiedenen gesellschaftlichen Teilsystemen und der organisierten Zivilgesellschaft beteiligt. Der Fokus liegt dabei auf gemeinwohlorientierten Aktivitäten. In Co-Site findet der Transfermodus 2b statt.

**Unterbegriff von:**  [Transfer](#transfer)

### Transformation

Verstanden als sozial-ökologische Transformation beschreibt der Begriff den tiefgreifenden strukturellen Wandel hin zu einer ressourcenschonenden Lebensweise und einer nachhaltigen Entwicklung.

### Transformation Skills

Transformation Skills sind Fähigkeiten, um Veränderungen aktiv zu gestalten. Dazu gehören systemisches Denken und Handeln, Innovationsfähigkeit, emotionale Intelligenz und kollaborative Problemlösung. Diese Kompetenzen ermöglichen es Individuen und Organisationen, sich an neue Herausforderungen anzupassen.

### Transformationsnetzwerk

Im Transformationsnetzwerk wirken verschiedene regionale Vetreter:innen aus Kommunen und Kreise, Wirtschaftsförderung, Wirtschaft und weitere Partner:innen der Teilvorhaben mit. Das Transformationsnetzwerk kommt zusammen, um Bedarfe aufzunehmen und fördert den Austausch sowie die (Weiter-)Entwicklung der Region im Sinne der Nachhaltigkeit.

### Transformationswissen

Wissen, wie man ein System vom Ist-Zustand zu einem gemeinsam definierten wünschenswerteren Zustand in der Zukunft bewegen kann.

**Verwandt:**  [Systemwissen](#systemwissen)

### Transformative Wissenschaft

Transformative Wissenschaft bezeichnet einen Forschungsansatz, der darauf abzielt, gesellschaftliche, ökologische und technologische Herausforderungen in wechselseitigen Austauschbeziehungen zwischen Wissenschaft, Politik, Wirtschaft und Gesellschaft zu erforschen, um nachhaltige Veränderungen und Innovationen zu initiieren und zu unterstützen.

### Transformatives Lernen

Transformatives Lernen bewirkt tiefgreifende Veränderungen in Denken und Verhalten. Es führt zu neuen Perspektiven und erweitertem Verständnis, indem bisherige Annahmen und Überzeugungen kritisch hinterfragt werden. Dies fördert eine nachhaltige Entwicklung persönlicher und beruflicher Fähigkeiten und erleichtert die Anpassung an komplexe Herausforderungen.

### Urbane Hitzeinsel

**(UHI)**

beschreibt die überdurchschnittliche Erwärmung von Innenstädten im Vergleich zu ihrem Umland. Besonders nachts kühlen Städte nicht ab, da die dicht bebauten und versiegelten Flächen die tagsüber gespeicherte Hitze in der Nacht wieder abgeben. Zudem verhindern verbaute Luftbahnen, dass kühle Luft aus dem Umland in die Stadt gelangt. Dadurch können Temperaturdifferenzen bis zu 10°C entstehen.

### Urbane Resilienz

beschreibt die Fähigkeit eines städtischen Systems und seiner Bevölkerung, bei Krisen oder Katastrophen widerstandsfähig zu reagieren. Berücksichtig wird dabei zugleich die Anpassungsfähigkeit und Entwicklung hin zu einer robusten, adaptiven und zukunftsfähigen Stadt.

### Urbane Retentionsräume

Natürliche oder künstlich geschaffene Retentionsräume im Stadtgebiet die bei Hochwasser und/ oder Starkregen Wassermassen zurückhalten, versickern, verdunsten oder verzögert in die Kanalisation abgeben. Urbane Retentionsflächen dienen somit sowohl dem Überschwemmungsschutz als auch der Verbesserung des Stadtklimas.

### Urbaner Digitaler Zwilling

Ein Urbaner Digitaler Zwilling ist eine virtuelle Nachbildung einer städtischen Umgebung, welche Daten aus verschiedenen Quellen nutzt, um das Leben, die Dynamik und bspw. die physikalischen Eigenschaften der Stadt zu simulieren. Anwendungen finden sich in Bereichen wie Verkehrsmanagement, Umweltschutz und Stadtentwicklung.

**Verwandt:**  [Digitaler Zwilling](#digitaler-zwilling)

### Vektordaten

eine Darstellung der Erdobjekte (Datenmodell) durch Punkte, Linien und Polygone.

### Verletzlichkeit

Siehe Vulnerabilität

### Verwundbarkeit

siehe Vulnerabilität

**Synonyme:**  [Vulnerabilität](#vulnerabilität), [Anfälligkeit](#anfälligkeit)

### Virtual Reality

**(VR)**

Eine computergenerierte virtuelle Umgebung, die die nutzende Person visuell und auditiv mittels VR-Brille erleben kann und in der die reale Welt visuell nicht erfasst werden kann (dt. virtuelle Welt).

### Virtuelle Realität

**(VR)**

Siehe Virtual Reality.

### Vision

Ein Zielbild, welches ein angestrebtes Szenario in der Zukunft beschreibt.

### VR-Brille

Virtual Reality-Brille, ein tragbares Gerät (HMD), welches wie eine Brille oder ein Helm getragen wird und den Benutzer vollständig in eine computergenerierte, dreidimensionale virtuelle Umgebung eintauchen lässt. Diese Brillen besitzen integrierte Bildschirme und Sensoren, um Kopfbewegungen zu verfolgen und eine immersive visuelle und oft auch auditive Erfahrung zu bieten.

### VR-Laufband

Ein VR-Laufband, auch Omnidirectional Treadmill (dt. omnidirektionales Laufband) genannt, ist ein spezielles Gerät, das es Nutzer:innen ermöglicht, sich in alle Richtungen innerhalb einer VR-Welt zu bewegen, ohne physisch den Ort zu wechseln, und erhöht so die Immersion und Interaktivität.

### VUCA

**(VUCA)**

VUCA setzt sich aus *volatility* (Unbeständigkeit), *uncertainty* (Unsicherheit), *complexity* (Komplexität) und *ambiguity* (Mehrdeutigkeit) zusammen und beschreibt die Herausforderungen und Dymaniken, welchen Organisationen oder Personen in der Arbeitswelt begegnen können.

**Verwandt:**  [Ambiguität](#ambiguität)

### Vulnerabilität

Der Begriff beschreibt den Zustand der Verletzbarkeit oder Verwundbarkeit und ist das Maß für die anzunehmende Schadensanfälligkeit eines Schutzgutes in Bezug auf ein bestimmtes (Schadens-)Ereignis. Sie bezieht sich auf Personen, Objekte, Infrastruktursysteme oder räumliche Bereiche. Vulnerabilität wird durch ökonomische, ökologische und soziale Faktoren bestimmt.

**Synonyme:**  [Anfälligkeit](#anfälligkeit)

### Vulnerable Personengruppen

Personengruppen, die als besonders vulnerabel gelten sind zum Beispiel: Kinder, Jugendliche, flüchtende und geflüchtete Menschen, Frauen, ältere Menschen, Menschen mit Behinderung, LGBTQIA+-Personen, sowie religiöse Minderheiten. Sie leiden besonders unter Krisen und ihren Folgen und sind diesen in vielen Fällen in höherem Maße ausgesetzt.

### Wassersensible Stadt

Stadt, die Wasser nachhaltig nutzt, Überflutungsrisiken minimiert und die Wasserqualität urbaner Wasserkörper verbessert. Integration von natürlichen Wasserzyklen und nachhaltiges Management von Wasserressourcen. Hauptmerkmale sind Regenwasserbewirtschaftung, grüne Infrastruktur, Flussrenaturierung, wassereffiziente Gebäude, Sensibilisierung der Bevölkerung und integriertes Wassermanagement.

**Einfache Beschreibung:**  Ziel einer wassersensiblen Stadt ist es, Wasser nachhaltig zu nutzen, Überflutungsrisiken zu minimieren und die Wasserqualität zu verbessern.

**Verwandt:**  [Renaturierung](#renaturierung), [Schwammstadt](#schwammstadt), [Grüne Infrastruktur](#grüne-infrastruktur), [Regenwasserbewirtschaftung](#regenwasserbewirtschaftung)

### Web Feature Service

**(WFS)**

Ein standardisierter OGC-Geodienst für die Bereitstellung von geografischen Informationen im Vektorformat über das Internet.

### Web Map Service

**(WMS)**

Ein standardisierter OGC-Geodienst für die Bereitstellung georeferenzierter Kartenbilder über das Internet.

### Weiterbildung

Weiterbildung ist ein Sammelbegriff für allgemeine, betriebliche, berufliche sowie politische Weiterbildung. Sie zielt darauf ab, Wissen und Fähigkeiten zu erweitern, sowohl für persönliche Entwicklung als auch zur Erfüllung beruflicher Anforderungen, und trägt zur Förderung der gesellschaftlichen Teilhabe und Erreichung organisationaler Ziele bei.

### Wirkung

Wirkung beschreibt Veränderungen und Ergebnisse, die als Resultat von Projektaktivitäten entstehen. Es können positive und negative sowie intendierte und unintendierte Wirkungen unterschieden werden.

### Wirkungsanalyse

Wirkungsanalyse stellt Evaluation bezogen auf die Gesamtheit eines Projekts dar. Sie umfasst die Entwicklung von Wirkungslogiken sowie die Planung, Beschreibung und Bewertung von Auswirkungen und Wechselwirkungen des Projekts auf relevante Faktoren und Stakeholder.

### Wirkungsmodell

Ein Wirkungsmodell ist eine systematische, visuelle Darstellung die beschreibt welche Veränderungen und Ergebnissen durch das Projekt erzielt werden sollen und wie diese Zielreichung umgesetzt werden soll. Dabei werden Ressourcen, Rahmenbedingungen, Maßnahmen sowie direkte und indirekte Wirkungen berücksichtigt und miteinander in Verbindung gesetzt. Sie basieren oft auf dem IOOI-Modell von Phineo.

### Wirkungsorientierung

Wirkungsorientierung bedeutet, dass ein Projekt darauf abzielt, gesellschaftliche Veränderungen zu bewirken, und dass es dementsprechend geplant und umgesetzt wird. Der Begriff wird im Feld der Wirkungsanalyse u.a. gerne genutzt, um zu verdeutlichen, dass Wirkung nicht wirklich messbar ist.

### Wissenschaftliche Weiterbildung

Wissenschaftliche Weiterbildung sind Maßnahmen, die auf wissenschaftlichen Erkenntnissen und Methoden basieren, für Personen mit berufsqualifizierendem oder akademischem Abschluss. Die Lernformate sind handlungsorientiert und zielen darauf ab, Fach- und Handlungskompetenzen in spezifischen Bereichen zu vertiefen oder zu erweitern.

### Wissenschaftskommunikation

**(WissKomm)**

Umfasst alle Aspekte der Kommunikation über wissenschaftliches Arbeiten, wissenschaftliche Aktivitäten und wissenschaftliche Ergebnisse, sowohl innerhalb der Wissenschaft als auch (im besonderen) darüber hinaus.

### Wissenserzeugung

Prozess, mit dem neues Wissen generiert wird. Wissen kann auf verschiedenen Wegen erzeugt werden, zum Beispiel durch Forschung und Austausch. Im Kontext von Reallaborarbeit bedeutet dies u.a. die Verknüpfung von vorhandenem Wissen verschiedener relevanter Stakeholder und die dadurch erzeugte ganzheitliche Erweiterung, Ergänzung und Entwicklung neuen Wissens.

### Wissenstransfer

Übertragung von (wissenschaftlichem) Wissen an weitere Personen oder Institutionen in Gesellschaft, Wirtschaft oder Politik

### Workshop

Ein methodisch strukturiertes Setting der Zusammenarbeit mehrerer Personen, welches zumeist von einer Moderation geleitet wird. Ziele sind die begleitete Wissensaneignung oder gemeinsame Produktion von Inhalten sowie Prototypen.

### Zeitliche Auflösung

Zeitliche Abstände zwischen einzelnen Aufnahmen des gleichen Gebietes in einem Datensatz.

### Zeitreihe

Zeitlich geordnete Messdaten, die regelmäßig erfasst wurden.

### Zielgruppe

Eine Person oder Gruppe von Menschen, die durch die Maßnahmen des Reallabors angesprochen werden sollen.

**Verwandt:**  [Dialoggruppe](#dialoggruppe)

### Zielwissen

Gemeinsam generiertes Wissen über gewünschte zukünftige Entwicklungen eines Systems

### Zivilschutz

Beschreibt den Schutz der Bevölkerung durch nicht militärische Maßnahmen im Falle von militärischen Auseinandersetzungen. Zum Zivilschutz gehören insbesondere der Selbstschutz, die Warnung der Bevölkerung, der Schutzbau, die Aufenthaltsregelung, der Katastrophenschutz nach Maßgabe des § 11 ZSKG, Maßnahmen zum Schutz der Gesundheit, Maßnahmen zum Schutz von Kulturgut.

**Verwandt:**  [Bevölkerungsschutz](#bevölkerungsschutz)

# IPCC Begriffe

### ablation

The process of removing snow, ice, or rock from a glacier or other frozen body by melting, sublimation, or calving.

### abrupt change

A significant change that happens in a relatively short time period, often affecting climate or ecological systems suddenly and dramatically.

### abrupt climate change

A rapid and significant change in the climate system that occurs over a short period, causing substantial impacts on natural and human systems.

### acceptability of policy or system change

The degree to which proposed policies or changes in systems are considered favorable or acceptable by stakeholders and the general public.

### access to modern energy services

The ability to obtain modern energy services, including electricity and clean cooking facilities, which are essential for economic development and well-being.

### acclimatisation

The physiological or behavioral adjustments that organisms make in response to changes in their environment to maintain performance across a range of environmental conditions.

### accumulation

The accumulation of substances such as snow, ice, or sediment in a natural environment.

### active layer

The layer of ground that is subject to annual freeze-thaw cycles in permafrost regions, affecting soil structure and ecosystem processes.

### acute food insecurity

A condition where food availability is severely reduced, leading to an urgent need for food aid to prevent hunger and malnutrition.

### adaptation

The process of adjusting to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities.

### adaptation behaviour

The ways in which individuals or communities change their behaviors to cope with or benefit from climate impacts.

### adaptation deficit

The gap between the level of adaptation that is currently achieved and the level that is needed to avert or minimize the negative impacts of climate change.

### adaptation fund

A fund established to finance adaptation projects and programs in developing countries that are particularly vulnerable to the adverse effects of climate change.

### adaptation gap

The difference between the current level of adaptation and the level required to adequately address the impacts of climate change.

### adaptation limits

The limitations that prevent effective adaptation, which may be physical, economic, social, or technological.

### adaptation needs

The specific requirements that must be met for effective adaptation to take place, addressing vulnerabilities and enhancing resilience.

### adaptation opportunity

The potential benefits or opportunities that arise from taking action to adapt to climate change.

### adaptation options

The various actions or strategies available to mitigate the impacts of climate change and enhance resilience.

### adaptation pathways

The sequences of actions or strategies that can be implemented over time to adapt to changing climatic conditions.

### adaptive capacity

The capacity of individuals, communities, or systems to adjust to potential damage, take advantage of opportunities, or respond to consequences.

### adaptive governance

A governance approach that emphasizes flexibility, learning, and collaboration across different levels of government and stakeholders.

### adaptive management

A management strategy that allows for learning and adaptation in response to changes and uncertainties.

### added value

The additional benefits or improvements that a project or policy brings beyond its primary objectives.

### additionality

The concept that a project or intervention should provide benefits that would not have occurred without it.

### adjustments

The changes or modifications made to policies, practices, or systems to improve performance or outcomes.

### advection

The horizontal movement of air or water due to atmospheric or oceanic conditions.

### adverse side-effect

An unintended negative consequence that arises from a policy or action intended to produce a different benefit.

### aerosol

Tiny solid or liquid particles suspended in the atmosphere, which can affect climate and human health.

### aerosol effective radiative forcing

The net change in the energy balance of the Earth’s atmosphere due to aerosols, affecting climate.

### aerosol optical depth

A measure of the extent to which aerosols prevent sunlight from reaching the Earth’s surface.

### aerosol–cloud interaction

The interactions between aerosols and cloud formation, which can influence weather patterns and climate.

### aerosol–radiation interaction

The interactions between aerosols and radiation, influencing climate through scattering or absorbing sunlight.

### afforestation

The establishment of forests in areas where there were no previous tree cover, as a method of carbon sequestration and environmental restoration.

### agreement

A formal arrangement between two or more parties, often to achieve mutual goals or resolve issues.

### agricultural and ecological drought

Drought conditions that affect agricultural productivity and ecological health, leading to food and water shortages.

### agriculture forestry and other land use

Land use practices involving agriculture, forestry, and other land uses that can impact the environment and climate.

### agroecology

A sustainable farming approach that integrates ecological principles with agricultural practices.

### agroforestry

A land management practice that integrates trees and shrubs into agricultural systems for environmental and economic benefits.

### air mass

A large body of air with uniform temperature and humidity characteristics.

### air pollution

The presence of pollutants in the air, which can harm human health and the environment.

### airborne fraction

The proportion of emitted CO2 that remains in the atmosphere rather than being absorbed by oceans or land.

### albedo

The reflectivity of a surface, with high albedo surfaces reflecting more sunlight and low albedo surfaces absorbing more.

### alkalinity

The capacity of a solution to neutralize acids, often used to measure the buffering capacity of seawater against ocean acidification.

### altimetry

The measurement of changes in surface height, often used in monitoring sea level and ice sheet dynamics.

### annular modes

Climate patterns characterized by large-scale high-pressure systems that influence weather patterns over weeks to months.

### anomaly

A deviation from the long-term average value of a climate variable, such as temperature or precipitation.

### antarctic ice sheet

A massive ice sheet covering Antarctica, containing the majority of the Earth’s fresh water.

### anthropocene

A proposed geological epoch that highlights the significant global impact of human activities on the Earth’s geology and ecosystems.

### anthropogenic

Originating from human activity, such as emissions from fossil fuel combustion, deforestation, and industrial processes.

### anthropogenic emissions

Emissions of greenhouse gases or other pollutants that result from human activities.

### anthropogenic removals

The process by which human activities remove greenhouse gases from the atmosphere, often through land use practices like reforestation.

### anthropogenic subsidence

The gradual sinking of land due to human activities such as groundwater extraction or oil drilling.

### apparent hydrological sensitivity

The apparent sensitivity of a hydrological system to changes in climate or other environmental conditions.

### arctic oscillation

A climate pattern characterized by shifting atmospheric pressure and temperature patterns in the Arctic, affecting global weather.

### arid zone

A climate zone characterized by very low precipitation and high evaporation rates, leading to desert-like conditions.

### aridity

A measure of the dryness of an environment, often used to assess drought conditions.

### artificial ocean upwelling

A geoengineering technique that involves bringing nutrient-rich deep ocean water to the surface to stimulate marine productivity and carbon sequestration.

### assets

The valuable resources, capabilities, and attributes that contribute to the wealth and well-being of an individual, community, or organization.

### atlantic meridional mode

A climate pattern characterized by temperature and precipitation variations in the Atlantic Ocean, affecting weather and climate globally.

### atlantic meridional overturning circulation

A large-scale ocean circulation system in the Atlantic Ocean that plays a key role in regulating climate.

### atlantic multi-decadal oscillation

A climate pattern in the Atlantic Ocean that oscillates over several decades, influencing global weather patterns.

### atlantic multi-decadal variability

Long-term variations in the climate of the Atlantic Ocean that affect global weather and climate.

### atlantic zonal mode

A climate pattern in the Atlantic Ocean characterized by variations in sea surface temperature and atmospheric pressure.

### atmosphere

The layer of gases surrounding the Earth, essential for weather, climate, and supporting life.

### atmospheric boundary layer

The lowest part of the atmosphere, where most weather phenomena occur, influenced by the Earth’s surface.

### atmospheric rivers

Narrow regions in the atmosphere that transport large amounts of water vapor from the tropics to higher latitudes, influencing precipitation patterns.

### attribution

The process of establishing the causes of observed changes or events, often in the context of climate science.

### australian and maritime continent monsoon

A monsoon system affecting Australia and surrounding regions, characterized by seasonal changes in wind and precipitation patterns.

### autonomous adaptation

Adaptation that occurs naturally within systems without directed intervention, often as a result of evolutionary processes.

### autotrophic respiration

The respiration by autotrophs (plants and algae) that releases CO2 into the atmosphere during photosynthesis.

### avalanche

A mass of snow, ice, and debris that rapidly descends a mountainside, often triggered by weather conditions or human activity.

### avoid

The action of preventing or minimizing undesirable outcomes, such as environmental damage or climate change.

### basal lubrication

The reduction of friction at the base of a glacier, which can enhance its flow and contribute to ice loss.

### baseline period

A period used as a reference point for comparison with current conditions, often in climate studies.

### baseline scenario

A hypothetical scenario used as a benchmark to assess the impact of potential changes or interventions.

### baseline/reference

The reference point or period against which changes are measured, providing a baseline for analysis.

### behavioural change

Changes in individual or collective behavior in response to environmental, social, or economic factors.

### benthic

Organisms living on or in the sea floor, often used to indicate the health of marine ecosystems.

### benthos

### beta diversity

The variety of species within a region, reflecting the ecological health and resilience of an area.

### biochar

A charcoal-like substance produced from biomass, used as a soil amendment and for carbon sequestration.

### biochemical oxygen demand

The amount of oxygen required to decompose organic material in water, an indicator of water quality.

### biodiversity

The variety of life forms within an ecosystem, encompassing genetic, species, and ecosystem diversity.

### biodiversity hotspots

Regions with exceptionally high levels of biodiversity that are under threat from human activities.

### bioenergy

Energy derived from biological sources, such as plants, which can be used as a renewable fuel.

### bioenergy with carbon dioxide capture and storage

A technology that combines bioenergy production with the capture and storage of carbon dioxide emissions.

### bioethanol

A type of biofuel produced from fermented biomass, often used as an alternative to gasoline.

### biofuel

Fuel derived from biological materials, offering a renewable alternative to fossil fuels.

### biogenic carbon emissions

Carbon emissions resulting from biological processes, such as plant respiration and decomposition.

### biogenic volatile organic compounds

Organic compounds released by plants that can contribute to atmospheric chemistry and pollution.

### biogeophysical potential

The potential of biological and physical processes to influence the climate and environment.

### biological pump

The process by which marine organisms, such as phytoplankton, transport carbon from the surface to the deep ocean.

### biomass

The total mass of living organisms in a given area, often used as a measure of ecosystem productivity.

### biomes

Large naturally occurring communities of flora and fauna occupying a major habitat.

### biosphere

The global ecological system integrating all living beings and their relationships with the atmosphere, hydrosphere, and geosphere.

### bipolar seesaw

A climate pattern characterized by opposing temperature changes in the Northern and Southern Hemispheres.

### black carbon

Fine particulate matter emitted from incomplete combustion of carbon-based fuels, affecting climate and health.

### blocking

Atmospheric conditions where high-pressure systems block the progression of weather patterns, leading to prolonged extreme events.

### blue carbon

Carbon stored in coastal and marine ecosystems, such as mangroves and seagrasses, contributing to climate mitigation.

### blue infrastructure

Infrastructure that incorporates natural processes and ecosystems to provide services such as water management and climate resilience.

### brewer–dobson circulation

A large-scale atmospheric circulation pattern that influences the distribution of ozone and other trace gases.

### burden

biennial update report

### business as usual

A scenario where current trends continue without significant change or intervention, often used in planning and forecasting.

### calcification

The process by which marine organisms, such as corals and mollusks, build calcium carbonate structures.

### calving

The process where chunks of ice break off from the edge of a glacier or ice shelf, forming icebergs.

### canopy temperature

The temperature within the layer formed by the leaves and branches of trees or plants, which can differ from air temperature due to shading and transpiration effects.

### capacity building

The process of developing skills, knowledge, and abilities within individuals, organizations, or societies to effectively address challenges and opportunities.

### carbon budget

The balance of carbon dioxide emissions and removals (e.g., through sinks like forests) in a specified region or system.

### carbon cycle

The natural process by which carbon is exchanged between the atmosphere, oceans, soil, and living organisms.

### carbon dioxide

A greenhouse gas that is a primary contributor to global warming, emitted through human activities such as fossil fuel combustion and deforestation.

### carbon dioxide fertilisation

The stimulation of plant growth due to increased atmospheric carbon dioxide levels.

### carbon dioxide capture and storage

Technologies and methods for capturing carbon dioxide emissions from industrial processes or power plants and storing it underground to prevent its release into the atmosphere.

### carbon dioxide capture and utilisation

Technologies and processes that capture carbon dioxide emissions and convert them into useful products or chemicals.

### carbon dioxide removal

Techniques and approaches to remove carbon dioxide from the atmosphere, such as through afforestation or direct air capture technologies.

### carbon feedback

The process where changes in the carbon cycle, such as carbon dioxide release or uptake, affect climate variables like temperature and precipitation.

### carbon footprint

The amount of greenhouse gases, particularly carbon dioxide, emitted directly or indirectly by human activities.

### carbon intensity

The amount of carbon dioxide emitted per unit of economic output or activity.

### carbon neutrality

Achieving a balance between emitted carbon dioxide and carbon dioxide removed from the atmosphere, often through carbon offsets or carbon removal technologies.

### carbon price

The cost imposed on carbon emissions to incentivize reductions and fund climate mitigation efforts.

### carbon sequestration

The process of capturing and storing atmospheric carbon dioxide to mitigate global warming and ocean acidification.

### carbon sink

Natural or artificial reservoirs that absorb and store carbon dioxide from the atmosphere.

### carbon stock

The amount of carbon stored in vegetation, soil, oceans, and geological formations, which can influence atmospheric carbon dioxide levels.

### carbonaceous aerosol

Tiny airborne particles composed of carbon, which can influence climate by absorbing or reflecting solar radiation.

### carbonate pump

The process by which marine organisms use carbonate ions to form calcium carbonate, sequestering carbon in deep ocean layers.

### carbon–climate feedback

The interactions between carbon dioxide levels in the atmosphere and climate processes, which can amplify or dampen climate change.

### cascading impacts

The wide-ranging impacts triggered by a single event or change, affecting interconnected systems.

### catchment

The area of land that collects and channels rainfall or snowmelt into streams, rivers, and lakes.

### cenozoic era

The geological era spanning from 66 million years ago to the present, characterized by the dominance of mammals and birds.

### central pacific el ni%C3%B1o

A type of El Niño event centered in the central Pacific Ocean, which can influence global weather patterns.

### chaotic

Describes a system that is highly sensitive to initial conditions, making long-term predictions difficult.

### charcoal

A form of carbon formed from the incomplete combustion of biomass, used in soil amendments and filtration.

### chlorofluorocarbons

Chemical compounds once used widely as refrigerants and propellants, known for depleting the ozone layer.

### choice architecture

The design of environments to influence people’s behavior towards more beneficial choices, particularly in sustainability.

### chronology

The arrangement of events or dates in the order of their occurrence.

### circular economy

An economic system designed to minimize waste and maximize resources, aiming for sustainable production and consumption.

### cirrus cloud thinning

The process of reducing cirrus cloud cover to counteract global warming by increasing Earth’s albedo.

### cities

Urban areas characterized by dense populations, infrastructure, and economic activities.

### citizen science

Scientific research conducted, in whole or in part, by amateur or non-professional scientists, often in collaboration with professional scientists.

### city region

A geographical area consisting of a core city and surrounding municipalities linked by economic, social, and environmental ties.

### clathrate

Ice-like compounds composed of gas molecules trapped within a lattice of water molecules, found in permafrost and deep ocean sediments.

### clausius–clapeyron equation/relationship

An equation relating the temperature of a phase change to the change in vapor pressure with temperature.

### climate

The long-term average of weather patterns in a particular region, including temperature, precipitation, and wind patterns.

### climate change

Changes in global climate patterns attributed directly or indirectly to human activity, particularly in the form of greenhouse gas emissions.

### climate change commitment

A commitment to future emissions reductions or climate actions, based on current policies and trajectories.

### climate extreme

Extreme weather or climate events, such as heatwaves, floods, or hurricanes, that significantly deviate from historical norms.

### climate feedback

The response of the climate system to changes or disturbances, which can amplify or mitigate the initial change.

### climate feedback parameter

A parameter describing the strength and direction of feedback loops within the climate system.

### climate finance

Financial mechanisms and resources mobilized to address climate change mitigation, adaptation, and resilience.

### climate forecast

Predictions or projections of future climate conditions based on models and data.

### climate governance

The governance structures and processes that influence climate policy, decisions, and actions at various levels.

### climate index

A measure or indicator used to assess climate conditions or trends over time.

### climate indicator

Data, knowledge, and assessments related to past, current, and future climate conditions and impacts.

### climate information

### climate justice

The concept of addressing climate change impacts and solutions in terms of fairness, equity, and justice.

### climate literacy

The understanding and knowledge of climate science, its impacts, and the actions needed to address them.

### climate metrics

Metrics and indicators used to measure and evaluate climate-related factors, impacts, and responses.

### climate model

Mathematical models used to simulate and predict climate behavior based on physical, chemical, and biological processes.

### climate pattern

Patterns or recurring sequences in climate variables such as temperature, precipitation, and atmospheric circulation.

### climate prediction

The process of predicting future climate conditions based on current knowledge, models, and scenarios.

### climate projection

The projection of future climate conditions based on scenarios of greenhouse gas emissions and other factors.

### climate refugium

A geographic area that remains relatively stable and conducive to species survival during periods of climate change.

### climate resilient development

Development pathways that integrate climate change adaptation and resilience into planning and policy.

### climate resilient development pathways

Strategies and actions aimed at ensuring development can withstand and adapt to climate change impacts.

### climate response

The overall response of the climate system to changes in greenhouse gas concentrations, emissions, or other factors.

### climate sensitivity

The sensitivity of the climate system to changes or disturbances, measured by how much the system responds to a given forcing.

### climate services

Services that provide climate information, predictions, and assessments to support decision-making and planning.

### climate simulation ensemble

A collection of climate model simulations used to account for uncertainties and variability in future climate projections.

### climate system

The interconnected components and processes of the Earth’s atmosphere, oceans, land surfaces, and ice masses.

### climate threshold

A critical threshold beyond which abrupt or significant changes in the climate system are expected.

### climate variability

The variability in climate conditions over time and space, encompassing short-term fluctuations and long-term trends.

### climate velocity

The rate at which climate zones shift in response to climate change, affecting ecosystems and species distributions.

### climate–carbon cycle feedback

The reciprocal interactions between carbon dioxide levels and climate processes, influencing each other’s dynamics.

### climate-resilient pathways

Pathways and strategies designed to enhance resilience and adaptation to climate change impacts.

### climate-smart agriculture

Agricultural practices that aim to sustainably increase productivity while reducing greenhouse gas emissions and adapting to climate change.

### climatic driver

Factors or phenomena that drive changes in climate conditions, such as greenhouse gas emissions or solar radiation.

### climatic impact-driver

Factors or phenomena that are influenced by climate change and in turn affect other aspects of the climate system.

### cloud condensation nuclei

Microscopic particles upon which water vapor condenses to form clouds, influencing cloud properties and climate.

### cloud feedback

The feedback loop in which clouds can either amplify or dampen the effects of climate change by altering the Earth’s radiation balance.

### cloud radiative effect

The impact of clouds on the balance of energy in the Earth’s atmosphere and surface, affecting climate conditions.

### cloud-resolving models

High-resolution models used to simulate cloud processes and their effects on weather and climate.

### co2 equivalent emission

A metric that expresses the impact of greenhouse gases in terms of the equivalent amount of CO2 that would produce the same effect.

### coastal erosion

The interface between land and sea, shaped by processes like erosion, sediment transport, and sea level changes.

### co-benefits

Additional benefits gained alongside primary goals when implementing actions or policies, often in environmental or social contexts.

### cold days/cold nights

Days or nights with temperatures below normal averages, indicating cooling trends or anomalous weather events.

### common era

The period from the birth of Christ onwards, used as a reference for historical and archaeological dating.

### communicable disease

A disease that can be transmitted from one person to another through direct or indirect means, influenced by environmental factors.

### community-based adaptation

Adaptation strategies that involve local communities in planning and decision-making processes to reduce vulnerability to climate change impacts.

### compatible emissions

Emissions that are compatible with a specific global temperature goal, considering both mitigation and adaptation efforts.

### compound risks

Risks resulting from the simultaneous occurrence of multiple climate or weather-related events, exacerbating impacts.

### compound weather/climate events

Events where multiple weather or climate phenomena interact to produce more severe or unusual conditions.

### concentrations scenario

Scenarios describing future concentrations of greenhouse gases and other radiatively active substances, used in climate modeling.

### conference of the parties

The annual meeting where countries that are parties to the United Nations Framework Convention on Climate Change negotiate and implement agreements.

### confidence

The level of certainty or reliability associated with climate projections, observations, or assessments.

### conservation agriculture

Agricultural practices that conserve soil, water, and biodiversity while enhancing productivity and climate resilience.

### constant composition commitment

A commitment to stabilize the composition of the atmosphere by reducing greenhouse gas emissions to prevent further climate change.

### constant emissions commitment

A commitment to maintain current levels of greenhouse gas emissions indefinitely, without further increases.

### consumption-based emissions

Emissions associated with the consumption of goods and services, including those produced domestically and internationally.

### convection

The transfer of heat through the movement of fluids (liquids or gases) due to differences in density and temperature.

### coping capacity

The ability of individuals, communities, or systems to cope with and adapt to adverse conditions or changes.

### coral bleaching

The phenomenon where coral colonies expel symbiotic algae due to stressors like increased sea temperatures, leading to their whitening.

### coral reef

Diverse ecosystems built from calcium carbonate secreted by coral polyps, which are highly vulnerable to climate change impacts.

### cosmogenic radioisotopes

Radioactive isotopes produced by cosmic rays interacting with the atmosphere or other substances, used for dating geological and archaeological materials.

### cost–benefit analysis

An economic analysis evaluating the costs and benefits of a decision, project, or policy related to climate change.

### cost-effectiveness analysis

An economic analysis evaluating the efficiency of achieving objectives or outcomes in relation to costs incurred, particularly in addressing climate change.

### coupled model intercomparison project

An international effort to coordinate and compare climate model simulations to improve understanding and predictions of climate change.

### cryosphere

The regions of Earth where water exists in solid form, including glaciers, ice caps, and permafrost.

### cultural impacts

The impacts of climate change on cultural heritage, practices, beliefs, and traditions.

### cumulative emissions

The total amount of greenhouse gases emitted over time, which contributes to global climate change.

### dansgaard-oeschger events

Abrupt climate events characterized by rapid temperature changes during the last glacial period.

### data assimilation

The process of incorporating observational data into numerical models to improve predictions and understanding.

### dead zones

Oxygen-depleted zones in oceans, caused by excessive nutrient pollution, leading to marine life depletion.

### decadal predictability

The predictability of climate variations and changes over a decade-long period.

### decadal prediction

Predictions of climate conditions over a decade-long period.

### decadal variability

Variations in climate patterns occurring over a decade-long period.

### decarbonisation

The process of reducing the carbon intensity of energy systems or economies.

### decent living standard

A standard of living that ensures basic human needs are met sustainably and equitably.

### decoupling

The separation of economic growth from environmental impact, aiming to reduce resource use and pollution.

### deep uncertainty

Uncertainty that cannot be fully characterized, understood, or quantified.

### deforestation

The clearing of forests for agriculture, urban development, or logging, leading to habitat loss and carbon dioxide emissions.

### deglacial or deglaciation or glacial termination

The process of ice sheets or glaciers melting, contributing to rising sea levels during periods of global warming.

### deliberate transformations

Planned and intentional changes or shifts in societal, economic, or environmental systems.

### deliberative governance

A form of governance that emphasizes dialogue, engagement, and participation in decision-making processes.

### demand- and supply-side measures

Policies or measures targeting both consumer behavior and production methods to reduce energy consumption and emissions.

### demand-side measures

Policies or measures targeting consumer behavior to reduce energy consumption and emissions.

### desertification

The degradation of land in arid, semi-arid, and dry sub-humid areas due to various factors including climate change.

### detection

The process of identifying changes in climate variables over time.

### detection and attribution

The process of identifying changes in climate variables and attributing these changes to specific causes.

### developed/developing countries

Categories based on economic development levels and income per capita, often used in global economic and climate discussions.

### development pathways

Trajectories or strategies for achieving development goals while considering sustainability and climate impacts.

### diatoms

Microscopic algae that play a crucial role in aquatic ecosystems and carbon cycling.

### diet

The types and quantities of food consumed by individuals or populations.

### dimensions of integration

The integration of different aspects or components into a unified whole, particularly in complex systems.

### direct air capture

The process of capturing carbon dioxide directly from the atmosphere and storing it, aiming to reduce greenhouse gas levels.

### direct air carbon dioxide capture and storage

The process of capturing carbon dioxide from the atmosphere and storing it underground to mitigate climate change.

### direct and indirect services

Services that have a direct impact on human well-being and quality of life.

### direct emissions

Greenhouse gas emissions released directly into the atmosphere from sources like industrial processes and transportation.

### disaster

A sudden, extreme event causing significant damage or loss, often due to natural hazards.

### disaster management

The process of preparing for, responding to, and recovering from disasters to minimize their impacts.

### disaster risk

The potential adverse effects of hazards on vulnerable elements, including people, property, infrastructure, and ecosystems.

### disaster risk management

Strategies and actions to manage disaster risks, aiming to reduce vulnerabilities and enhance resilience.

### disaster risk reduction

Long-term reduction of disaster risks through policies, strategies, and actions.

### discharge

The volume of water flowing through a river or stream at a given point.

### discounting

The practice of adjusting future costs and benefits to reflect their present value, often used in economic assessments.

### displacement

The evaluation of potential impacts, positive or negative, of a project or policy.

### disruptive innovation

Innovations that significantly alter existing markets or industries.

### dissolved inorganic carbon

Carbon dioxide dissolved in seawater as bicarbonate and carbonate ions, affecting ocean acidity and marine life.

### distributive equity

Fairness in the distribution of resources, benefits, and costs among different groups or individuals.

### diurnal temperature range

The difference between the highest and lowest temperatures recorded in a day.

### dobson unit

A unit measuring the thickness of the ozone layer, used in atmospheric and climate research.

### downscaling

The process of generating detailed climate information at a local or regional scale from global climate models.

### drainage

The natural or artificial removal of surface water from an area, affecting hydrology and ecosystems.

### driver

Factors or phenomena that drive changes in environmental or climatic conditions.

### drought

A prolonged period of abnormally low precipitation leading to water shortages and environmental stress.

### dynamic global vegetation model

Models that simulate the dynamics of vegetation and its interactions with the atmosphere, soil, and climate.

### dynamical system

A system whose state evolves over time according to established rules and equations, used in climate modeling and prediction.

### early eocene climatic optimum

A warm period during the early Eocene epoch, characterized by elevated global temperatures and reduced polar ice.

### early warning systems

Systems designed to detect and provide early warnings for impending natural hazards or disasters.

### earth system feedbacks

Interactions within Earth’s climate system that can amplify or dampen climate change impacts.

### earth system model

Models that simulate interactions between Earth’s atmosphere, oceans, land, and biosphere to study climate dynamics.

### earth system model of intermediate complexity

Simplified Earth system models that balance complexity and computational feasibility.

### earth system sensitivity

Earth’s sensitivity to changes in greenhouse gas concentrations, influencing climate response.

### earth%E2%80%99s energy budget

The balance between incoming solar radiation absorbed by Earth and outgoing radiation emitted back into space.

### earth’s energy flows

The pathways and transfers of energy within Earth’s atmosphere, oceans, and surface.

### earth’s energy imbalance

The disparity between incoming solar radiation absorbed by Earth and outgoing radiation emitted back into space.

### earth’s radiative response

Earth’s response to changes in radiative forcing, affecting temperature and climate.

### east asian monsoon

The seasonal wind pattern affecting East Asia, bringing heavy rainfall and influencing regional climate.

### eastern boundary upwelling systems

Oceanic systems that bring nutrient-rich waters to the surface along coastal areas, supporting marine ecosystems.

### eastern pacific el ni%C3%B1o

A climate phenomenon in the Pacific Ocean, characterized by warmer waters in the eastern Pacific.

### economic potential

The potential economic benefits or opportunities associated with climate change mitigation and adaptation efforts.

### ecosystem

A community of living organisms and their physical environment interacting as an ecological unit.

### ecosystem health

The overall condition and resilience of ecosystems, indicating their ability to sustain biodiversity and functions.

### ecosystem services

The benefits humans derive from ecosystems, including provisioning, regulating, cultural, and supporting services.

### ecosystem-based adaptation

Adaptation strategies that integrate ecosystem services and biodiversity conservation to reduce vulnerability to climate change.

### effective equilibrium climate sensitivity

The equilibrium climate sensitivity considering the effects of feedback mechanisms over time.

### effective radiative forcing due to aerosol–cloud interactions

Changes in Earth’s radiative balance due to interactions between aerosols and cloud particles.

### effective radiative forcing due to aerosol–radiation interactions

Changes in Earth’s radiative balance due to interactions between aerosols and radiation.

### ekman transport

The horizontal transport of ocean water by wind, influencing marine ecosystems and climate patterns.

### el niño–southern oscillation

A coupled ocean-atmosphere phenomenon influencing global weather patterns.

### electromagnetic spectrum

The distribution of electromagnetic radiation across a range of wavelengths, including visible light and radio waves.

### elevation-dependent warming

The phenomenon where higher elevations warm faster than lower elevations due to climate change.

### embodied %5Bemissions

Emissions associated with the production and transport of goods and services.

### emergence

The appearance of new properties or behaviors in a complex system that emerge from interactions among its components.

### emergent constraint

A limiting factor or prediction used to constrain uncertainty in climate models or projections.

### emission and socio-economic scenario ensemble

A collection of scenarios or projections describing future greenhouse gas emissions and socio-economic developments.

### emission factor/emissions intensity

The amount of greenhouse gas emissions per unit of economic activity or product output.

### emission pathways

### emission trajectories

Trajectories describing future greenhouse gas emissions based on various scenarios and assumptions.

### emissions scenario

The potential future paths or tracks of greenhouse gas emissions based on different scenarios.

### emulation

The replication of the behavior of complex systems using simplified models or simulations.

### emulators

Mathematical models or algorithms used to approximate complex processes or systems.

### enabling conditions

Conditions and factors that facilitate or support the implementation of policies or technologies.

### endemic species

Species native and restricted to a specific geographic area or habitat.

### energy access

Access to reliable and modern energy sources for basic human needs, development, and well-being.

### energy balance

The balance between incoming solar radiation and outgoing thermal radiation from Earth’s surface and atmosphere.

### energy balance model

A model that calculates energy exchanges within Earth’s climate system to study energy flows and feedbacks.

### energy budget

The quantitative representation of energy transfers and transformations within Earth’s climate system.

### energy efficiency

The efficient use of energy to achieve desired outcomes or services, reducing energy consumption and waste.

### energy poverty

Lack of access to adequate and reliable energy services, affecting quality of life and development.

### energy security

Measures ensuring the availability and reliability of energy sources and services to meet societal needs.

### energy services

Services and benefits derived from energy production, distribution, and consumption.

### energy system

The infrastructure, technologies, and practices involved in the production, distribution, and consumption of energy.

### enhanced weathering

A geoengineering technique involving the accelerated weathering of minerals to remove carbon dioxide from the atmosphere.

### ensemble

A group of simulations or models used to account for uncertainties and variability in climate predictions.

### enteric fermentation

The fermentation process in livestock digestive systems producing methane emissions.

### equality

Fairness and impartiality in the distribution of resources, opportunities, and outcomes among individuals or groups.

### equilibrium and transient climate experiment

The response of the climate system to sustained greenhouse gas concentrations over centuries or millennia.

### equilibrium climate sensitivity

The sensitivity of Earth’s climate to changes in atmospheric carbon dioxide levels.

### equilibrium line

The altitude at which snow accumulation equals melting in a glacier or ice sheet.

### equity

Fairness and justice in the distribution of benefits and burdens related to climate change and mitigation efforts.

### equivalent carbon dioxide emission

A standardized measure expressing the global warming potential of a greenhouse gas relative to carbon dioxide.

### ethics

The moral principles and considerations guiding decisions and actions related to climate change.

### eudaimonic

A concept of well-being and flourishing that emphasizes human potential and fulfillment.

### eutrophication

Nutrient enrichment in water bodies leading to excessive algae growth and ecosystem degradation.

### evaporation

The process by which water changes from liquid to vapor, driven by solar radiation.

### evapotranspiration

The combined process of water evaporation from surfaces and transpiration from plants into the atmosphere.

### evidence

The available body of facts or information indicating whether a belief or proposition is true or valid.

### evolutionary adaptation

Adaptations in species traits and behaviors over successive generations in response to environmental changes.

### exergy

The maximum useful work that can be extracted from a system at a given state, often related to energy efficiency.

### exposure

The exposure of people, assets, or systems to climate change impacts or hazards.

### extended concentration pathways

Scenarios describing future greenhouse gas concentrations and their impacts on climate and ecosystems.

### external forcing

Factors or influences external to Earth’s climate system that alter its energy balance, such as solar radiation or volcanic eruptions.

### externality/external cost/external benefit

Costs or benefits arising from economic activities that affect third parties not directly involved in the transaction.

### extinction

The complete disappearance of a species from Earth.

### extirpation

The local extinction of a species from a specific geographic area, while surviving elsewhere.

### extratropical cyclone

A storm system outside the tropics, driven by temperature contrasts and frontal boundaries.

### extratropical jets

High-altitude air currents driven by temperature and pressure gradients, influencing weather patterns.

### extreme climate event

An unusual or severe weather event significantly deviating from typical climatic conditions.

### extreme sea level

An extreme event where sea level rises significantly above normal, often due to storms or tides.

### extreme weather event

An unusually severe or atypical weather event, such as hurricanes, heatwaves, or tornadoes, often linked to climate change.

### extreme/heavy precipitation event

Heavy precipitation events exceeding normal levels, often leading to flooding or other impacts.

### faculae

Bright patches on the Sun’s surface indicating intense magnetic activity.

### fairness

The quality of being just, equitable, or impartial in distribution or treatment.

### feasibility

The practicality or achievability of a proposed project, plan, or policy.

### final energy

Energy in its final usable form after conversion and distribution to end-users.

### fine-mode aerosol optical depth

The amount of fine particles in the atmosphere affecting light transmission and climate.

### fingerprint

A unique pattern or characteristic indicative of a specific cause or origin, often used in climate science to identify climate change signals.

### fire weather

Meteorological conditions conducive to wildfires due to dryness, heat, and wind.

### firn

Compacted snow on glaciers that has not yet turned into ice.

### fitness-for-purpose

The suitability of a product, service, or system to meet specific needs or purposes.

### flaring

The burning of gas at oil production sites, releasing greenhouse gases and pollutants.

### flexibility

The ability to adapt or modify policies and actions in response to changing circumstances or needs.

### flexible governance

Adaptive and responsive governance structures capable of addressing complex and dynamic challenges.

### flood

Overflow of water onto normally dry land, causing damage.

### flux

The rate of transfer of a fluid, such as water or air, through a surface or boundary.

### food loss and waste

Losses of food at various stages from production to consumption.

### food security

The condition where all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food.

### food system

The interconnected network of food production, distribution, and consumption within a region or globally.

### food-borne diseases

Diseases caused by contaminated food, leading to illness.

### foraminifera

Marine organisms with protective shells, crucial for paleoclimate research.

### forcing

External influences causing changes in Earth’s energy balance and climate.

### forest

A complex ecosystem dominated by trees and other vegetation, influencing climate and biodiversity.

### forest degradation

The deterioration of forest ecosystems due to human activities or natural processes.

### forest line

The altitude above which trees cannot grow due to climatic conditions.

### fossil fuel emissions

Emissions of carbon dioxide and other greenhouse gases from burning fossil fuels.

### fossil fuels

Non-renewable energy sources like coal, oil, and natural gas formed over millions of years from organic matter.

### free atmosphere

The part of the atmosphere above the planetary boundary layer where weather phenomena occur.

### frozen ground

Ground that remains below freezing for more than two consecutive years, influencing ecosystems and infrastructure.

### fuel poverty

The inability to afford adequate energy services in a household or community.

### fugitive emissions

Emissions of greenhouse gases not intentionally produced, such as leaks from pipelines or storage tanks.

### gender equity

Fair distribution of resources, opportunities, and outcomes between genders.

### general circulation

Large-scale atmospheric circulation patterns influencing global climate.

### general circulation model

Computer models simulating Earth’s climate system to study past, present, and future climate conditions.

### geocentric sea level change

The change in sea level relative to the center of the Earth due to gravitational and rotational effects.

### geoid

The shape of Earth’s gravitational field, representing sea level as an equipotential surface.

### geostrophic winds or currents

Winds or currents parallel to Earth’s isobars or sea surface contours, driven by the pressure gradient and Coriolis force.

### geothermal energy

Renewable energy derived from the Earth’s internal heat.

### gini coefficient

A measure of income distribution within a population, indicating inequality.

### glacial isostatic adjustment

The ongoing vertical land movements due to changes in ice and water loads following glacial retreat.

### glacial lake outburst flood /glacier lake outburst

Sudden floods caused by the breach or drainage of glacial lakes, often due to glacier melting.

### glacial or glaciation

The process or condition related to glaciers or the growth and spread of glaciers.

### glacial-interglacial cycles

Periodic shifts between colder glacial and warmer interglacial periods over geological time scales.

### glaciated

Covered, affected, or formed by glaciers.

### glacier

A large mass of ice moving slowly down a slope or valley, influenced by climate.

### glacierized

Covered by glaciers.

### global carbon budget

The balance between sources and sinks of carbon dioxide in Earth’s atmosphere and oceans.

### global change

The overall transformation and changes in Earth’s systems due to human activities and natural processes.

### global dimming

The reduction in solar radiation reaching Earth’s surface due to aerosols and particulates in the atmosphere.

### global energy budget

The balance between incoming solar radiation and outgoing thermal radiation from Earth’s surface and atmosphere.

### global energy inventory

A comprehensive inventory of global energy production, consumption, and sources.

### global environment facility

An international financial mechanism supporting projects addressing global environmental issues.

### global mean sea level change

The average sea level change across the world’s oceans.

### global mean surface air temperature

The average temperature of Earth’s surface air over a specified period.

### global mean surface temperature

The average temperature of Earth’s surface, including oceans and land areas.

### global monsoon

A seasonal wind and rainfall pattern affecting regions across the globe.

### global warming

The increase in Earth’s average surface temperature due to human activities, primarily greenhouse gas emissions.

### global warming potential

A measure of the relative global warming potential of a greenhouse gas compared to carbon dioxide.

### governance

The structures, processes, and norms by which authority and decision-making are exercised.

### governance capacity

The capability of institutions and organizations to effectively manage and respond to challenges.

### gravitational

Relating to or caused by gravitational force or effects.

### gravity recovery and climate experiment

A satellite mission measuring changes in Earth’s gravitational field and their implications for climate.

### grazing land

Land used primarily for grazing livestock, supporting pastoral livelihoods.

### green climate fund

A financial mechanism supporting climate change mitigation and adaptation efforts in developing countries.

### green infrastructure

Natural and engineered features promoting environmental sustainability, such as green roofs and wetlands.

### greenhouse effect

The warming of Earth’s surface due to greenhouse gases trapping heat in the atmosphere.

### greenhouse gas emission metric

### greenhouse gas neutrality

### greenhouse gases

Gases like carbon dioxide and methane that trap heat in Earth’s atmosphere, contributing to the greenhouse effect.

### greenland ice sheet

The massive ice sheet covering most of Greenland, influencing sea level rise and climate.

### grey infrastructure

Infrastructure primarily composed of concrete, steel, and other materials, contrasting with natural or green infrastructure.

### gross domestic product

The total value of goods and services produced within a country in a specific period.

### gross primary production

The total amount of carbon dioxide fixed by photosynthesis in plants.

### grounding line

The line where a glacier loses contact with the underlying bedrock, affecting ice flow and sea level rise.

### ground-level ozone

Ground-level ozone formed by chemical reactions between pollutants in sunlight.

### groundwater recharge

The process of replenishing groundwater reserves through natural percolation or artificial means.

### gyre

Large systems of rotating ocean currents driven by winds and Earth’s rotation, influencing climate and ecosystems.

### habitability

The suitability of an environment for human habitation, influenced by factors like climate, resources, and infrastructure.

### hadley circulation

Global air circulation cells near the equator, driving weather patterns and climate.

### halocarbons

Synthetic chemicals containing carbon, chlorine, or bromine, contributing to ozone depletion and climate change.

### halocline

A steep change in salinity with depth in oceans or lakes.

### halosteric

Changes in sea level due to changes in ocean salinity, affecting ocean density and volume.

### halosteric sea level change

Changes in sea level due to changes in ocean salinity.

### hazard

A natural or human-induced event that poses a threat to human life, property, or the environment.

### health

The overall well-being, physical and mental, of individuals and communities.

### heat index

A measure combining temperature and humidity to quantify discomfort from heat.

### heat stress

Physiological strain from prolonged exposure to high temperatures, often exacerbated by humidity.

### heatwave

A prolonged period of unusually high temperatures relative to the expected climate norms.

### heavy precipitation event

Intense precipitation events exceeding normal levels, leading to flooding or other impacts.

### hedonic

A method in economics determining the value of goods and services based on market demand and preferences.

### heinrich event

Abrupt cooling events during the last glacial period, caused by massive iceberg discharges into the North Atlantic.

### heterotrophic respiration

Carbon dioxide release into the atmosphere from microbial decomposition of organic matter.

### hindcast or retrospective forecast

The practice of using models to simulate past weather events for validation and understanding.

### holocene

The current geological epoch characterized by stable climate conditions conducive to human civilization.

### household carbon footprint

The total amount of greenhouse gas emissions directly and indirectly associated with a household’s activities.

### human behaviour

Actions, decisions, and behaviors of individuals or groups, influencing climate change mitigation and adaptation.

### human influence on the climate system

Human activities contributing to changes in Earth’s climate, particularly through greenhouse gas emissions.

### human mobility

The movement of people across or within geographical regions, influenced by environmental, social, and economic factors.

### human rights

Fundamental rights ensuring the dignity, security, and freedom of individuals and communities.

### human security

### human system

The interconnected human activities and systems influencing and affected by environmental changes.

### hydroclimate

The study of water in the atmosphere and its cycling between Earth’s surface and the atmosphere.

### hydrofluorocarbons

Synthetic chemicals used as substitutes for ozone-depleting substances, also contributing to global warming.

### hydrological cycle

The continuous movement of water on, above, and below the surface of the Earth, including evaporation, precipitation, and runoff.

### hydrological drought

A prolonged period of reduced water availability due to insufficient precipitation or water storage.

### hydrological sensitivity

Sensitivity of a region or system to changes in the hydrological cycle, affecting water resources.

### hydropower

Electricity generation from flowing water, such as rivers or dams.

### hydrosphere

The combined mass of Earth’s water in oceans, lakes, rivers, and glaciers.

### hyperthermal events

Periods of rapid global warming events in Earth’s history.

### hypoxic

Low oxygen levels in water bodies, affecting aquatic life and ecosystems.

### hypoxic events

Events where oxygen levels in water bodies drop below normal, affecting marine life.

### hypsometry

The study of the distribution and variations in elevation across Earth’s surface.

### ice age

Periods of long-term cooling or warming of Earth’s climate, marked by glaciations or interglacial periods.

### ice core

Cylindrical samples of ice drilled from glaciers or ice sheets, used to study past climate conditions.

### ice sheet

Massive ice masses covering land and formed by accumulated snow over millennia.

### ice shelf

A floating platform of ice attached to a coastline or ice sheet.

### ice stream

Fast-moving rivers of ice within ice sheets, flowing towards the coast.

### ice–albedo feedback

The feedback loop where melting ice reduces Earth’s albedo, enhancing further warming.

### iceberg

Large floating chunks of ice calved from glaciers or ice shelves into the ocean.

### impact assessment

A measure of the acidity or alkalinity of a substance.

### impacts

The effects and consequences of climate change on ecosystems, societies, economies, and the environment.

### income

The total earnings or money received by individuals or households from various sources.

### incremental adaptation

Incremental adjustments and improvements to adapt to climate change impacts.

### indian ocean basin mode

Oceanic climate patterns influencing rainfall and temperature in the Indian Ocean region.

### indian ocean dipole

An irregular climate oscillation affecting sea surface temperatures in the Pacific Ocean.

### indigenous knowledge

Traditional knowledge and practices developed by indigenous peoples over generations.

### indigenous peoples

Indigenous communities with ancestral ties to specific lands and traditional knowledge.

### indirect emissions

Greenhouse gas emissions resulting from indirect activities, such as supply chains or infrastructure development.

### indirect land-use change

Changes in land use leading to greenhouse gas emissions, such as deforestation for agriculture.

### industrial revolution

The transition marked by industrial advancements, urbanization, and socio-economic changes.

### inequality

Disparities and uneven distributions of resources, opportunities, and outcomes among individuals or groups.

### informal settlement

Informal settlements lacking legal recognition or basic services like water and sanitation.

### infrastructure

Physical and organizational structures supporting societal functions and services.

### insolation

Solar radiation energy reaching Earth’s surface.

### instantaneous radiative forcing due to aerosol–cloud interactions

Changes in Earth’s radiation balance due to interactions between aerosols, clouds, and radiation.

### instantaneous radiative forcing due to aerosol–radiation interactions

Changes in Earth’s radiation balance due to interactions between aerosols and radiation.

### institutional capacity

The ability of organizations or institutions to effectively implement policies and programs.

### institutions

Organizations, laws, and systems governing and regulating societal behaviors and activities.

### insurance/reinsurance

Financial protection against risks associated with climate-related disasters or events.

### integrated assessment

An approach integrating multiple disciplines to assess complex societal and environmental challenges.

### integrated assessment model

Models combining physical, economic, and social factors to assess climate change impacts and policies.

### integrated assessment scenario%C2%A0ensemble

A collection of scenarios or projections describing future climate and socio-economic conditions.

### inter-decadal pacific oscillation

A multi-decadal climate oscillation affecting sea surface temperatures across the Pacific Ocean.

### interglacial or interglaciation

Periods between glacial periods characterized by warmer temperatures and less ice cover.

### internal climate variability

Natural variability in Earth’s climate system, unrelated to external forcing factors.

### internal variability

Variability within Earth’s climate system, independent of external factors or influences.

### internet of things

Interconnected devices transmitting data over the internet for monitoring and control purposes.

### interpolation uncertainty

Uncertainty related to estimating values between known data points.

### interstadial or interstade

Periods of warmer climate conditions within glacial periods.

### inter-tropical convergence zone

The region near the equator where trade winds converge, influencing weather patterns and precipitation.

### invasive species

Non-native species that adversely affect local ecosystems, biodiversity, or human activities.

### irreversibility

Conditions or changes that cannot be reversed within a foreseeable timeframe.

### isostatic or isostasy

Equilibrium in Earth’s crust where buoyancy forces stabilize vertical movements.

### isotopes

Atoms with the same number of protons but different numbers of neutrons, used in climate and geological studies.

### just transitions

Fair and equitable transitions to sustainable economies and societies, minimizing social and economic disruptions.

### justice

Fairness and impartiality in the distribution of benefits, burdens, and risks among individuals and groups.

### kaya identity

A formula used to analyze factors influencing greenhouse gas emissions, combining population, GDP per capita, energy intensity, and carbon intensity.

### key climate indicators

Key indicators used to monitor and assess climate change impacts, trends, and risks.

### key risk

Risks critical to understanding and managing climate change impacts on ecosystems, societies, and economies.

### kriging

A geostatistical method for interpolating spatial data points based on nearby values.

### land

Solid ground or soil, including terrestrial ecosystems and landscapes.

### land cover

The physical and biological cover over Earth’s surface, including vegetation and artificial structures.

### land degradation

Deterioration of land quality and productivity, often due to human activities like agriculture and deforestation.

### land degradation neutrality

The state whereby land degradation is halted and reversed, achieving sustainable land use practices.

### land management

The management and use of land resources to achieve sustainable development and conservation goals.

### land management change

Changes in land use practices, such as deforestation or afforestation, affecting land cover and ecosystems.

### land potential

The productive potential of land for agriculture, forestry, and other uses.

### land rehabilitation

The process of restoring degraded land to improve its ecological functionality and productivity.

### land restoration

Actions to restore ecosystems and habitats on degraded or deforested land.

### land surface air temperature

The temperature of Earth’s surface air, measured near the ground.

### land use

The human activities and practices involving the management, utilization, and modification of land resources.

### land water storage

Changes in the amount of water stored in land surfaces, influencing hydrological cycles and climate.

### land-cover change

Changes in land cover type over time, often due to human activities like deforestation or urbanization.

### land-use change

Changes in land use from natural or semi-natural ecosystems to agriculture, urban areas, or other land cover types.

### lapse rate

The rate at which atmospheric temperature decreases with altitude under specific atmospheric conditions.

### large-scale

Involving or relating to a large scale, encompassing broad areas or regions.

### last millennium

The period from 1000 to 2000 CE, covering the last thousand years.

### latent heat flux

The transfer of heat energy during changes of state, such as evaporation or condensation.

### leakage

The unintended increase in greenhouse gas emissions or environmental impact in one location due to reduction measures elsewhere.

### leapfrogging

Skipping technological stages to adopt more advanced methods or technologies.

### least developed countries

Countries facing severe structural economic challenges and low human development indices.

### lifecycle assessment

Assessment of the environmental impacts of a product or service throughout its lifecycle.

### lifetime

The period for which a substance remains in the atmosphere or environment before breaking down.

### light-absorbing particles

Particles absorbing sunlight in the atmosphere, contributing to warming.

### likelihood

The probability of occurrence or likelihood of a particular event or outcome.

### lithosphere

Earth’s rigid outer shell consisting of the crust and upper mantle.

### livelihood

The means of earning a living, including income generation and subsistence activities.

### local extinction

The extinction of a species from a particular geographic area, but not globally.

### local knowledge

Knowledge and practices developed by communities based on their local environment and traditions.

### local sea level change

Changes in local sea levels influenced by factors like land subsidence and ocean dynamics.

### lock-in

The situation where technological or societal choices become entrenched, making change difficult.

### long-lived climate forcers

Gases with long atmospheric lifetimes contributing to global warming, like methane and nitrous oxide.

### long-lived greenhouse gases

Gases like carbon dioxide and methane that remain in the atmosphere for extended periods, contributing to global warming.

### loss and damage

The irreversible loss and harm caused by climate change impacts, requiring international response.

### low elevation coastal zones

Low-lying coastal areas vulnerable to sea level rise and associated hazards.

### low-likelihood

Events or scenarios with a low probability of occurrence or happening.

### madden–julian oscillation

A tropical climate oscillation affecting weather patterns and precipitation in the Indian and Pacific Oceans.

### maladaptive actions

Actions exacerbating vulnerability to climate change impacts.

### malnutrition

Health conditions caused or exacerbated by inadequate nutrition or food quality.

### managed forest

Forests managed to optimize wood production while maintaining ecosystem functions.

### managed grassland

Grasslands managed to optimize livestock production while conserving biodiversity.

### managed land

Land managed for specific purposes, such as agriculture, forestry, or conservation.

### marine cloud brightening

A geoengineering concept aiming to increase cloud reflectivity to cool the planet.

### marine heatwave

An extended period of unusually warm ocean temperatures, affecting marine ecosystems.

### marine ice cliff instability

The potential collapse of ice cliffs along marine-based ice sheets, accelerating ice loss.

### marine ice sheet instability

The potential instability and rapid disintegration of marine-based ice sheets due to warming.

### marine isotope stage

Geological periods characterized by similar oxygen isotope ratios in deep-sea cores, indicating past climate conditions.

### marine-based ice sheet

Portions of ice sheets resting on the sea floor, influencing sea level rise when melting.

### market failure

Market inefficiencies resulting in misallocation of resources and failure to address environmental costs.

### mass balance/budget

The balance or equilibrium between inputs and outputs of mass, energy, or substances in a system.

### material substitution

Substituting one material for another to reduce environmental impact.

### mean sea level

multilateral environmental agreement

### measurement

The process or action of measuring or determining quantities or properties.

### megacity

A city with a population exceeding 10 million inhabitants.

### megadrought

A prolonged period of severe drought affecting large regions or continents.

### meltwater pulse 1a

A rapid rise in global sea levels around 14,000 years ago due to melting ice sheets.

### mental health

The psychological and emotional well-being of individuals and communities.

### meridional overturning circulation

The overturning circulation of water masses in the world’s oceans, affecting climate and ecosystems.

### meteorological drought

A prolonged period of dry weather caused by a lack of precipitation.

### methane

A potent greenhouse gas emitted from natural and human sources, influencing climate change.

### metric

A standard unit or measure used to evaluate performance, impact, or effectiveness.

### microclimate

The climate conditions of a small-scale or localized area, differing from the surrounding region.

### microwave sounding unit

Instruments measuring microwave radiation emitted by Earth’s atmosphere, used in weather and climate monitoring.

### migrant

A person moving from one region or country to another for various reasons, including environmental or economic factors.

### migration

The movement of people from one place to another, often driven by environmental or socio-economic factors.

### mineralization/remineralization

The conversion of organic matter into minerals by microbial action, contributing to nutrient cycles.

### mitigation

Actions to reduce greenhouse gas emissions or enhance sinks to mitigate climate change impacts.

### mitigation measures

Measures and actions aimed at reducing greenhouse gas emissions or enhancing sinks to mitigate climate change.

### mitigation option

Options and strategies for reducing greenhouse gas emissions or enhancing sinks to achieve climate goals.

### mitigation pathways

Different pathways or scenarios outlining actions and measures to achieve greenhouse gas emissions reductions.

### mitigation potential

The potential for reducing greenhouse gas emissions through various measures and technologies.

### mitigation scenario

Scenarios outlining potential pathways and outcomes based on different levels of mitigation action.

### model initialization

The process of setting initial conditions in climate models to simulate past or current climate conditions.

### model spread

The range or variability among model simulations or predictions for the same scenario.

### models

Computer models simulating Earth’s climate system to study and predict climate patterns and changes.

### modes of climate variability

Patterns or cycles of natural climate variations affecting weather and climate globally or regionally.

### mole fraction or mixing ratio

The ratio of the number of molecules of one substance to another in a mixture, often used for gases in the atmosphere.

### monitoring and evaluation

The continuous assessment and evaluation of climate-related actions and policies to gauge effectiveness and impact.

### montreal protocol

An international agreement aimed at phasing out ozone-depleting substances.

### mountains

Elevated areas of land characterized by high relief and distinct ecological zones.

### multi-level governance

A governance approach involving multiple levels of government, institutions, and stakeholders.

### narrative

A storyline or narrative used to convey complex scientific or policy information.

### native species

Species naturally occurring and evolving in specific ecosystems or regions.

### natural systems

Natural environments and ecosystems comprising living organisms and their interactions.

### natural variability

Variability in Earth’s climate system caused by internal processes and natural phenomena.

### nature-based solutions

Ecosystem-based approaches using natural features and processes to address societal challenges.

### nature’s contributions to people

The contributions of ecosystems to human well-being, including food, water, and cultural services.

### near-surface permafrost

Permanently frozen soil near Earth’s surface, crucial for ecosystem stability in polar regions.

### negative greenhouse gas emissions

The removal of greenhouse gases from the atmosphere, reducing their concentration.

### net negative greenhouse gas emissions

Achieving a balance between greenhouse gas emissions and removals, resulting in no net addition to the atmosphere.

### net primary production

The total amount of carbon dioxide absorbed by plants and other photosynthetic organisms, influencing the carbon cycle.

### net zero co2 emissions

Achieving a balance between carbon dioxide emissions and removals, resulting in no net addition to the atmosphere.

### net zero greenhouse gas emissions

A sustainable urban development framework focusing on inclusive, resilient, and sustainable urban growth.

### new urban agenda

Deposition of reactive nitrogen compounds into ecosystems, influencing nutrient cycles and biodiversity.

### nitrogen deposition

A potent greenhouse gas emitted from agricultural and industrial activities, influencing climate change.

### nitrous oxide

Gases other than carbon dioxide that contribute to radiative forcing and climate change.

### non-climatic driver

Diseases not directly transmitted by pathogens, often associated with lifestyle and environmental factors.

### non-co2 emissions and radiative forcing

Factors unrelated to climate causing environmental or societal changes.

### non-communicable diseases

Non-linear relationships or behaviors in climate systems, where small changes lead to disproportionately larger effects.

### non-linearity

Volatile organic compounds contributing to atmospheric chemistry and climate change.

### non-methane volatile organic compounds

Climate pathways avoiding overshooting global warming targets, ensuring long-term sustainability.

### non-overshoot pathways

A seasonal weather pattern affecting North America, characterized by increased rainfall and humidity.

### north american monsoon

Atmospheric circulation pattern affecting weather patterns in the North Atlantic region.

### north atlantic oscillation

A climate oscillation influencing weather and atmospheric circulation in the Northern Hemisphere.

### northern annular mode

### ocean acidification

The largest bodies of saline water on Earth’s surface, covering approximately 71% of its surface.

### ocean alkalinization/ocean alkalinity enhancement

Increasing ocean alkalinity to enhance carbon dioxide absorption and mitigate climate change impacts.

### ocean carbon cycle

The cycling of carbon through oceanic processes, including uptake, transport, and storage.

### ocean deoxygenation

Decreasing oxygen levels in the ocean, affecting marine life and ecosystems.

### ocean dynamic sea level change

Changes in sea level due to ocean dynamics, such as currents and temperature changes.

### ocean fertilisation

Adding nutrients to ocean waters to stimulate phytoplankton growth and enhance carbon dioxide absorption.

### ocean heat uptake efficiency

The efficiency with which the ocean absorbs and stores heat from the atmosphere.

### ocean stratification

Layering of ocean waters based on temperature and salinity, affecting marine ecosystems and circulation.

### offset

Compensation for greenhouse gas emissions through reductions elsewhere or carbon removal.

### orbital forcing

Changes in Earth’s orbit affecting climate, influencing long-term climate patterns.

### organic aerosol

Aerosols composed of organic compounds, influencing atmospheric processes and climate.

### organic farming

Agricultural practices avoiding synthetic chemicals and promoting natural methods.

### outbreak

Sudden increase in disease occurrence in a population, region, or ecosystem.

### outgoing longwave radiation

Longwave radiation emitted from Earth’s surface into the atmosphere.

### outlet glacier

Glaciers flowing from ice sheets or ice caps into the ocean, affecting sea level rise.

### overshoot pathways

Climate pathways temporarily exceeding global warming targets before returning to safer levels.

### oxygen minimum zone

Areas of the ocean with very low oxygen levels, impacting marine ecosystems.

### ozone

A gas molecule consisting of three oxygen atoms, crucial in the upper atmosphere for absorbing ultraviolet radiation.

### ozone layer

The protective layer of ozone gas in the stratosphere, absorbing most of the sun’s harmful ultraviolet radiation.

### ozone-depleting substances

Substances that deplete the ozone layer, such as chlorofluorocarbons and halons.

### ozonesonde

Balloons carrying instruments to measure ozone concentration and atmospheric parameters.

### pacific decadal oscillation

### pacific decadal variability

Long-term climate variability in the Pacific Ocean influencing weather patterns.

### pacific-north american pattern

Variability in sea surface temperatures and atmospheric circulation affecting climate in the Pacific-North American region.

### palaeocene–eocene thermal maximum

A rapid warming event 55 million years ago, impacting global climate and ecosystems.

### paleoclimate

The study of Earth’s climate history using geological and biological evidence.

### pandemic

An epidemic of infectious disease affecting a large population across multiple countries or continents.

### pareto optimum

An optimal allocation of resources where no one can be made better off without making someone else worse off.

### participatory governance

A governance approach involving the participation of stakeholders in decision-making processes.

### particulate matter

Small particles suspended in the atmosphere, influencing air quality and climate.

### pasture

Land used for grazing livestock, influencing carbon storage and biodiversity.

### path dependence

The idea that historical events or decisions constrain future options and choices.

### pathways

Different routes or sequences of events leading to different outcomes or goals.

### pattern scaling

Scaling climate model projections based on observed patterns or relationships.

### peat

Organic material formed in waterlogged environments, storing carbon and influencing climate.

### peatlands

Wetland ecosystems consisting of partially decayed plant material, crucial for carbon storage.

### pelagic

Relating to the open sea rather than coastal waters or the seafloor.

### pelagos

Open ocean regions beyond coastal and continental shelves.

### percentile

A statistical measure indicating the percentage of data points below a given value.

### peri-urban areas

Areas adjacent to urban centers with mixed urban and rural characteristics.

### permafrost

Perennially frozen ground in polar regions, sensitive to climate change.

### permafrost degradation

### permafrost thaw

The thawing or melting of permafrost due to rising temperatures.

### perturbed parameter ensemble

Ensemble simulations varying model parameters to assess climate model sensitivity.

### phenology

The study of cyclic and seasonal natural phenomena in plants and animals.

### photosynthesis

The process by which plants use sunlight to convert carbon dioxide and water into sugars.

### physical climate storyline

A narrative describing the physical processes and interactions influencing climate.

### planetary health

The health of human civilization linked to the state of natural systems and the environment.

### plankton

Microscopic organisms floating in the ocean, forming the basis of marine food webs.

### planned relocation

Planned relocation of communities or populations due to environmental or climate-related risks.

### plant evaporative stress

Water stress in plants due to inadequate moisture availability, affecting growth and yield.

### plasticity

The ability of organisms or systems to adapt to changing environmental conditions.

### pleistocene

The geological epoch from 2.6 million to 11,700 years ago, characterized by repeated glaciations.

### pliocene

The geological epoch from 5.3 to 2.6 million years ago, preceding the Pleistocene.

### polar amplification

The amplification of temperature changes in polar regions compared to global average warming.

### policies

Courses of action or strategies adopted by governments or organizations to achieve specific goals.

### political economy

The interaction of politics and economics influencing policy decisions and resource allocation.

### pollen analysis

The study of pollen grains in sediment cores to reconstruct past climates and ecosystems.

### polycentric governance

A governance approach involving multiple centers of authority at different levels.

### pool

A reservoir or storage of a substance in a system, such as carbon in forests or oceans.

### potential evapotranspiration

The potential evaporation rate from land and water surfaces under optimal conditions.

### poverty

The state of being poor, lacking basic necessities and resources for a decent standard of living.

### poverty eradication

Efforts and actions aimed at eradicating poverty and improving living conditions globally.

### poverty trap

A situation where individuals or communities remain trapped in poverty due to structural barriers.

### precipitable water

The amount of water vapor in the atmosphere, influencing cloud formation and precipitation.

### precipitation deficit

A deficit in precipitation compared to the expected amount for a given period and region.

### precursors

Chemical compounds that react to form pollutants or other substances.

### predictability

The extent to which a system or process can be predicted accurately.

### prediction quality/skill

The quality or accuracy of predictions made by climate models or forecasting techniques.

### pre-industrial

Relating to the period before industrialization and significant human influence on climate.

### primary energy

Energy from sources before conversion or transformation, such as coal or solar radiation.

### primary production

The production of organic matter through photosynthesis by plants and other organisms.

### private costs

Costs borne directly by individuals or entities, excluding externalities or societal impacts.

### probability density function

A function describing the likelihood of a continuous random variable taking a given value.

### procedural justice

Fairness in the processes and procedures governing the distribution of benefits and burdens.

### process-based model

A model describing physical processes and interactions in a system, such as climate or ecology.

### production-based emissions

Emissions associated with the production of goods and services.

### projection

A projection or estimate of future climate conditions based on scientific data and models.

### prosumers

Consumers who both consume and produce goods or services, such as energy or food.

### proxy

A substitute used to estimate values for unavailable data points based on nearby values or known relationships.

### quasi-biennial oscillation

A cycle of winds in the equatorial stratosphere affecting atmospheric circulation and climate.

### quaternary

The geological period spanning the past 2.6 million years, characterized by repeated glaciations.

### radiative forcing

The change in energy balance of the Earth-atmosphere system causing climate change.

### rapid dynamical change

Abrupt and significant changes in Earth’s systems, such as ice sheets or ocean currents.

### reanalysis

A method combining historical data with models to create consistent datasets for climate analysis.

### reasons for concern

A framework outlining qualitative reasons for concern regarding climate change impacts.

### rebound effect

The unintended increase in resource consumption following efficiency improvements.

### reconstruction

The process of reconstructing past climate conditions using proxy data and models.

### reducing emissions from deforestation and forest degradation

Efforts to decrease greenhouse gas emissions from deforestation and forest degradation.

### reference period

A specified time period used as a baseline for comparison in climate assessments.

### reference scenario

A future scenario used to explore potential outcomes and responses to climate change.

### reforestation

Planting trees in areas where forests have been depleted to mitigate climate change.

### refugium

Areas where species survive during adverse conditions, preserving biodiversity.

### regenerative agriculture

Agricultural practices enhancing ecosystem health and soil fertility while sequestering carbon.

### region

A specific geographic area characterized by distinct climate conditions.

### regional climate messages

Regional climate change impacts and projections tailored for specific geographic areas.

### regional climate model

Climate models focusing on specific regions to provide detailed local climate projections.

### regional sea level change

Changes in sea level varying regionally due to factors like ocean currents and land movement.

### regulation

Rules and standards governing behavior or practices to achieve specific outcomes.

### relative humidity

The ratio of water vapor present in the air to the maximum possible at a given temperature.

### relative sea level change

Changes in sea level relative to the land surface due to factors like land subsidence or uplift.

### remaining carbon budget

The remaining allowable emissions to stay within a specified global warming limit.

### renewable energy

Energy derived from naturally replenished sources, such as sunlight or wind.

### reporting

The process of compiling and presenting data or information for specific purposes.

### representative concentration pathways

Scenarios representing future greenhouse gas concentrations and their effects on climate.

### representative key risks

Key risks identified as critical for planning and decision-making under climate change.

### reservoir

A natural or artificial storage location for substances, such as carbon in forests or oceans.

### residual risk

Risks that remain after risk reduction measures have been implemented.

### resilience

The capacity of a system to absorb disturbances while retaining its basic function and structure.

### resolution

The level of detail or granularity in data or model outputs.

### resource cascade

The sequential use of resources through recycling and reuse to minimize waste.

### respiration

The process by which organisms convert organic matter into energy, releasing carbon dioxide.

### response time or adjustment time

The time it takes for a system to adjust to a new equilibrium after a disturbance.

### restoration

Activities restoring ecosystems to a more natural or healthy state.

### return period

The average time between events of a particular magnitude occurring.

### return value

The expected value of an extreme event, such as the 100-year flood level.

### risk assessment

The process of evaluating potential hazards and determining their likelihood and impacts.

### risk framework

A framework outlining how risks are identified, assessed, and managed.

### risk management

### risk perception

Individual perceptions and judgments of risks influenced by personal experiences and beliefs.

### risk trade-off

Balancing risks against benefits when making decisions or taking actions.

### risk transfer

The transfer of risk from one party to another through mechanisms like insurance.

### river discharge

The volume of water flowing through a river channel over a specific period.

### rock glacier

A type of glacier containing significant amounts of rock debris, affecting movement and dynamics.

### runoff

The runoff of water from land surfaces into streams, rivers, and lakes.

### salt-water intrusion/encroachment

The intrusion of seawater into freshwater aquifers due to factors like sea level rise.

### sampling uncertainty

Uncertainty associated with the representativeness of sampled data.

### scenario storyline

A plausible and internally consistent description of a potential future state or development.

### sea ice area

The total area covered by sea ice within a given region.

### sea ice concentration

The proportion of a given area covered by sea ice, influencing climate and ecosystems.

### sea ice extent

The spatial extent of sea ice coverage in polar regions, impacting climate and ecosystems.

### sea level change

Changes in average global sea level over time due to factors like thermal expansion and ice melt.

### sea level equivalent

The equivalent amount of freshwater needed to match the weight of melted ice causing sea level rise.

### sea level rise

The rise in average global sea level over time, influenced by climate change.

### sea surface temperature

The temperature of the upper layer of the ocean’s surface, influencing climate and weather patterns.

### semi-arid zone

A region receiving low annual precipitation, prone to drought and desertification.

### semi-empirical model

A model combining empirical relationships and physical understanding to project climate change impacts.

### sendai framework for disaster risk reduction

A framework for reducing disaster risk, adopted in Sendai, Japan in 2015.

### sensible heat flux

The flux of heat transferred by convection and conduction between Earth’s surface and the atmosphere.

### sensitivity

The degree of response of a system or variable to changes in external conditions.

### sequestration

The process of capturing and storing carbon dioxide to mitigate climate change impacts.

### sequestration potential

The potential amount of carbon dioxide that can be stored in geological reservoirs.

### service provisioning

The ability of ecosystems to provide resources and services to support human well-being.

### services

Goods and benefits provided by ecosystems that contribute to human well-being.

### settlements

Human settlements including towns, cities, and villages with specific socio-economic characteristics.

### shared socio-economic pathways

A set of future socio-economic scenarios used in climate change impact assessments.

### sharing economy.

A collaborative economic model focusing on sharing resources and assets.

### shelf seas

Coastal seas extending from the shoreline to the continental shelf, rich in marine life.

### shifting development pathways

Changing pathways of socio-economic development to achieve sustainable outcomes.

### shifting development pathways to sustainability

Adaptive socio-economic pathways guiding development towards sustainability.

### short-lived climate forcers

Gases with short atmospheric lifetimes influencing climate change over shorter timeframes.

### short-lived climate pollutants

Pollutants with short atmospheric lifetimes contributing to climate change and air pollution.

### significant wave height

The average height of the highest third of waves in a given time period.

### simple climate model

A simplified climate model focusing on key processes to assess climate change impacts.

### sink

A natural or artificial storage location for absorbing greenhouse gases, such as forests or oceans.

### small island developing states

Small island nations facing unique vulnerabilities to climate change impacts.

### smart grids

Electrical grids incorporating digital technology to optimize energy distribution and consumption.

### snow cover

The extent and duration of snow covering the ground, affecting climate and hydrology.

### snow cover duration

The duration of time that snow remains on the ground during a given period.

### snow cover extent

The area covered by snow on the ground at a specific time, influencing climate and ecosystems.

### snow water equivalent

The amount of water contained within snowpack, impacting water availability and runoff.

### social cost of carbon

The economic cost imposed by carbon emissions, accounting for damages caused by climate change.

### social costs

Costs borne by society as a whole, including environmental and social impacts.

### social group

A group of individuals with shared interests, characteristics, or social relations.

### social identity

Identification with a group based on cultural, social, or economic factors.

### social inclusion

The inclusion of marginalized groups in decision-making processes and societal structures.

### social infrastructure

Infrastructure supporting social services and community well-being, such as healthcare and education.

### social justice

Fairness and equity in the distribution of benefits and burdens in society.

### social learning

The process of acquiring knowledge and understanding through interaction with others and the environment.

### social protection

Policies and programs providing financial and social support to vulnerable populations.

### social-ecological system

Interactions between social systems and ecological systems, influencing resilience and sustainability.

### societal transformations

Fundamental changes in societal structures and norms towards sustainability and resilience.

### socio-economic scenario

Scenarios depicting future socio-economic conditions and their implications for climate change.

### socio-technical transitions

Transitioning socio-technical systems towards sustainability through technological and social innovations.

### soil carbon sequestration

The process of storing carbon in soils through improved land management practices.

### soil erosion

The erosion of topsoil by wind, water, or human activities, affecting soil fertility and ecosystems.

### soil moisture

The water content of soil, influencing plant growth, climate, and hydrological processes.

### soil organic carbon

Carbon stored in soil organic matter, contributing to carbon cycling and climate regulation.

### soil organic matter

Organic matter in soil, influencing soil structure, fertility, and carbon storage.

### soil temperature

The temperature of soil layers, affecting nutrient availability, plant growth, and microbial activity.

### solar activity

The activity of the sun influencing climate patterns and solar radiation reaching Earth’s surface.

### solar cycle

The 11-year cycle of solar activity affecting solar radiation and climate variability.

### solar energy

Energy derived from sunlight using technologies like photovoltaic cells or solar thermal systems.

### solar radiation

Electromagnetic radiation emitted by the sun, influencing Earth’s climate and weather patterns.

### solar radiation modification

Intentional modification of solar radiation reaching Earth’s surface to mitigate climate change impacts.

### solubility pump

The process by which carbon dioxide dissolves in ocean surface waters and is transported to deeper layers.

### solution space

The range of possible solutions or strategies available to address a problem or challenge.

### source

The origin or cause of emissions or pollutants released into the atmosphere.

### south american monsoon

A monsoon affecting South America, characterized by seasonal wind and precipitation patterns.

### south and south east asian monsoon

Monsoonal weather patterns affecting South and Southeast Asia, influencing regional climate and agriculture.

### south pacific convergence zone

A convergence zone in the South Pacific Ocean influencing climate and weather patterns.

### southern annular mode

Variability in atmospheric circulation influencing weather and climate in the Southern Hemisphere.

### southern ocean

The ocean surrounding Antarctica, playing a crucial role in global climate and ocean circulation.

### spatial and temporal scales

The spatial and temporal dimensions over which phenomena or processes occur.

### specific humidity

The amount of water vapor in the atmosphere relative to air temperature and pressure.

### spill-over effect

The unintended spread or transfer of effects from one area to another.

### stadial or stade

A cold period during an interglacial period, affecting climate and ecosystems.

### standard

A defined standard or level used for comparison or evaluation in scientific studies.

### steric sea level change

Changes in sea level due to thermal expansion, affecting coastal ecosystems and communities.

### storm surge

An abnormal rise in sea level along coastlines due to weather events like storms or hurricanes.

### storm tracks

Storm tracks are designated pathways in the atmosphere where storms develop and move, influenced by global wind patterns and atmospheric pressure systems, impacting regional weather and climate patterns.

### storyline

Long-term paths or trajectories of development, change, or events in a narrative.

### stranded assets

Assets losing value or becoming obsolete due to climate change impacts or policy changes.

### stratification

The layering of water columns based on temperature and salinity, influencing marine ecosystems.

### stratosphere

The layer of Earth’s atmosphere above the troposphere, containing the ozone layer and influencing climate.

### stratosphere–troposphere exchange

The exchange of air and substances between the stratosphere and troposphere, affecting atmospheric composition.

### stratospheric aerosol injection

Injecting aerosols into the stratosphere to reflect sunlight and cool the Earth’s surface.

### stratospheric ozone

The protective layer of ozone in the stratosphere, absorbing most of the sun’s harmful ultraviolet

### stratospheric polar vortex

A persistent wind pattern in the stratosphere over the polar regions.

### stratospheric sounding unit

Instruments measuring atmospheric conditions in the stratosphere.

### streamflow

The flow of water in rivers and streams.

### stressors

Factors or pressures causing stress or strain on systems or individuals.

### subduction

The process of one tectonic plate moving under another.

### subnational actors

Subnational entities such as states or provinces with political power or influence.

### sudden stratospheric warming

Rapid warming events in the stratosphere disrupting polar vortex patterns.

### sufficiency

Meeting basic needs without exceeding environmental limits.

### sulphur hexafluoride

A potent greenhouse gas used in electrical transmission equipment.

### sunspots

Dark spots on the sun’s surface linked to solar activity and climate.

### supply-side measures

Measures targeting the production or supply of goods and services.

### surface energy budget

The balance between incoming and outgoing energy at Earth’s surface.

### surface mass balance

The balance between accumulation and loss of snow and ice on Earth’s surface.

### surprises

Unexpected events or outcomes impacting climate or ecosystems.

### sustainability

The capacity to endure and thrive without compromising future generations.

### sustainable development

Development that meets present needs without compromising future generations.

### sustainable development goals

Global objectives for sustainable development adopted by the United Nations.

### sustainable development pathways

Pathways guiding development towards sustainability and resilience.

### sustainable forest management

The responsible use and conservation of forests to meet current and future needs.

### sustainable intensification

Practices aiming to increase agricultural productivity without degrading resources.

### sustainable land management

Practices ensuring sustainable use and conservation of land resources.

### swash

The rush of seawater up a beach after a wave breaks.

### sympagic

Associated with or occurring in sea ice habitats.

### systems of innovation

Systems promoting the development and adoption of new technologies and practices.

### talik

A layer of unfrozen ground surrounded by permafrost.

### technical potential

The maximum achievable level of technology adoption under ideal conditions.

### technology deployment

The process of introducing and using new technologies in various sectors.

### technology diffusion

The spread and adoption of technologies across different regions or sectors.

### technology transfer

The transfer of technologies from one entity or region to another.

### teleconnection

A large-scale atmospheric interaction linking distant regions.

### teleconnection pattern

Patterns in teleconnections affecting weather and climate.

### temperature overshoot

A temporary increase in global temperatures above desired targets.

### terrestrial radiation

Radiation emitted by Earth’s surface into the atmosphere.

### thermocline

A boundary separating warm surface water from cold deep water in oceans.

### thermokarst

Thawing of ice-rich permafrost leading to land subsidence and landscape changes.

### thermosteric sea level change

Changes in sea level due to variations in water temperature.

### tide gauge

An instrument measuring sea level changes relative to a fixed point on land.

### tier

A classification or level within a system or framework.

### time of emergence

The time when a climate signal emerges from natural variability.

### tipping element

Climate elements with the potential to cause abrupt and irreversible shifts.

### tipping point

A critical threshold in a system triggering irreversible changes.

### top-of-atmosphere energy budget

The balance of incoming and outgoing energy at the top of Earth’s atmosphere.

### total alkalinity

The measure of all dissolved bases in seawater.

### total carbon budget

The total amount of carbon stored or emitted within a specified system.

### total solar irradiance

The total solar power received per unit area at the top of the Earth’s atmosphere.

### total water level

The combined level of ocean, tidal, and storm surge water height.

### trace gas

Gases present in trace amounts in the atmosphere, influencing climate.

### trade-off

A situation where one thing must be decreased to increase another.

### traditional biomass

Biomass obtained from traditional practices like wood or charcoal burning.

### transformation

Fundamental and irreversible changes in social, economic, and ecological systems.

### transformation pathways

Pathways guiding societal transformations towards sustainability.

### transformational adaptation

Fundamental changes in societal structures and norms towards sustainability and resilience.

### transformative change

The equilibrium global surface temperature increase after doubling CO2 concentration.

### transient climate response

The temperature increase caused by cumulative CO2 emissions over time.

### transient climate response to cumulative co2 emissions

A shift from one state to another, like from fossil fuels to renewable energy.

### transition

The line on mountains marking the transition from tree growth to no trees.

### tree line

Annual growth rings in tree trunks used to study past climates.

### tree rings

Uncertainty associated with estimates of trends over time.

### trend estimates uncertainty

Variability in Atlantic Ocean conditions affecting climate in tropical regions.

### tropical atlantic variability

A rotating storm system with low-pressure centers and strong winds.

### tropical cyclone

The boundary between the troposphere and stratosphere.

### tropopause

The lowest layer of Earth’s atmosphere, where weather occurs.

### troposphere

Ozone found in the troposphere, influencing air quality and climate.

### tropospheric ozone

Large ocean waves caused by seismic activity or underwater eruptions.

### tsunami

Cold, treeless plains in the Arctic and Antarctic.

### tundra

The average time a substance remains in a reservoir before being replaced.

### turnover time

Regions classified by similar characteristics, such as climate and vegetation.

### typological regions

Lack of certainty or predictability about the future state of the climate system.

### uncertainty

An international treaty combating desertification, adopted in 1994.

### united nations convention to combat desertification

An international treaty addressing climate change, adopted in 1992.

### united nations framework convention on climate change

The absorption or assimilation of a substance by another.

### uptake

Areas where cold, nutrient-rich water rises towards the ocean surface.

### upwelling region

Systems of cities interconnected by economic and social activities.

### urban

Agricultural practices within urban and surrounding areas.

### urban and peri-urban agriculture

The phenomenon where urban areas are significantly warmer than rural areas.

### urban heat island

The process of urban growth and expansion.

### urban systems

Characteristics related to cities, including population density and infrastructure.

### urbanisation

The process of urban growth and expansion.

### urbanization

Core principles and convictions shaping individual and collective behavior.

### values and beliefs

Renewable energy sources that fluctuate based on natural factors like wind and sunlight.

### variable renewable energy

Diseases transmitted by vectors such as mosquitoes or ticks.

### vector-borne disease

The exchange of air between indoors and outdoors.

### ventilation

Confirmation that actions or processes meet specified criteria or standards.

### verification

Vertical movement of land relative to sea level.

### vertical land motion

Halogenated substances with short atmospheric lifetimes.

### very short-lived halogenated substances

Organic chemicals that can easily vaporize into the atmosphere.

### volatile organic compounds

The susceptibility of a system to harm from exposure to stresses or hazards.

### vulnerability

An index assessing the susceptibility of a system to harm from hazards.

### vulnerability index

A system of atmospheric circulation influencing weather patterns.

### walker circulation

Diseases transmitted through contaminated water sources.

### water cycle

A body of water with uniform temperature and salinity.

### water mass

The availability of reliable access to sufficient quantities of clean water.

### water security

The efficiency of water use in achieving desired outcomes.

### water-borne diseases

The continuous movement of water on, above, and below the surface of the Earth.

### water-use efficiency

The increase in sea level due to wind stress and pressure differences.

### wave setup

The breakdown of rocks and minerals by chemical, physical, and biological processes.

### weathering

The state of being healthy, happy, and prosperous.

### well-being

Gases like carbon dioxide that remain in the atmosphere for a long time, causing warming.

### well-mixed greenhouse gas

A monsoon affecting West Africa, characterized by seasonal wind and precipitation patterns.

### west african monsoon

Areas of land saturated with water, like swamps and marshes.

### wetland

Energy generated from wind using turbines.

### wind energy

A period of abrupt cooling during the Pleistocene Epoch.

### younger dryas

The commitment to eliminate all greenhouse gas emissions.

### zero emissions commitment

The displacement of people from their homes or communities.

# IPCC Akronyme

### 20CR

20th Century Reanalysis

### A/R

Afforestation and Reforestation

### A1B

Special Report on Emissions Scenarios

### AABW

Antarctic bottom water

### AAI

Africa Adaptation Initiative

### AAIW

Antarctic intermediate water

### AAO

Antarctic Oscillation

### AAS

Australian Academy of Science

### AB

Assembly Bill

### ABNJ

Areas Beyond National Jurisdiction

### ABS

Australian Bureau of Statistics

### ACC

alternating current

### ACCC

Antarctic Circumpolar Current

### ACCCRN

Australian Competition and Consumer Commission

### ACCESS

Australian Community Climate and Earth System Simulator

### ACCMIP

Atmospheric Chemistry and Climate Model Intercomparison Project

### ACCTS

Agreement on Climate Change, Trade and Sustainability,

### ACE

Accumulated Cyclone Energy OR Antarctic Climate & Ecosystems Cooperative Research Centre

### ACF

areal carbon footprint

### ACRE

Agriculture and Climate Risk Enterprise

### ACT

Australian Capital Territory

### ADB

Asian Development Bank

### ADEME

Agence de l’Environnement et de la Maîtrise de l’Energie (French Environment and Energy Management Agency)

### ADW

Alternate Drying and Wetting

### AED

atmospheric evaporative demand

### AEMO

Australian Energy Market Operator

### AerChemMIP

Aerosols and Chemistry Model Intercomparison Project

### AeroCom

Aerosol Comparisons between Observations and Models project

### AERONET

Aerosol Robotic Network

### AEW

African Easterly Wave

### AF

Adaptation Fund OR Africa OR Agroecological Farming OR airborne fraction of CO2

### AFD

French Development Agency

### AfDB

African Development Bank

### AFOLU

Agriculture, Forestry and Other Land Use

### AFR

Africa

### AFSI

Australian Sustainable Finance Initiative

### AGAGE

Advanced Global Atmospheric Gases Experiment

### AGCM

atmospheric global climate model

### AGFP

absolute global forcing potential

### AgMIP

Agricultural Model Intercomparison and Improvement Project

### AGR/ECOL

agriculture and ecological droughts

### AGTP

absolute global temperature change potential

### AGWP

absolute global warming potentials

### AHP

Analytic Hierarchy Processing

### AI

Artificial Intelligence

### AIDR

Australian Institute for Disaster Resilience

### AIHW

Australian Institute of Health and Welfare

### AILAC

Association of the Latin American and Caribbean Countries

### AIRS

Atmospheric Infrared Sounder

### AIS

Antarctic Ice Sheet

### AK

Alaska

### ALBA

Alianza Bolivariana para los Pueblos de Nuestra América (Bolivarian Alliance for the Peoples of our Americas)

### ALCA

Attributional Life Cycle Assessment

### ALL

all forcings

### ALT

Active Layer Thickness

### AM

additive manufacturing

### AMIP

Atmospheric Model Intercomparison Project

### AMM

Atlantic Meridional Mode

### AMMA

African Monsoon Multidisciplinary Analyses

### AMO

Atlantic Multidecadal Oscillation

### AMOC

Atlantic Meridional Overturning Circulation

### AMSU

Advanced Microwave Sounding Unit

### AMV

Atlantic Multi-decadal Variability

### ANPP

Annual Net Primary Productivity

### AO

Arctic Oscillation

### AOD

aerosol optical depth

### AOGCM

Atmosphere-Ocean General Circulation Model

### AOSIS

Alliance of Small Island States

### AP

Antarctic Peninsula

### APEC

Asia-Pacific Economic Cooperation

### APP

Agricultural Adaptation and Perception

### APRA

Australian Prudential Regulation Authority

### AQ

air quality

### AR

atmospheric river

### AR4

Fourth Assessment Report of the Intergovernmental Panel on Climate Change

### AR5

Fifth Assessment Report of the Intergovernmental Panel on Climate Change

### AR6

Sixth Assessment Report of the Intergovernmental Panel on Climate Change

### AR7

Seventh Assessment Cycle of the Intergovernmental Panel on Climate Change

### ARA

Arab Region of Asia

### ARC

African Risk Capacity

### ARI

Acute Respiratory Infection

### ARO

Arctic Ocean

### ARP

Arabian Peninsula

### ARPA-E

Advanced Research Projects Agency-Energy

### ARS

Arabian Sea

### ART

Architecture for REDD+ Transactions

### Art.

Article (e.g., of the UNFCCC),

### ASAP

Adaptation for Smallholder Agriculture Programme

### ASBEC

Australian Sustainable Built Environment Council

### ASCM

Agreement on Subsidies and Countervailing Measures

### ASE

Amundsen Sea Embayment

### ASEAN

Association of Southeast Asian Nations

### ASFI

Australian Sustainable Finance Initiative

### ASI

Avoid-Shift-Improve

### ASK

available seat kilometres

### ASP

Adaptive Social Protection

### ATLAS

Adaptation Thought Leadership and Assessments

### AU

African Union

### AUC

Area under the Curve

### AUM

assets under management

### AUP

Auckland Unitary Plan

### AUS

Australasia

### AusMCM

Australian–Maritime Continent monsoon

### AVHRR

Advanced Very High Resolution Radiometer

### AZM

Atlantic Zonal Modes

### BAT

best available technology

### BAU

Business-as-Usual

### BC

black carbon

### BCA

border carbon adjustment

### BCE

Before the Common Era

### BCP

biological carbon pump

### BDP

The Bangladesh Delta Plan

### BE

Berkeley Earth

### BECCS

Bioenergy with Carbon Dioxide Capture and Storage

### BEES

building energy efficiency standards

### BEMS

building energy management systems

### BEV

battery electric vehicle

### BF-BOF

blast furnace-basic oxygen furnace

### BFV

Barmah Forest Virus

### BIM

Building Information Modelling

### BIPV

building-integrated photovoltaic

### BLUE

Bookkeeping of land-use emissions

### BMPs

Best Management Practices

### BOB

Bay of Bengal

### BOM

Bureau of Meteorology

### BORDA

Bremen Overseas Research & Development Association

### BP

before the present

### BR

biennial report

### BrC

brown carbon

### BRI

Belt and Road Initiative

### BRICS

Brazil, Russia, India, China and South Africa

### BRT

bus rapid transport

### BSISO

boreal summer intra-seasonal oscillation

### BTM

Bhutanese Traditional Medicine

### BTR

biennial transparency report

### BTU

British thermal units

### BUR

bottom up

### BVOC

Biogenic Volatile Organic Compounds

### C&S

Cities and Settlements

### C3S

Copernicus Climate Change Service

### C4MIP

Coupled Climate Carbon Cycle Model Intercomparison Project

### CA

Conservation Agriculture

### CAF

Central Africa

### CAGR

compound annual growth rate

### CAIT

Climate Analysis Indicators Tool

### CAM

Crassulacean Acid Metabolism

### CAMS

Copernicus Atmosphere Monitoring Service

### CanESM2

Canadian Earth System Model version 2

### CanESM5

Canadian Earth System Model version 5

### CAPE

convective available potential energy

### CAPEX

capital expenditure

### CAR

Climate Action Reserve

### CAT

Climate Action Tracker

### CAU

Central Australia

### CBA

cost-benefit analysis

### CBAM

carbon border adjustment mechanism

### CBCF

consumption-based carbon footprint (accounting)

### CBD

Convention on Biological Diversity

### CBDRRC

common but differentiated responsibilities and respective capabilities

### CBEs

consumption-based emissions

### CBO

Community-Based Organisations

### CBs

Central Banks

### CCA

Climate-Change Adaptation

### CCAC

Climate and Clean Air Coalition

### CCAFS

Climate Change, Agriculture and Food Security

### CCATWG

Climate Change Adaptation Technical Working Group

### CCC

Climate Change Committee

### CCD

climate-compatible development

### CCDMF

China Clean Development Mechanism Fund

### CCE

Climate-Change Education

### CCM

chemistry–climate model

### CCMI

Chemistry–Climate Modelling Initiative

### CCN

cloud condensation nuclei

### CCP

Cross-Chapter Paper

### CCPI

Climate Change Performance Index

### CCRA

Climate Change Response Act

### CCRIF

Caribbean Catastrophe Risk Insurance Facility

### CCS

carbon dioxide capture and storage

### CCT

cirrus cloud thinning

### CCU

Carbon Dioxide Capture and Utilisation

### CCUS

carbon capture, use and storage,

### CCX

Chicago Climate Exchange

### CD

cooling degree days

### CDC

Community Development Committees

### CDD

cooling degree-days

### CDEM

Civil Defence & Emergency Management

### CDIAC

Carbon Dioxide Information Analysis Center

### CDKN

Climate & Development Knowledge Network

### CDM

Clean Development Mechanism

### CDMC

Community Disaster Management Committees

### CDR

carbon dioxide removal

### CDRMIP

Carbon Dioxide Removal Model Intercomparison Project

### CDW

Circumpolar Deep Water

### CE

Common Era

### CEA

cost-effectiveness analysis

### CEDS

Community Emissions Data System

### CEIC

Census and Economic Information Center

### CER

Certified Emissions Reduction

### CERES

Clouds and the Earth’s Radiant Energy System

### CES

Cultural Ecosystem Services

### CESM

Community Earth System Model

### CETA

EU-Canada Comprehensive Economic and Trade Agreement

### CFC

Chlorofluorocarbon

### CFCs

chlorofluorocarbons

### CfD

contract for difference

### CFL

compact fluorescent lamp [/lighting]

### CFM

Community Forest Management

### CFMIP

Cloud Feedback Model Intercomparison Project

### CFP

Ciguatera Fish Poisoning

### CFPP

Coal-Fired Power Plant

### CFSR

Climate Forecast System Reanalysis

### CGE

Computable General Equilibrium

### CGIAR

Consultative Group on International Agricultural Research

### CGRA

Coordinated Global and Regional Assessments

### CGTP

combined global temperature change potential

### CH

Switzerland

### CH4

methane

### CH4

methane

### CHP

combined heat and power

### CICERO

Center for International Climate and Environment Research

### CID

climatic impact-driver

### CII

Carbon Intensity Indicator

### CIS

Climate Information Services

### CISM2

Community Ice Sheet Model 2

### CLASP

Collaborative Labelling and Appliance Standards Program

### CLC

constant land cover

### CLCA

Consequential Life Cycle Assessment

### CLIMI

Climate Laws, Institutions and Measures Index,

### CLLJ

Caribbean low-level jet

### CLP

Community Learning Platform

### CLRTAP

Convention on Long-Range Transboundary Air Pollution

### CLSAT

China Land Surface Air Temperature

### CLT

cross-laminated timber

### CMA

Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

### CMAP

NOAA Climate Prediction Center Merged Analysis of Precipitation

### CMIP

Coupled Model Intercomparison Project

### CMIP3

Coupled Model Intercomparison Project Phase 3

### CMIP5

Coupled Model Intercomparison Project Phase 5

### CMIP6

Coupled Model Intercomparison Project Phase 6

### CMR

Crude Mortality Rate

### CMSI

Climate Measurement Standards Initiative

### CNA

Central North America

### CNG

compressed natural gas

### CNRM

Centre National de la Recherche Météorologique

### CO

carbon monoxide

### CO ²

carbon dioxide

### CO ²-eq

carbon dioxide equivalent

### CO2

emissions

### CO2-eq

carbon dioxide equivalent

### CO2-FFI

CO2 from Fossil Fuel combustion and Industrial processes

### CO2-LULUCF

CO2 from Land Use, Land-Use Change and Forestry

### CoA

Commonwealth of Australia

### COAG

Council of Australian Governments

### COBE

Centennial in situ Observation-Based Estimates of Sea Surface Temperature

### CODOHSAPA

Centre for Dialogue on Human Settlement and Poverty Alleviation

### COMMIT

Climate policy assessment and Mitigation Modelling to Integrate national and global Transition pathways

### COP

Conference of the Parties

### COP16

16th Session of the Conference of the Parties

### COP19

19th Session of the Conference of the Parties

### COP26

26th Session of the Conference of the Parties

### COPD

Chronic Obstructive Pulmonary Disease

### CORDEX

Coordinated Regional Climate Downscaling Experiment

### CORSIA

Carbon Offsetting and Reduction Scheme for International Aviation

### COSMO

Consortium for Small-scale Modeling

### COSSAO

Corporacion De Servicios De Salud Y Desarrollo Socioeconemico, El Otoao

### COVID-19

coronavirus disease of 2019

### CP

Central Pacific

### CPA

Conservation Priority Areas

### CPI

Climate Policy Integration

### CPM

convection-permitting model

### CPRS

Climate Policy Relevant Sectors

### CPTPP

Comprehensive and Progressive Agreement for Trans-Pacific Partnership

### CRA

climate risk and adaptation assessment

### CRC

Climate Resilient City

### CRD

climate-resilient development

### CRDP

Climate Resilient Development Pathway

### CRE

cloud radiative effect

### CREMAs

Community Resource Management Area Mechanisms (Ghana)

### CRF

common reporting format

### CRFS

City Region Food System

### CRGE

Climate Resilient Green Economy

### CRIBs

Climate Relevant Innovation-system Builders

### CRIDA

Climate Risk Informed Decision Analysis

### CRM

cloud resolving model

### CRO

Chief Resilience Officer

### CRS

Climate Regime Shifts

### CRU

Climate Research Unit

### CRUTEM

Climatic Research Unit gridded global historical near-surface air temperature dataset

### CRUTS

Climatic Research Unit gridded time-series dataset

### CS

Climate Services

### CSA

Climate-Smart Agriculture

### CSB

Cross-Section Box

### CSC

climate-smart cocoa

### CSF

Climate-Smart Forestry

### CSI

Cement Sustainability Initiative

### CSIRO

Commonwealth Scientific Industrial and Research Organisation

### CSOs

Combined Sewer Overflows

### CSP

concentrating solar power

### CSR

corporate social responsibility

### CSSP

cross-sector social partnership

### CTCN

Climate Technology Centre and Network

### CurPol

Current Policies scenario

### CVD

Cardiovascular Disease

### CZ

Czech Republic

### DAC

direct air capture

### DACCS

direct air carbon capture with carbon storage

### DACCU

direct air capture carbon and utilisation

### DAE

Direct Access Entities

### DAI

Dangerous Anthropogenic Interference

### DALY

Disability-Adjusted Life Year

### DAMIP

Detection and Attribution Model Intercomparison Project

### DAPP

Dynamic Adaptive Pathways Planning

### DBH

diameter at breast height

### DC

direct current

### DCCEE

Department of Climate Change, Energy and Efficiency

### DCPP

Decadal Climate Prediction Project

### DE

Germany

### DECK

Diagnostic, Evaluation and Characterization of Klima

### DeepMIP

Deep-Time Model Intercomparison Project

### DEM

Digital Elevation Model

### DENR

Department of Environment and Natural Resources

### DES

Department of Environment and Science

### DESA

Department of Economic and Social Affairs

### DF

drought frequency

### DFIs

Development Finance Institutions

### DGVM

dynamic global vegetation model

### DGVMs

Dynamic Global Vegetation Models

### DHW

Degree Heating Weeks

### DI

Drought Index

### DIC

dissolved inorganic carbon

### DINA

Drought Impact and Needs Assessment

### DISER

Department of Industry, Science, Energy and Resources

### DIY

Do It Yourself

### DJF

December–January–February

### DJFM

December–January–February–March

### DLS

decent living standards

### DMDU

Decision-Making under Deep Uncertainty

### DMS

dimethyl sulphide

### DOC

Dissolved Organic Carbon

### DOM

Dissolved Organic Matter

### DRC

Democratic Republic of Congo

### DRFIP

Disaster Risk Financing and Insurance Program

### DRI

direct reduced iron

### DRM

Disaster Risk Management

### DRR

Disaster Risk Reduction

### DSM

demand-side management

### DSR

Direct-Seeded Rice

### DTR

diurnal temperature range

### DU

Dobson Units

### DWM

down woody material

### E

Exposure

### ELUCland-use change emissions

### EaaS

energy as a service

### EAD

Expected Annual Damages

### EAF

electric arc furnace

### EAIS

East Antarctic Ice Sheet

### EAN

East Antarctica

### EAO

Equatorial Atlantic Ocean

### EAS

East Asia

### EAsiaM

East Asian monsoon

### EASM

East Asian summer monsoon

### EAU

Eastern Australia

### EAWM

East Asian winter monsoon

### EbA

Ecosystem-based Adaptation

### EBAF

CERES Energy Balanced and Filled climate data record

### EBEs

extraction-based emissions

### EBM

Energy Balance Model

### EBS

Eastern Bering Sea

### EBSA

Ecologically and Biologically Significant Areas

### EBUS

Eastern boundary upwelling systems

### EC

End-Century

### ECB

European Central Bank

### ECMWF

European Centre for Medium-Range Weather Forecasts

### ECOSOC

Economic and Social Council of the United Nations

### ECS

equilibrium climate sensitivity

### ECV

Essential Climate Variable

### ECWL

Extreme Coastal Water Level

### EDCD

European Centre for Disease Prevention and Control

### EDGAR

Emissions Database for Global Atmospheric Research

### EDLC

electrochemical double layer capacitor

### EDRM

Emergency and Disaster Risk Management

### EDW

elevation-dependent warming

### EEA

European Environment Agency

### EECO

Early Eocene Climatic Optimum

### EED

Energy Efficiency Directive

### EEDI

Energy Efficiency Design Index

### EEE

emissions embodied in exports

### EES

electrical energy storage

### EET

emissions embodied in trade

### EEU

Eastern Europe

### EEXI

Energy Efficiency Existing Ship Index

### EEZ

Exclusive Economic Zone

### EF

emission factor

### EFRs

Environmental Flow Requirements

### EgC

exagrams of carbon (1000 petagrams of carbon)

### EGR

exhaust gas recirculation

### EGTT

Expert Group on Technology Transfer

### EIA

Energy Information Administration

### EIMs

Energy Improvement Mortgages

### EIO

Equatorial Indian Ocean

### EIP

energy and industrial processes

### EJ

exajoule

### EKC

Environmental Kuznets Curve

### EMAS

Eco-Management and Auditing Scheme

### EMIC

Earth models of intermediate complexity

### ENA

Eastern North America

### ENACTS

East Africa and the West African Sahel

### ENSO

El Nino-Southern Oscillation

### EOF

empirical orthogonal function

### EOV

Essential Ocean Variable

### EP

Environmental Peacebuilding

### EPA

USA Environmental Protection Agency

### EPBD

Energy Performance Buildings Directive

### EPCs

Energy Performance Certificates

### EPD

Environmental Product Declaration

### EPO

Equatorial Pacific Ocean

### EPR

extended producer responsibility

### EPS

Emissions Performance Standard

### EqAmer

equatorial America

### ERA20C

ECMWF 20th century reanalysis

### ERA20CM

ECMWF 20th century atmospheric model ensemble

### ERA5

ECMWF global reanalysis (replaces

### ERA-Interim

ECMWF global reanalysis

### ERF

effective radiative forcing

### ERFaci

effective radiative forcing due to aerosol–cloud interactions

### ERFari

effective radiative forcing due to in aerosol–radiation interactions

### ERIA

Economic Research Institute for ASEAN and East Asia

### ERSST

Extended Reconstructed Sea

### ES

Spain

### ESA

European Space Agency

### ESA CCI

European Space Agency Climate Change Initiative

### ESAF

East Southern Africa

### ESB

East Siberia

### ESCC

Earth Systems and Climate Change

### ESCI

Electricity Sector Climate Information

### ESCO

Energy Service Company

### ESD

education for sustainable development

### ES-FiT

Energy Savings Feed-in Tariff

### ESG

environmental, social and governance,

### ESGF

Earth System Grid Federation

### ESL

extreme sea level

### ESM

energy systems model

### ESMValTool

Earth System Model Evaluation Tool

### ESRL

NOAA Earth System Research Laboratory

### ESW

Economic and Sector Work

### ESWL

extreme still water levels

### ET

evapotranspiration

### ETC

extratropical cyclone

### ETCCDI

Expert Team on Climate Change Detection and Indices

### ETP Energy Technology Perspectives

(IEA report)

### ETS

Emissions Trading System

### ETWL

Extreme Total Water Level

### EU

European Union

### EU ETS

European Union Emissions Trading Scheme

### EU-27

European Union member states [excluding UK]

### EU-28

European Union member states [including UK]

### EU-RED

EU Renewable Energy Directive

### EV

electric vehicle

### EW

enhanced weathering

### EWFD

European Water Framework Directive

### EWS

Early Warning System

### FACE

Free-Air Carbon Dioxide Enrichment

### FaIR

Finite Amplitude Impulse Response

### FAO

Food and Agriculture Organization

### FAPAR

fraction of absorbed photosynthetically active radiation

### FAQ

Frequently Asked Questions

### FAR

IPCC First Assessment Report

### FBD

Food-Borne Disease

### FCDO

UK Foreign, Commonwealth and Development Office,

### FCV

fuel cell vehicle

### FD

frost days

### FDI

Foreign Direct Investment

### FEDURP

Federation of the Urban and Rural Poor

### FEMA

Federal Emergency Management Agency

### FESOM

Finite Element Sea ice/Ice Shelf Ocean Model

### FEW

Food-Energy-Water

### FFDI

Forest Fire Danger Index

### FFI

Fossil-Fuel combustion and Industrial processes

### F-gas

fluorinated gas

### F-gases

Fluorinated gases

### FIC

Faster Innovation Case

### Fish-MIP

Fisheries and Marine Ecosystem Model Intercomparison Project

### FiT

feed-in tariff

### FiTP

feed-in premium

### FLEGT

Forest Law Enforcement, Governance and Trade,

### FLW

food loss and waste

### FMU

Forest Management Unit

### FOLU

forestry and other land use

### FPIC

Free Prior and Informed Consent

### FR

France

### FRAND

fair, reasonable and non-discriminatory,

### FSC

Forest Sustainability Council

### FT

Fischer-Tropsch

### FTA

free trade agreement

### FW

Fire Weather

### FWL

Freshwater Lens

### FWM

fine woody material

### FYROM

North Macedonia

### G20

Group of Twenty

### GAMI

Global Adaptation Mapping Initiative

### GAST

Global Mean Surface Air Temperature

### GATS

General Agreement on Trade in Services

### GATT

General Agreement on Tariffs and Trade

### GBAM

ground-based albedo modifications

### GBCA

Green Building Council of Australia

### GBP

Great Britain Pound

### GBR

Great Barrier Reef

### GBRMPA

Great Barrier Reef Marine Park Authority

### GCAM

Global Change Assessment Model

### GCCA

Global Cement and Concrete Association

### GCF

Green Climate Fund

### GCM

Global Climate Model

### GCoM

Global Covenant of Mayors

### GCOS

Global Climate Observing System

### GCP

Global Carbon Project

### GDD

growing degree days

### GDE

Groundwater-Dependent Ecosystem

### GDP

gross domestic product

### GEA

Global Energy Assessment

### GEF

Global Environment Facility

### GeoMIP

Geoengineering Model

### GFBI

Global Forest Biodiversity Initiative

### GFCA

Global Framework for Climate Action

### GFCF

Gross-fixed capital formation

### GFCS

Global Framework for Climate Services

### GFDL

NOAA Geophysical Fluid Dynamics Laboratory

### GFED

Global Fire Emissions Database

### GHA

Greater Horn of Africa

### GHCN

NOAA Global Historical Climatology Network

### GHCNd

NOAA Global Historical Climatology Network daily database

### GHCNv4

NOAA Global Historical Climatology Network monthly database version 4

### GHG

greenhouse gas

### GHM

global hydrological model

### GI

Gastrointestinal

### GIA

glacial isostatic adjustment

### GIC

Greenland/Iceland

### GIS

global innovation system

### GISS

NASA Goddard Institute for Space Studies

### GISTEMP

NASA Goddard Institute for Space Studies Surface Temperature Analysis

### GIZ

the German Development Agency

### GJ

gigajoule

### GlacierMIP

Glacier Model Intercomparison Project

### GLDAS

Global Land Data Assimilation System

### GLEON

Global Lakes Ecological Observatory Network

### GLOF

Glacial Lake Outburst Flood

### GloGEM

Global Glacier Evolution Model

### GM

Global monsoon

### GMMIP

Global Monsoons Model Intercomparison Project

### GMRIO

global multi-region input-output

### GMSL

global mean sea level

### GMSLR

Global Mean Sea Level Rise

### GMST

global mean surface temperature

### GMT

Global Mean Temperature

### GMTSL

global mean thermosteric sea level

### GNI

gross national income

### GNSS

Global Navigation Satellite System

### GOA-ON

Global Ocean Acidification Observing Network

### GOME

Global Ozone Monitoring Experiment

### GOSAT

Greenhouse Gases Observing Satellite

### GPCC

Global Precipitation Climatology Centre

### GPCP

Global Precipitation Climatology Project

### GPG

Good Practice Guidance

### GPM

Global Precipitation Mission

### GPP

Gross Primary Production

### GPS

Global Positioning System

### GPT

general-purpose technologies

### GQL

Good Quality of Life

### GRACE

Gravity Recovery and Climate Experiment

### GRD

gravitational, rotational and deformational

### GRDC

Global Runoff Data Centre

### GrIS

Greenland Ice Sheet

### GSAT

global surface air temperature

### GSMaP

Global Satellite Mapping of Precipitation dataset

### Gt

Gigatonnes

### GtC

gigatonnes of carbon

### GtCO2

gigatonnes of carbon dioxide

### GtCO2-eq

gigatonnes of CO2 equivalent

### GTEM

global transport energy sectoral models

### GTP

global temperature change potential

### GW

Gigawatt

### GWL

global warming level

### GWP

global warming potential

### GWP100

Global Warming Potential over a 100 year time horizon

### GWR

Geographically Weighted Regression

### GWRC

Greater Wellington Regional Council

### GWSHP

Groundwater-Source Heat Pumps

### GWSI

Global Water Security Index

### H

Hazard

### HAB

Harmful Algal Bloom

### HadCM3

Hadley Center Coupled Model

### HadCRUT

Hadley Centre Climatic Research Unit gridded surface temperature dataset

### HadEX3

Hadley Centre gridded land surface extremes indices

### HadGEM

Hadley Centre Global Environment Model

### HadISST

Hadley Centre Ice and Sea Surface Temperature dataset

### HadSST

Hadley Centre Sea Surface Temperature dataset

### HAP

household air pollution

### HC

Hadley circulation

### HCE

historical cumulative emission

### HCFC

hydrochlorofluorocarbon

### HCFCs

hydrochlorofluorocarbons

### HCS

High Carbon Stock

### HCSA

High Carbon Stock Areas

### HCVA

High Conservation Value Areas

### HD

heating degree days

### HDD

Heat Degree Days

### HDI

Human Development Index

### H-DRI

Hydrogen-based direct reduced iron

### HDSR

Health and Disability System Review

### HDV

Heavy-duty vehicles

### HELP

High Level Experts and Leaders Panel

### HEMS

home energy management system

### HES

Hybrid energy storage

### HEV

hybrid electric vehicle

### HFC

hydrofluorocarbon

### HFCs

Hydrofluorocarbons

### HFCV

hydrogen fuel cell vehicle

### HFRS

Haemorrhagic Fever with Renal Syndrome

### HI

heat index

### HighResMIP

High Resolution Model Intercomparison Project

### HIHD

Historical Index of Human Development

### HIV

Human Immunodeficiency Virus

### HKH

Hindu Kush Himalaya

### HLD

High Latitude Dust

### HLPF

High-Level Political Forum

### HN

Houghton and Nassikas

### HNO3

nitric acid

### HNPP

Herbaceous Net Primary Productivity

### HPLE

High Level Panel of Experts

### HRBA

Human Rights-Based Approach

### HSR

high-speed rail

### HVAC

heating, ventilation and air conditioning,

### HVO

hydrotreated vegetable oil

### HYDE

History database of the Global Environment

### IAGA

International Air Transport Association

### IAGOS

In-service Aircraft for a Global Observing System

### IAM

integrated assessment model

### IAS

Invasive Alien Species

### IBAI

Index-Based Agricultural Insurance

### IBE

income-based emission accounting

### ICA

Insurance Council of Australia

### ICAO

International Civil Aviation Organization

### ICCT

International Council on Clean Transportation

### ICE

internal combustion engine

### ICESat

Ice, Cloud and land Elevation Satellite

### ICEV

internal combustion engine vehicles

### ICLEI

Local Governments for Sustainability

### ICM

Integrated Coastal Management

### ICNZ

Insurance Council of New Zealand

### ICOADS

International Comprehensive Ocean–Atmosphere Data Set

### ICRI

International Coral Reef Initiative

### ICT

Information and Communications Technology

### ICV

Instituto Centro de Vida

### ICZM

Integrated Coastal Zone Management

### ID

Insufficient Data

### IDDRI

Institute for Sustainable Development and International Relations

### IDF

International Diabetes Foundation

### IDMC

Internal Displacement Monitoring Centre

### IDP

Internally Displaced People

### IEA

International Energy Agency

### IEA-STEPS

International Energy Agency Stated Policies Scenario

### IFC

International Finance Corporation

### IFDD

Institut de la Francophonie pour le Développement Durable (Francophonie Institute for Sustainable Development)

### IFI

international financial institution

### IFPRI

International Food Policy Research Institute

### IGCC

Investor Group on Climate Change

### IHME

Institute for Health Metrics and Evaluation

### IIASA

International Institute for Applied Systems Analysis

### IIED

International Institute for Environment and Development

### IIGCC

Institutional Investors Group on Climate Change

### IIoT

industrial internet of things

### ILB

incandescent light bulb

### ILM

intrusive load monitoring

### ILUC

Indirect Land-Use Change

### IMBIE

Ice Sheet Mass Balance Intercomparison Exercise

### IMF

International Monetary Fund

### IMO

International Maritime Organization

### IMP

Illustrative Mitigation Pathway

### IMP-GS

Illustrative Mitigation Pathway - Gradual Strengthening

### IMP-LD

Illustrative Mitigation Pathway - Low Demand

### IMP-Neg

Illustrative Mitigation Pathway - Net Negative Emissions

### IMP-Ren

Illustrative Mitigation Pathway - Renewable Electricity

### IMP-SP

Illustrative Mitigation Pathway - Shifting Pathways

### INDC

Intended Nationally Determined Contributions

### INP

ice nucleating particle

### Intercomparison

Project

### IOB

Indian Ocean Basin

### IOD

Indian Ocean Dipole

### IoT

internet of things

### IP

Illustrative Pathway

### IPBES

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

### IPCC

Intergovernmental Panel on Climate Change

### IPLC

Indigenous Peoples and Local Communities

### IP-ModAct

Illustrative Pathway Moderate Action

### IPO

Inter-decadal Pacific Oscillation

### IPP

independent power producers

### IPPU

Industrial processes and product use

### IPR

intellectual property rights

### IPSL

Institut Pierre-Simon Laplace

### IQR

Interquartile Range

### IRENA

International Renewable Energy Agency

### IRF

instantaneous radiative forcing

### IRFaci

Instantaneous radiative forcing (or effect) due to aerosol-cloud interactions

### IRGC

International Risk Governance Council

### ISIMIP

Inter-Sectoral Impacts Model Intercomparison Project

### ISME

International Society for Mangrove Ecosystems

### ISO

International Organization for Standardization

### IT

Italy

### ITCZ

Inter-tropical Convergence Zone

### ITF

International Transport Forum

### ITMO

internationally transferred mitigation outcome

### ITUC

International Trade Union Confederation

### IUCN

International Union for the Conservation of Nature

### IUWN

Integrated Urban Water Management

### IVA

Integrated Vulnerability Assessments

### IWGIA

International Work Group for Indigenous Affairs

### IWRM

Integrated Water Resource Management

### JAS

July–August–September

### JAXA

Japan Aerospace Exploration Agency

### JICA

Japanese International Cooperation Agency

### JJA

June–July–August

### JJAS

June–July–August–September

### JMA

Japan Meteorological Agency

### JRA-55

Japanese 55-year Reanalysis

### JRC

Joint Research Centre

### K1

Mountain Delineation

### K2

Mountain Delineation

### K3

Mountain Delineation

### KNOMAD

Knowledge Partnership on Migration and Development

### KR

Key Risk

### L&D

Losses and Damages

### LAI

leaf area index

### LAM

Latin America and the Caribbean

### LAP

light-absorbing particle

### LARMIP

Linear Antarctic Response Model Intercomparison Project

### LCA

life cycle assessment or,life cycle analysis,

### LCC

lifecycle costs

### LCCC

levelised cost of conserved carbon

### LCCE

levelised cost of conserved energy

### LCOE

Levelized Cost of Energy

### LCP

Local Community Perception

### LC-PUFAs

Long-Chain Polyunsaturated Fatty Acids

### LCS

low-carbon society

### LDC

Least Developed Countries

### LDCF

Least Developed Country Fund

### LDCs

Least-Developed Countries

### LDN

Land Degradation Neutrality

### LDT

Last deglacial transition

### LDV

light-duty vehicle

### LEAF

Lowering Emissions by Accelerating Forest Finance

### LECZ

Low-Elevation Coastal Zone

### LED

light-emitting diode

### LED scenario

Low Energy Demand scenario

### LEDS

Low Emission Development Strategies

### LEED

Leadership in Energy and Environmental Design

### LEED-ND

Leadership in Energy and Environmental Design - Neighbourhood Design

### LEO

low Earth orbit

### LGBTQI

Lesbian, Gay, Bisexual, Transgender, Queer, Intersex

### LGM

Last Glacial Maximum

### LGNZ

Local Government of New Zealand

### LI

Lithuania

### LIB

lithium-ion battery

### LIG

Last Interglacial

### LIMIC

Low-Income and Medium-Income Countries

### Li-on

Lithium-ion

### LiRE

IMAGE-Lifestyle-Renewable (IEA scenario)

### LK

Local Knowledge

### LLGHG

long-lived greenhouse gas

### LLHI

Low-likelihood, high-impact

### LMMA

Locally Managed Marine Area

### LNG

liquefied natural gas

### LNOx

lightning NOx

### LPG

liquefied petroleum gas

### LR

lapse rate

### LSAT

land surface air temperature

### LSLA

Large-Scale Land Acquisition

### LTGG

long-term global goal (to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels)

### LTO

long-term operation

### LTP

Long-Term Plan

### LU

Luxembourg

### LUC

land-use change

### LULUC

Land Use and Land-Use Change

### LULUCF

Land Use,Land-Use Change and Forestry

### LUM

land-use model

### LW

longwave

### LWP

liquid water path

### LWS

land-water storage

### MA

Mitigation Alliance

### MaaS

Mobility as a Service

### MAC

marginal abatement costmbpd,million barrels per day,

### MAGICC

Model for the Assessment of Greenhouse Gas Induced Climate Change

### MAM

March–April–May

### MAP

Municipal Adaptation Plan

### MAR

Managed Aquifer Recharge

### MAT

marine air temperature

### MBIE

Ministry of Business, Innovation and Employment

### MC

Mid-Century

### MCB

marine cloud brightening

### MCDA

Multi-Criteria Decision Analysis

### MCO

Miocene Climatic Optimum

### MCP

Maximum Catch Potential

### MCPP

Municipal Climate Protection Programme

### MCS

mesoscale convective system

### MD

Mega-Drought

### MDB

Murray-Darling Basin

### MDG

Millennium Development Goal

### MEA

material efficiency

### MEASO

Marine Ecosystem Assessment for the Southern Ocean

### MED

Mediterranean

### MEE

Ministry of Ecology and Environment

### MEFF

Mediterranean Flood Fatalities Database

### MeHg

Methylmercury

### MEL

Monitoring, Evaluation and Learning

### MENA

Middle East North Africa

### MEPC

Marine Environment Protection Committee

### MEPSs

Minimum Energy Performance Standards

### MERI

Monitoring, Evaluation, Reporting and Improvement

### MERRA

Modern-Era Retrospective Analysis for Research and Applications

### MERS

Middle East Respiratory Syndrome

### MES

material efficiency scenario

### METACLIP

Metadata for climate products project

### MfE

Ministry for the Environment

### MFP

Multistakeholder Forestry Programme

### MGNREGA

Mahatma Gandhi National Rural Employment Guarantee Act

### MH

mid-Holocene

### Mha

million hectares

### MHW

Marine Heatwaves

### MI

Myocardial Infarction

### MICI

marine ice cliff instability

### MIGA

Multilateral Investment Guarantee Agency

### MIP

Model Intercomparison Project

### MIPs

Model Intercomparison Projects

### MIROC

Model for Interdisciplinary Research on Climate

### MIS

mission-oriented innovation systems

### MISI

marine ice sheet instability

### MISMIP

Marine Ice Sheet Model Intercomparison Projects

### MJ

megajoule

### MJO

Madden–Julian Oscillation

### Mkm2

million square kilometres

### MLO

Mauna Loa Observatory

### MLP

multi-level perspective

### MME

multi-model ensemble

### MMT

Minimum Mortality Temperature

### MOC

meridional overturning circulation

### ModAct

Moderate Action scenario

### MODIS

Moderate Resolution Imaging Spectroradiometer

### MOE

molten oxide electrolysis

### MOOC

massive open online course

### MPa

megapascal

### MPI

Multidimensional Poverty Index

### MPWP

mid-Pliocene Warm Period

### MRI

Meteorological Research Institute, Japan Meteorological Agency

### MRV

Monitoring, Reporting and Verification

### MS

member state

### MSD

midsummer drought

### MSFD

Marine Strategy Framework Directive

### MSL

Mean Sea Level

### MSME

micro, small and medium enterprises,

### MSP

Marine Spatial Planning

### MSRI

Modified System of Rice Intensification

### MSSD

Mediterranean Strategy for Sustainable Development

### MSY

Maximum Sustainable Yields

### Mt

megatonne

### MTA

methanol-to-aromatics

### MTE

Mediterranean-Type Ecosystems

### MTFR

maximum technically feasible reductions

### MTO

methanol-to-olefins

### MWh

megawatt hour

### N ²O

nitrous oxide

### N2O

nitrous oxide

### NADW

North Atlantic Deep Water

### NAF

North Africa and Middle East

### NAFTA

North American Free Trade Agreement

### NAHS

National Aboriginal Health Strategy

### NAM

Northern Annular Mode

### NAMA

Nationally Appropriate Mitigation Actions

### NAmerM

North American monsoon

### NAO

North Atlantic Oscillation

### NAP

national adaptation plan

### NAPA

National Adaptation Programmes of Action

### NARCCAP

North American Regional Climate Change Assessment Program

### NAS

National Adaptation Strategy

### NASA

USA National Aeronautics and Space Administration

### NASH

North Atlantic Subtropical High

### NAU

Northern Australia

### NAZCA

Non-State Actor Zone for Climate Action

### NBI

Nile Basin Initiative

### NBP

Net Biome Productivity

### NbS

Nature-Based Solutions

### NCA

Northern Central America

### NCAR

National Center for Atmospheric Research

### NCCARF

National Climate Change Adaptation Research Facility

### NCCRS

National Climate Change Response Strategy

### NCEI

NOAA National Centers for Environmental Information

### NCEP

NOAA National Centers for Environmental Prediction

### NDC

Nationally Determined Contributions

### NDD

number of dry days

### NDVI

Normalized Difference Vegetation Index

### NE

Northeast

### NEAF

North Eastern Africa

### NEDO

New Energy and Industrial Technology Development Organisation, Japan,

### NELD

non-economic loss and damage

### NEN

North-Eastern North America

### NEP

Net Ecosystem Production

### NES

North-Eastern South America

### NESP

National Environmental Science Program

### NEU

Northern Europe

### NEUS

European Arctic Waters

### NF

Near Future

### NF3

Nitrogen trifluoride

### NFM

Natural Flood Management

### NGFS

Network for Greening the Financial System

### NGO

Non-Governmental Organisation

### NH

Northern Hemisphere

### NH3

ammonia

### NH4

ammonium

### NHS

National Health Service

### NiCD

nickel-cadmium

### NIES

National Institute for Environmental Studies

### NILM

non-intrusive load monitoring

### Nimby

Not in my back yard

### NiMH

nickel-metal hydride

### NIS

national innovation system

### NIWA

National Institute of Water and Air

### NL

Netherlands

### NMAT

nighttime marine air temperature

### NMHS

National Meteorological and Hydrological Services

### NMVOC

non-methane volatile organic compounds

### NO2

nitrogen dioxide

### NO3

nitrate

### NOAA

USA National Oceanic and Atmospheric Administration

### NOAAGlobalTemp

NOAA Merged Land Ocean Global Surface Temperature Analysis

### NorESM

Norwegian Earth System Model

### NOx

nitrogen oxides

### NPO

North Pacific Ocean

### NPP

Nuclear Power Plants

### NR

Non-Residential

### NRG

natural regrowth

### NSA

Northern South America

### NSR

Northern Sea Route

### NSTT

North-South technology transfer and cooperation

### NSW

New South Wales

### NT

Non-technological

### NTDs

Neglected Tropical Diseases

### NTEM

national transport -energy models

### NTFPs

Non-Timber Forest Products

### NUA

New Urban Agenda

### NWN

North-Western North America

### NWP

Northwest Passages

### NWS

Northwestern South America

### NYCEDC

New York City Economic Development Corporation

### NYDF

New York Declaration on Forests

### NZ

New Zealand

### NZCFSF

New Zealand Centre for Sustainable Finance

### NZE

net zero emissions

### NZE scenario

Net-Zero Emissions by 2050 (IEA scenario)

### NZEB

net zero energy building nZEB,nearly zero energy building,

### O3

Ozone

### OA

organic aerosols

### OAC

ocean albedo change

### OAE

ocean alkalinity enhancement

### OC

organic carbon

### OCLTT

Capacity-Limited Thermal Tolerance

### ODA

overseas development assistance

### ODS

ozone-depleting substance

### OECD

Organisation for Economic Co-operation and Development

### OECM

Other Effective Area-Based Conservation Measures

### OEH

Office of Environment and Heritage

### OH

hydroxyl radical

### OHC

ocean heat content

### OHRLLS

United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States

### OLR

outgoing longwave radiation

### OLS

ordinary least squares

### OMI

Ozone Monitoring Instrument

### OMIP

Ocean Model Intercomparison Project

### OMVS

Senegal River Basin Organisation

### OMZ

Oxygen Minimum Zones

### OPEC

Organization of the Petroleum Exporting Countries

### OPEX

operating and maintenance expenditures

### OS

overshoot

### OSPAR

Convention for the Protection of the Marine Environment of the North-East Atlantic

### OSS

one-stop shop

### OW

The Office of Water

### P2P

peer-to-peer

### PA

The Paris Agreement

### PACE

Property Assessed Clean Energy

### PACJA

Pan Africa Climate Justice Alliance

### PAGCC

Gender and Climate Change Action Plans

### PAGES

2K Past Global Changes 2k consortium

### Pas

Protected Areas

### PBEs

production-based emissions

### PC

principal component

### PCB

Polychlorinated Biphenyl

### PCCB

Paris Committee on Capacity-buildingand Financing Initiative

### PCE

Parliamentary Commissioner for the Environment

### PDB

public development bank

### PDO

Pacific Decadal Oscillation

### PDRC

People’s Democratic Republic of Congo

### PDS

Public Distribution System

### PDSI

Palmer Drought Severity Index

### PDV

Pacific Decadal Variability

### PEFC

Programme for the Endorsement of Forest Certification

### PEMFC

proton-exchange membrane fuel cells

### PERSIANN-CDR

Precipitation estimations from Remotely Sensed Information using Artificial Neural Networks Climate Data Record

### PES

Payments for Ecosystem Services

### PET

Potential Evapotranspiration

### PETM

Paleocene–Eocene Thermal Maximum

### PFC

Perfluorocarbon

### PFCs

perfluorocarbons

### PgC

petagrams of carbon

### PgCeq

petagrams of carbon equivalent

### PHEV

plug-in hybrid electric vehiclepkm,passenger-kilometres,

### PICSA

Participatory Integrated Climate Services for Agriculture

### PIDA

African Union’s Programme for Infrastructure Development

### PIDACC

Programmes for Integrated Development and Adaptation to Climate Change

### PlioMIP

Pliocene Model Intercomparison Project

### PM

particulate matter

### PM10

particulate matter with diameter of less than 10 microns

### PM2.5

particulate matter with diameter of less than 2.5 microns

### PMIP

Paleoclimate Modelling Intercomparison Project

### POA

primary organic aerosols

### POC

Particulate Organic Carbon

### POMS

Pacific Oyster Mortality Syndrome

### POP

Persistent Organic Pollutant

### PP

primary production

### PPA

Power Purchase Agreement

### PPADI

Human Development Index, Recently Adjusted to Reflect the Effect of Planetary Pressures

### PPCA

Powering Past Coal Alliance

### PPCR

Pilot Program for Climate Resilience

### PPI

pulp and paper industry

### PPP

purchasing power parity

### PRI

Principles for Responsible Investment

### PSI

Principles for Sustainable Insurance

### PSNP

Productive Safety Net Programme

### PSS-78

Practical Salinity Scale 1978

### PTSD

Post-Traumatic Stress Disorder

### PV

photovoltaic

### PWC

Physical Work Capacity

### PWLM

Participatory Watershed Land-Use Management

### QBO

quasi-biennial oscillation

### QE

quantitative easing

### QFCI

Queensland Floods Commission of Inquiry

### QFES

Queensland Fire and Emergency Services

### QOL

Quality of Life

### R&D

Research and Development

### RAR

Russian Arctic Region

### RAWES

Rapid Assessment of Wetland Ecosystem Services

### RBNZ

Reserve Bank of New Zealand

### RCB

Remaining Carbon Budget

### RCEP

Regional Comprehensive Economic Partnership

### RCM

regional climate model

### RCMIP

Reduced Complexity Model Intercomparison Project

### RCP

Representative Concentration Pathway

### RCPs

Representative Concentration Pathways

### RCSA

Rwanda Climate Services Programme

### RD&D

research, development and demonstration,

### RDI

Research, Development and Innovation,

### RDM

Robust Decision-Making

### RE

Renewable Energy

### RECC

Resource Efficiency and Climate Change

### RECC-LED

Resource Efficiency and Climate Change-Low Energy Demand (IEA scenario)

### REDD

Reduction of Emissions From Deforestation and Forest Degradation

### REDD+

reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks,

### REEs

rare earth elements

### REGEN

Rainfall Estimates on a Gridded Network

### ReSOLVE

Regenerate, Share, Optimise, Loop, Virtualise, Exchange framework,

### RF

radiative forcing

### RFC

Reasons for Concern

### RFCs

Reasons for Concern

### RFE

Russian Far East

### RFMIP

Radiative Forcing Model Intercomparison Project

### RFMO

Regional Fisheries Management Organisation

### RGGI

Regional Greenhouse Gas Initiative

### RH

relative humidity

### RICH

Radiosonde Innovation Composite Homogenization

### RIMAP

Real-time Integrated Model for probabilistic Assessment of emissions Paths

### RIO

Rational Impartial Observer

### RIS

regional innovation systems

### RIT

Resilient Infrastructure and Technologies

### RKR

Representative Key Risk

### RMB

Renminbi

### RO

radio occultation

### ROSES

Reporting Standards for Systematic Evidence Syntheses

### RRV

Ross River Virus

### RSD

relative standard deviation

### RSL

relative sea level

### RSLR

Relative Sea-Level Rise

### RSPO

Roundtable on Sustainable Palm Oil

### RTI

Respiratory Tract Infection

### RTS

Reference Technology Scenario

### RVF

Rift Valley Fever

### S&L

standards and labelling

### SAF

sustainable aviation fuel

### SAH

Sahara

### SAI

stratospheric aerosol interventions

### SAIA

South African Insurance Association

### SAIIA

South African Institute of International Affairs

### SAM

Southern Annular Mode

### SAmerM

South American monsoon

### SAO

South Atlantic Ocean

### SAOD

stratospheric aerosol optical depth

### SAR

Second Assessment Report

### SARF

stratospheric-temperature-adjusted radiative forcing

### SARPs

Standards and Recommended Practices

### SAS

South Asia

### SASB

Sustainability Accounting Standards Board

### SAsiaM

South and South East Asian monsoon

### SASSCAL

Southern African Science Service Centre for Climate Change, Adaptive Land Management

### SAT

surface air temperature

### SAU

Southern Australia

### SBSTA

Subsidiary Body for Scientific and Technological Advice

### SBT

science-based target

### SC

Sponge City

### SCA

Southern Central America

### SCC

social cost of carbon

### SCCF

Special Climate Change Fund

### SCE

snow cover extent

### ScenarioMIP

Scenario Model Intercomparison Project

### SCM

simple climate model

### SCS

soil carbon sequestration

### SD

Sustainable Development

### SDG

Sustainable Development Goals

### SDM

Species Distribution Model

### SDP

Sustainable Development Pathway

### SDPS

shifting development pathways to increased sustainability

### SDR

Special Drawing Rights

### SDS

Sustainable Development Scenario (IEA scenario)

### SDSN

Sustainable Development Solutions Network

### SE

sustainable entrepreneur

### SEA

strategic environmental assessment

### SEADRIF

South East Asian Disaster Risk Insurance Facility

### SEAF

South Eastern Africa

### SEC

specific energy consumption

### SECA

sulphur emission control area

### SED

Structured Expert Dialogue

### SEEA

System of Environmental-Economic Accounting

### SEEMP

Ship Energy Efficiency Management Plan

### SEJ

Structured Expert Judgement

### SEM

structural equations modelling

### SER

Sufficiency, Efficiency, Renewal,

### SES

Southeast South America

### SETAC

Society of Environmental Toxicology and Chemistry (UNEP-SETAC)

### SETS

Social, Ecological and Technological Systems

### SEU

Southern Europe

### SEUS

Mediterranean Sea and Black Sea

### SF6

sulphur hexafluoride

### SH

Southern Hemisphere

### SHELF

Sheffield Elicitation Framework

### SI

sustainable intensification

### SIA

sea ice area

### SIDS

Small Island Developing States

### SIE

sea ice extent

### SIS

sectoral innovation system

### SITES

Sustainable Sites Initiative

### SL

Slovenia

### SLCF

short-lived climate forcer

### SLE

sea level equivalent

### SLM

sustainable land management

### SLP

sea level pressure

### SLR

sea level rise

### SLURC

Sierra Leone Urban Research Centre

### SM

Supplementary Material

### SMAP

Soil Moisture Active Passive

### SMART

Stormwater Management and Road Tunnel

### SMB

surface mass balance

### SME

Small and Medium Enterprises

### SMEs

small and medium-sized enterprises

### SMILE

single-model initial-condition large ensemble

### SNA

System of National Accounts

### SNTT

South-North technology transfer and cooperation

### SO2

sulphur dioxide

### SO4^2-

sulphate

### SOA

secondary organic aerosols

### SOC

Soil Organic Carbon

### SOE

state-owned enterprise

### SOFC

solid oxide fuel cell

### SOI

Southern Oscillation Index

### SOM

Soil Organic Matter

### SON

September–October–November

### SOO

Southern Ocean

### SOx

sulphur oxides

### SP

Social Protection

### SPCZ

South Pacific Convergence Zone

### SPEI

Standardized Precipitation Evapotranspiration Index

### SPI

Standardized Precipitation Index

### SPM

Summary for Policymakers

### SPO

South Pacific Ocean or South Pole Observatory

### SPP

State Planning Policy

### SPV

special purpose vehicle

### SR1.5

Special Report on Global Warming of 1.5°C

### SRA

Social Responsibility Agreements

### SRCCL

Special Report on Climate Change and Land

### SRES

Special Report on Emissions Scenarios

### SREX

IPCC Special Report on Managing the Risk of Extreme Events and Disasters to Advance Climate Change Adaptation

### SRI

Sustainable and Responsible Investment

### SRM

solar radiation modification

### SROCC

Special Report on the Ocean and Cryosphere in a Changing Climate

### SRTM

Shuttle Radar Topography Mission

### SSA

Southern South America

### SSC

South-South cooperation

### SSP

Shared Socioeconomic Pathways

### SSR

Seasonal Severity Rating

### SST

sea surface temperature

### SSTT

South-South technology transfer and cooperation

### SSW

sudden stratospheric warming

### STE

stratosphere–troposphere exchange

### STEM

science, technology, engineering and mathematics,

### STEPS

Stated Policies Scenario

### STFM

Sustainable Tropical Forest Management

### STI

Science, Technology and Innovation

### Surface

Temperature

### SUV

sport utility vehicle

### SW

shortwave

### SWE

snow water equivalent

### SWM

Sustainable Water Management

### SWP

Soil Water Potential

### SWS

South-Western South America

### SWV

stratospheric water vapour

### SYR

Synthesis Report

### TA

territorial accounting

### TABS

thermally activated building systems

### TAR

Third Assessment Report

### TAV

Tropical Atlantic Variability

### TBT Agreement

WTO Agreement on Technical Barriers to Trade

### TC

tropical cyclone

### TCBA

technology-adjusted consumption-based emission accounting

### TCFD

Task Force on Climate-related Financial Disclosures

### TCR

transient climate response

### TCRE

transient climate response to cumulative

### TCs

Tropical Cyclones

### TCWV

total column water vapour

### TDR

travel demand reduction

### TEC

Technology Executive Committee

### TEEB

The Economics of Ecosystems and Biodiversity

### TEG CRM

Technical Expert Group on Comprehensive Risk Management

### TEU

Twenty-Foot Container Equivalent Units

### TEUS

European Temperate Seas

### T-FACE

Temperature Free-Air Controlled Enhancement

### TFC

total final energy consumption

### TFP

Total Factor Productivity

### Tg

teragrams

### TGC

tradeable green certificatetkm,tonne-kilometre,

### TGCs

Tradable Green Certificates

### THI

Temperature Humidity Index

### ThSL

thermosteric sea level

### TIA

Tourism Industry Aotearoa

### TIB

Tibetan Plateau

### TK

Traditional Knowledge

### TLAS

Timber Legality Assurance System

### TMNs

Transnational Municipal Networks

### TMSP

Transboundary Marine Spatial Planning

### TN

Tropical Nights

### TNA

technology needs assessment

### TNn

annual minimum daily minimum temperature

### TNx

annual maximum daily minimum temperature

### TOA

the net top-of-the-atmosphere

### TOD

transit-oriented development

### ToE

time of emergence

### TPES

total primary energy supply

### TPI

tripole Index

### TRA

technology readiness assessment

### TrC

triangular cooperation

### TRIPS Agreement

Trade-Related Aspects of Intellectual Property Rights Agreement

### TRL

technology readiness level

### TRMM

Tropical Rainfall Measuring Mission

### TS

Technical Summary

### TSI

total solar irradiance

### TSR

Transpolar Sea Route

### TSRA

Torres Strait Regional Authority

### TSU

Technical Support Unit

### TURFs

Territorial Use Rights for Fishing

### TW

terawatt

### TWS

Terrestrial Water Storage

### TWS-DSI

Terrestrial Water Storage-Drought Severity Index

### TWWHA

Tasmanian Wilderness World Heritage Area

### UA

Urban Agriculture

### UAH

University of Alabama in Huntsville

### UCDP

Uppsala Conflict Data Program

### UCLG

United Cities and Local Governments

### UF

utility factor

### UHC

Universal Health Coverage

### UHI

urban heat island

### UKCCC

United Kingdom Climate Change Committee

### ULCS

ultra-low carbon steel

### UN

United Nations

### UNCCD

United Nations Convention to Combat Desertification

### UNCRD

United Nations Centre for Regional Development

### UNDP

United Nations Development Programme

### UNEP

United Nations Environment Programme

### UNESCO

United Nations Educational, Scientific and Cultural Organization

### UNFCCC

United Nations Framework Convention on Climate Change

### UNHCR

United Nations High Commissioner for Refugee

### UNICEF

United Nations Children’s Fund

### UNOSSC

United Nations Office for South-South Cooperation

### UPA

Urban and Peri-Urban Agriculture

### US DOE

United States Department of Energy

### US EPA

United States Environmental Protection Agency

### USAID

United States Agency for International Development

### USD

US dollar

### USGS

United States Geological Survey

### UTLS

upper troposphere and lower stratosphere

### UV

ultraviolet

### UVic

ESCM University of Victoria Earth System Climate Model

### V

Vulnerability

### V1G

controlled charging (of an electric vehicle)

### V2G

vehicle-to-grid

### VaR

Value at Risk

### VBD

Vector-Borne Disease

### VC

venture capital

### VCS

Verified Carbon Standard of the Verra programmevkm,vehicle-kilometre,

### VF

Vertical Farming

### VKT

vehicle kilometres travelled

### VLM

vertical land motion

### VLR

Voluntary Local Review

### VOC

volatile organic compounds

### VoCC

Velocity of Climate Change

### VOD

Vegetation Optical Depth

### VPD

vapour pressure deficit

### VSLS

very short-lived halogenated species

### W

Western

### WAF

Western Africa

### WAfriM

West African monsoon

### WAIS

West Antarctic Ice Sheet

### WAN

West Antarctica

### WASCAL

West African Science Service Centre on Climate Change and Adaptive Land Management

### WASH

Water, Sanitation and Hygiene

### WBC

western boundary current

### WBCSD

World Business Council on Sustainable Development

### WBD

Waterborne Disease

### WBGT

wet bulb globe temperature

### WC

Walker circulation

### WCA

West Central Asia

### WCE

Western Central Europe

### WCRP

World Climate Research Programme

### WEF

World Economic Forum

### WEFN

water-energy-food nexus

### WEMA

Water Efficient Maize for Africa

### WEO

World Energy Outlook

### WEU

Western Europe

### WFP

World Food Programme

### WG

Working Group

### WGI

Working Group I

### WGII

Working Group II

### WGIII

Working Group III

### WGWDGD

Wet Get Wetter, Dry Get Drier

### WHO

World Health Organization

### WHP

waste heat to power

### WIM

Warsaw International Mechanism

### Wm-2

Watts per square meter

### WMGHG

well-mixed greenhouse gas

### WMO

World Meteorological Organization

### WNA

Western North America

### WNF

West Nile Fever

### WNP

Western North Pacific

### WOA18

World Ocean Atlas 2018

### WRAP

Waste and Resources Action Programme

### WSAA

Water Services Association of Australia

### WSAF

West Southern Africa

### WSB

Wilkes Subglacial Basin

### WSI

Water Scarcity Index

### WSUD

Water Sensitive Urban Design

### WTO

World Trade Organization

### WTP

willingness to pay

### WTTC

World Travel&Tourism Council

### WTU

Water Treatment Unit

### WUE

water-use efficiency

### WUI

Wildland-Urban Interface

### WWF

World Wildlife Fund

### YCS

Yield Constraint Score

### YJ

yottajoule, 10^24 joules

### YLD

Years of Life Lived with Disability

### YLL

Years of Life Lost

### ZEC

zero emissions commitment

### ZEV

zero emission vehicle

### ZJ

zettajoule, 10^21 joules

# IPCC Qualifier

### about as likely as not

33–66% probability (Indicates the assessed likelihood of an outcome or a result)

### exceptionally unlikely

0–1% probability (Indicates the assessed likelihood of an outcome or a result)

### extremely likely

95–100% probability (Indicates the assessed likelihood of an outcome or a result)

### extremely unlikely

0–5% probability (Indicates the assessed likelihood of an outcome or a result)

### high confidence

Each finding is grounded in an evaluation of underlying evidence and agreement. The IPCC calibrated language uses five qualifiers to express a level of confidence (very low, low, medium, high and very high )

### likely

66–100% probability (Indicates the assessed likelihood of an outcome or a result)

### low confidence

Each finding is grounded in an evaluation of underlying evidence and agreement. The IPCC calibrated language uses five qualifiers to express a level of confidence (very low, low, medium, high and very high )

### medium confidence

Each finding is grounded in an evaluation of underlying evidence and agreement. The IPCC calibrated language uses five qualifiers to express a level of confidence (very low, low, medium, high and very high )

### more likely than not

>50–100% probability (Indicates the assessed likelihood of an outcome or a result)

### unlikely

0–33% probability (Indicates the assessed likelihood of an outcome or a result)

### very high confidence

Each finding is grounded in an evaluation of underlying evidence and agreement. The IPCC calibrated language uses five qualifiers to express a level of confidence (very low, low, medium, high and very high )

### very likely

90–100% probability (Indicates the assessed likelihood of an outcome or a result)

### very low confidence

Each finding is grounded in an evaluation of underlying evidence and agreement. The IPCC calibrated language uses five qualifiers to express a level of confidence (very low, low, medium, high and very high )

### very unlikely

0–10% probability (Indicates the assessed likelihood of an outcome or a result)

### virtually certain

99–100% probability (Indicates the assessed likelihood of an outcome or a result)

# Sandbox

### addfsdfsd

sdfsdf

**Beschreibung (einfach):**

sdfsdfsd

**Status:**

Entwurf

**Verwandt:**

[black carbon](https://tibhannover.github.io/semantic-glossar/sandbox.html#black-carbon)

**Unterbegriff von:**

[Gordon Shumway](https://tibhannover.github.io/semantic-glossar/sandbox.html#gordon-shumway)

**Synonyme:**

[black carbon](https://tibhannover.github.io/semantic-glossar/sandbox.html#black-carbon)

### Begriff

Beschreibung

**Status:**

Entwurf

### Begriff2

Beschreibung

**Status:**

Entwurf

**Tags:**

Monday

**Unterbegriff von:**

[Katze](https://tibhannover.github.io/semantic-glossar/sandbox.html#katze)

### Bishopskin

Band aus London

**Status:**

Entwurf

### dssdfdf

sdsdfsdfs

**Beschreibung (einfach):**

sdfsdfsdf

**Status:**

Entwurf

**Verwandt:**

[black carbon](https://tibhannover.github.io/semantic-glossar/sandbox.html#black-carbon)

**Synonyme:**

[black carbon](https://tibhannover.github.io/semantic-glossar/sandbox.html#black-carbon)

### Globalisation

Economic policy of extending supply chains.

**Beschreibung (einfach):**

Economic policy of extending supply chains.

**Status:**

Entwurf

### Grigori Jefimowitsch Rasputin

Rasputin ist einer der bekanntesten Namen in der Geschichte Russlands. Über ihn gibt es eine Vielzahl von Biographien, Romanen, Spiel- und Dokumentarfilmen sowie Theaterstücken, Opern und Musicals. Unzählige Bars, Restaurants und Nachtclubs sind nach ihm benannt. Er ist die Hauptfigur in mindestens zwei Videospielen und erscheint in japanischen Manga- und Anime-Produktionen.

**Status:**

Entwurf

### Hund

Säugetier mit vier Beinen und zwei Ohren.

**Status:**

Entwurf

### Katze

Tier, meistens etwas kleiner als ein Hund

**Status:**

Entwurf

**Verwandt:**

[Pferd](https://tibhannover.github.io/semantic-glossar/sandbox.html#pferd), [Waschbär](https://tibhannover.github.io/semantic-glossar/sandbox.html#waschbär), [Hund](https://tibhannover.github.io/semantic-glossar/sandbox.html#hund)

### Kilgore Trout

Fiktionaler Schriftsteller

**Status:**

In Review

**Synonyme:**

[Theodore Sturgeon](https://tibhannover.github.io/semantic-glossar/sandbox.html#theodore-sturgeon)

### Kinsbishop

UK BAND

**Status:**

Entwurf

**Tags:**

Player

**Unterbegriff von:**

[Bishopskin](https://tibhannover.github.io/semantic-glossar/sandbox.html#bishopskin)

### Link

About the link <https://link.com/>

**Status:**

Entwurf

### long descr test

vv1WcFGDNsBbqMf6DKkuTybDfNBBs2qco9THNE0Y1N421IukAtSgO74HDgyRTeiOeb7v0LkRijr2BijlzmIy0pPOtEF2eC52ggjvIuuOKbKYUr0EPfKxN9nRE6TITWZ7gXByd8lhf4RTfKmizuvrOI3vIHTbpZ3XkrqD8liKAVsoJJGgwBVxQGk2UQt8Ribb67NaNWty1qEy8RrViG4V8iTuayxr9mXEmgHUVTLRpf6Lzn65i7R6BMmCuHZRT82ckybsnhqWCbT1Aa8gQZrLfTG9HkFlTsM9XkbwISQk5imtatOjZ3aoVgUjhGk6oD3V96DuTLwEWpWPnkLYE1pibVxSnAUHIuP4LIq9SPAO7LGj0az22EsydZxh7WeRYsXHFbnjGrZd6ePRxYvM

**Status:**

Entwurf

### Pferd

Vierbeiniges Säugetier

**Beschreibung (einfach):**

Vierbeiniges Säugetier

**Status:**

Entwurf

### sdfsdf

sdfsdf

**Beschreibung (einfach):**

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**Status:**

Entwurf

### sfsd

sdf

**Beschreibung (einfach):**

dsf

**Status:**

Entwurf

### Staatsvertrag

Ein Staatsvertrag ist ein Vertrag, bei dem mindestens einer der Vertragspartner ein staatliches Organ ist.

**Status:**

Entwurf

**Verwandt:**

[APEC](https://tibhannover.github.io/semantic-glossar/sandbox.html#apec), [APP](https://tibhannover.github.io/semantic-glossar/sandbox.html#app)

**Unterbegriff von:**

[APEC](https://tibhannover.github.io/semantic-glossar/sandbox.html#apec)

**Synonyme:**

[APEC](https://tibhannover.github.io/semantic-glossar/sandbox.html#apec)

### Test

Test

**Status:**

Entwurf

### test111

test

**Status:**

Entwurf

### testTermasdsdsdsdfdsf

sdfsdfsdsdfs

**Status:**

Review ausstehend

### testTermUmlaute

Eine Gefahr, wie z.B: ein Hochwasser kann zu Schäden führen

**Status:**

Entwurf

### testTermX

Beschreibung

**Beschreibung (einfach):**

Klartext

**Status:**

Entwurf

### The Gun Club

Amerikanische Band

**Status:**

Entwurf

### Theodore Sturgeon

Realer Schriftsteller

**Status:**

Entwurf

**Synonyme:**

[Kilgore Trout](https://tibhannover.github.io/semantic-glossar/sandbox.html#kilgore-trout)

### Waschbär

Mittelgroßes Tier mit Streifen und Panzerknackermaske

**Status:**

Entwurf

### Wasser

Etwa 70% von dir, mir, Bello und unserem blauen Planeten

**Status:**

Entwurf

# EPA: Begriffe zum Klimawandel

## EPA (US: Environmental Protection Agency)

Name: Glossar der Begriffe zum Klimawandel

Beschreibung: Glossar der auf der EPA-Website zum Klimawandel verwendeten Begriffe.

Veröffentlichende Organisation: Office of Air and Radiation/Office of Atmospheric Protection/Climate Change Division

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Programm-Website: <https://www.epa.gov/climate-research>

Terminologieservice: [Link](https://sor.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=Glossary%20Climate%20Change%20Terms)

## Terms

### 100-Year Flood Levels

Severe flood levels with a one-in-100 likelihood of occurring in any given year.

### Abrupt Climate Change

Sudden (on the order of decades), large changes in some major component of the climate system, with rapid, widespread effects.

### Adaptation

Adjustment or preparation of natural or human systems to a new or changing environment which moderates harm or exploits beneficial opportunities.

### Adaptive Capacity

The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

### Aerosols

Small particles or liquid droplets in the atmosphere that can absorb or reflect sunlight depending on their composition.

### Afforestation

Planting of new forests on lands that historically have not contained forests.

### Albedo

The amount of solar radiation reflected from an object or surface, often expressed as a percentage.

### Alternative Energy

Energy derived from nontraditional sources (e.g., compressed natural gas, solar, hydroelectric, wind).

### Annex I Countries/Parties

Group of countries included in Annex I (as amended in 1998) to the United Nations Framework Convention on Climate Change, including all the developed countries in the Organization of Economic Co-operation and Development, and economies in transition. By default, the other countries are referred to as Non-Annex I countries. Under Articles 4.2 (a) and 4.2 (b) of the Convention, Annex I countries commit themselves specifically to the aim of returning individually or jointly to their 1990 levels of greenhouse gas emissions by the year 2000.

### Anthropogenic

Made by people or resulting from human activities. Usually used in the context of emissions that are produced as a result of human activities.

### Atmosphere

The gaseous envelope surrounding the Earth. The dry atmosphere consists almost entirely of nitrogen (78.1% volume mixing ratio) and oxygen (20.9% volume mixing ratio), together with a number of trace gases, such as argon (0.93% volume mixing ratio), helium, radiatively active greenhouse gases such as carbon dioxide (0.035% volume mixing ratio), and ozone. In addition the atmosphere contains water vapor, whose amount is highly variable but typically 1% volume mixing ratio. The atmosphere also contains clouds and aerosols.

### Atmospheric Lifetime

Atmospheric lifetime is the average time that a molecule resides in the atmosphere before it is removed by chemical reaction or deposition. In general, if a quantity of a compound is emitted into the atmosphere at a particular time, about 35 percent of that quantity will remain in the atmosphere at the end of the compound’s atmospheric lifetime. This fraction will continue to decrease in an exponential way, so that about 15 percent of the quantity will remain at the end of two times the atmospheric lifetime, etc. (Some compounds, most notably carbon dioxide, have more complex lifecycles, and their atmospheric lifetimes are not defined by a simple exponential equation.) Greenhouse gas lifetimes can range from a few years to a few thousand years.

### Biofuels

Gas or liquid fuel made from plant material (biomass). Includes wood, wood waste, wood liquors, peat, railroad ties, wood sludge, spent sulfite liquors, agricultural waste, straw, tires, fish oils, tall oil, sludge waste, waste alcohol, municipal solid waste, landfill gases, other waste, and ethanol blended into motor gasoline.

### Biogeochemical Cycle

Movements through the Earth system of key chemical constituents essential to life, such as carbon, nitrogen, oxygen, and phosphorus.

### Biomass

Materials that are biological in origin, including organic material (both living and dead) from above and below ground, for example, trees, crops, grasses, tree litter, roots, and animals and animal waste.

### Biosphere

The part of the Earth system comprising all ecosystems and living organisms, in the atmosphere, on land (terrestrial biosphere) or in the oceans (marine biosphere), including derived dead organic matter, such as litter, soil organic matter and oceanic detritus.

### Black Carbon Aerosol

Black carbon (BC) is the most strongly light-absorbing component of particulate matter (PM), and is formed by the incomplete combustion of fossil fuels, biofuels, and biomass. It is emitted directly into the atmosphere in the form of fine particles (PM2.5).

### Borehole

Any exploratory hole drilled into the Earth or ice to gather geophysical data. Climate researchers often take ice core samples, a type of borehole, to predict atmospheric composition in earlier years. See ice core.

### Carbon Capture and Sequestration

Carbon capture and sequestration (CCS) is a set of technologies that can greatly reduce carbon dioxide emissions from new and existing coal- and gas-fired power plants, industrial processes, and other stationary sources of carbon dioxide. It is a three-step process that includes capture of carbon dioxide from power plants or industrial sources; transport of the captured and compressed carbon dioxide (usually in pipelines); and underground injection and geologic sequestration, or permanent storage, of that carbon dioxide in rock formations that contain tiny openings or pores that trap and hold the carbon dioxide.

CCS

### Carbon Cycle

All parts (reservoirs) and fluxes of carbon. The cycle is usually thought of as four main reservoirs of carbon interconnected by pathways of exchange. The reservoirs are the atmosphere, terrestrial biosphere (usually includes freshwater systems), oceans, and sediments (includes fossil fuels). The annual movements of carbon, the carbon exchanges between reservoirs, occur because of various chemical, physical, geological, and biological processes. The ocean contains the largest pool of carbon near the surface of the Earth, but most of that pool is not involved with rapid exchange with the atmosphere.

### Carbon Dioxide

A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal human caused greenhouse gas that affects the Earth’s radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1. See climate change and global warming.

### Carbon Dioxide Equivalent

A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). Carbon dioxide equivalents are commonly expressed as “million metric tons of carbon dioxide equivalents (MMTCO₂Eq).” The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP. MMTCO₂Eq = (million metric tons of a gas) \* (GWP of the gas) See greenhouse gas, global warming potential, metric ton.

### Carbon Dioxide Fertilization

The enhancement of the growth of plants as a result of increased atmospheric CO₂ concentration. Depending on their mechanism of photosynthesis, certain types of plants are more sensitive to changes in atmospheric CO₂ concentration.

### Carbon Footprint

The total amount of greenhouse gases that are emitted into the atmosphere each year by a person, family, building, organization, or company. A persons carbon footprint includes greenhouse gas emissions from fuel that an individual burns directly, such as by heating a home or riding in a car. It also includes greenhouse gases that come from producing the goods or services that the individual uses, including emissions from power plants that make electricity, factories that make products, and landfills where trash gets sent.

### Carbon Sequestration

Terrestrial, or biologic, carbon sequestration is the process by which trees and plants absorb carbon dioxide, release the oxygen, and store the carbon. Geologic sequestration is one step in the process of carbon capture and sequestration (CCS), and involves injecting carbon dioxide deep underground where it stays permanently.

### Chlorofluorocarbons

Gases covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere, CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are being replaced by other compounds: hydrochlorofluorocarbons, an interim replacement for CFCs that are also covered under the Montreal Protocol, and hydrofluorocarbons, which are covered under the Kyoto Protocol. All these substances are also greenhouse gases. See hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, ozone depleting substance.

### Climate

Climate in a narrow sense is usually defined as the “average weather,” or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands of years. The classical period is 3 decades, as defined by the World Meteorological Organization (WMO). These quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system. See weather.

### Climate Change

Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer.

### Climate Feedback

A process that acts to amplify or reduce direct warming or cooling effects.

### Climate Lag

The delay that occurs in climate change as a result of some factor that changes only very slowly. For example, the effects of releasing more carbon dioxide into the atmosphere occur gradually over time because the ocean takes a long time to warm up in response to a change in radiation. See climate, climate change.

### Climate Model

A quantitative way of representing the interactions of the atmosphere, oceans, land surface, and ice. Models can range from relatively simple to quite comprehensive. See General Circulation Model.

### Climate Sensitivity

In Intergovernmental Panel on Climate Change (IPCC) reports, equilibrium climate sensitivity refers to the equilibrium change in global mean surface temperature following a doubling of the atmospheric (equivalent) CO₂ concentration. More generally, equilibrium climate sensitivity refers to the equilibrium change in surface air temperature following a unit change in radiative forcing (degrees Celsius, per watts per square meter, °C/Wm-2). One method of evaluating the equilibrium climate sensitivity requires very long simulations with Coupled General Circulation Models (Climate model). The effective climate sensitivity is a related measure that circumvents this requirement. It is evaluated from model output for evolving non-equilibrium conditions. It is a measure of the strengths of the feedbacks at a particular time and may vary with forcing history and climate state. See climate, radiative forcing.

### Climate System

The five physical components (atmosphere, hydrosphere, cryosphere, lithosphere, and biosphere) that are responsible for the climate and its variations.

### Co-Benefit

The benefits of policies that are implemented for various reasons at the same time including climate change mitigation acknowledging that most policies designed to address greenhouse gas mitigation also have other, often at least equally important, rationales (e.g., related to objectives of development, sustainability, and equity).

### Coal Mine Methane

Coal mine methane is the subset of coalbed methane that is released from the coal seams during the process of coal mining. For more information, visit the Coalbed Methane Outreach program site [http://www.epa.gov/cmop/].

### Coalbed Methane

Coalbed methane is methane contained in coal seams, and is often referred to as virgin coalbed methane, or coal seam gas. For more information, visit the Coalbed Methane Outreach program site [http://www.epa.gov/cmop/].

### Concentration

Amount of a chemical in a particular volume or weight of air, water, soil, or other medium. See parts per billion, parts per million.

### Conference of the Parties

The supreme body of the United Nations Framework Convention on Climate Change (UNFCCC). It comprises more than 180 nations that have ratified the Convention. Its first session was held in Berlin, Germany, in 1995 and it is expected to continue meeting on a yearly basis. The COP’s role is to promote and review the implementation of the Convention. It will periodically review existing commitments in light of the Convention’s objective, new scientific findings, and the effectiveness of national climate change programs. See United Nations Framework Convention on Climate Change.

### Coral Bleaching

The process in which a coral colony, under environmental stress expels the microscopic algae (zooxanthellae) that live in symbiosis with their host organisms (polyps). The affected coral colony appears whitened.

### Cryosphere

One of the interrelated components of the Earth’s system, the cryosphere is frozen water in the form of snow, permanently frozen ground (permafrost), floating ice, and glaciers. Fluctuations in the volume of the cryosphere cause changes in ocean sea level, which directly impact the atmosphere and biosphere.

### Deforestation

Those practices or processes that result in the conversion of forested lands for non-forest uses. Deforestation contributes to increasing carbon dioxide concentrations for two reasons: 1) the burning or decomposition of the wood releases carbon dioxide; and 2) trees that once removed carbon dioxide from the atmosphere in the process of photosynthesis are no longer present.

### Desertification

Land degradation in arid, semi-arid, and dry sub-humid areas resulting from various factors, including climatic variations and human activities. Further, the UNCCD (The United Nations Convention to Combat Desertification) defines land degradation as a reduction or loss, in arid, semi-arid, and dry sub-humid areas, of the biological or economic productivity and complexity of rain-fed cropland, irrigated cropland, or range, pasture, forest, and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns, such as: (i) soil erosion caused by wind and/or water; (ii) deterioration of the physical, chemical and biological or economic properties of soil; and (iii) long-term loss of natural vegetation. Conversion of forest to non-forest.

### Dryland Farming

A technique that uses soil moisture conservation and seed selection to optimize production under dry conditions.

### Earth System

### Eccentricity

The extent to which the Earth’s orbit around the Sun departs from a perfect circle.

### Ecosystem

Any natural unit or entity including living and non-living parts that interact to produce a stable system through cyclic exchange of materials.

### El Niño - Southern Oscillation

El Niño, in its original sense, is a warm water current that periodically flows along the coast of Ecuador and Peru, disrupting the local fishery. This oceanic event is associated with a fluctuation of the intertropical surface pressure pattern and circulation in the Indian and Pacific Oceans, called the Southern Oscillation. This coupled atmosphere-ocean phenomenon is collectively known as El Niño-Southern Oscillation. During an El Niño event, the prevailing trade winds weaken and the equatorial countercurrent strengthens, causing warm surface waters in the Indonesian area to flow eastward to overlie the cold waters of the Peru current. This event has great impact on the wind, sea surface temperature, and precipitation patterns in the tropical Pacific. It has climatic effects throughout the Pacific region and in many other parts of the world. The opposite of an El Niño event is called La Niña.

ENSO

### Emissions

The release of a substance (usually a gas when referring to the subject of climate change) into the atmosphere.

### Emissions Factor

A unique value for scaling emissions to activity data in terms of a standard rate of emissions per unit of activity (e.g., grams of carbon dioxide emitted per barrel of fossil fuel consumed, or per pound of product produced).

### Energy Efficiency

Using less energy to provide the same service.

### Energy Star

A U.S. Environmental Protection Agency voluntary program that helps businesses and individuals save money and protect our climate through superior energy efficiency. Learn more about ENERGY STAR (http://www.energystar.gov/index.cfm?c=about.ab\_index).

### Enhanced Greenhouse Effect

The concept that the natural greenhouse effect has been enhanced by increased atmospheric concentrations of greenhouse gases (such as CO₂ and methane) emitted as a result of human activities. These added greenhouse gases cause the earth to warm. See greenhouse effect.

### Enteric Fermentation

Livestock, especially cattle, produce methane as part of their digestion. This process is called enteric fermentation, and it represents one third of the emissions from the agriculture sector.

### Evaporation

The process by which water changes from a liquid to a gas or vapor.

### Evapotranspiration

The combined process of evaporation from the Earth’s surface and transpiration from vegetation.

### Feedback Mechanisms

Factors which increase or amplify (positive feedback) or decrease (negative feedback) the rate of a process. An example of positive climatic feedback is the ice-albedo feedback. See climate feedback.

### Fluorinated Gases

Powerful synthetic greenhouse gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons, hydrochlorofluorocarbons, and halons) and are often used in coolants, foaming agents, fire extinguishers, solvents, pesticides, and aerosol propellants. These gases are emitted in small quantities compared to carbon dioxide (CO₂), methane (CH₄), or nitrous oxide (N₂O), but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases (High GWP gases).

### Fluorocarbons

Carbon-fluorine compounds that often contain other elements such as hydrogen, chlorine, or bromine. Common fluorocarbons include chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). See chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, ozone depleting substance.

### Forcing Mechanism

A process that alters the energy balance of the climate system, i.e. changes the relative balance between incoming solar radiation and outgoing infrared radiation from Earth. Such mechanisms include changes in solar irradiance, volcanic eruptions, and enhancement of the natural greenhouse effect by emissions of greenhouse gases. See radiation, infrared radiation, radiative forcing.

### Fossil Fuel

A general term for organic materials formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the earth’s crust over hundreds of millions of years.

### Fuel Switching

In general, this is substituting one type of fuel for another. In the climate-change discussion it is implicit that the substituted fuel produces lower carbon emissions per unit energy produced than the original fuel, e.g., natural gas for coal.

### General Circulation Model

A global, three-dimensional computer model of the climate system which can be used to simulate human-induced climate change. GCMs are highly complex and they represent the effects of such factors as reflective and absorptive properties of atmospheric water vapor, greenhouse gas concentrations, clouds, annual and daily solar heating, ocean temperatures and ice boundaries. The most recent GCMs include global representations of the atmosphere, oceans, and land surface. See climate modeling.

GCM

### Geosphere

The soils, sediments, and rock layers of the Earth’s crust, both continental and beneath the ocean floors.

### Glacier

A multi-year surplus accumulation of snowfall in excess of snowmelt on land and resulting in a mass of ice at least 0.1 km2 in area that shows some evidence of movement in response to gravity. A glacier may terminate on land or in water. Glacier ice is the largest reservoir of fresh water on Earth, and second only to the oceans as the largest reservoir of total water. Glaciers are found on every continent except Australia.

### Global Average Temperature

An estimate of Earth’s mean surface air temperature averaged over the entire planet.

### Global Warming

The recent and ongoing global average increase in temperature near the Earth’s surface.

### Global Warming Potential

A measure of the total energy that a gas absorbs over a particular period of time (usually 100 years), compared to carbon dioxide.

### Greenhouse Effect

Trapping and build-up of heat in the atmosphere (troposphere) near the Earth’s surface. Some of the heat flowing back toward space from the Earth’s surface is absorbed by water vapor, carbon dioxide, ozone, and several other gases in the atmosphere and then reradiated back toward the Earth’s surface. If the atmospheric concentrations of these greenhouse gases rise, the average temperature of the lower atmosphere will gradually increase. See greenhouse gas, anthropogenic, climate, global warming.

### Greenhouse Gas

Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride.

GHG

### Habitat Fragmentation

A process during which larger areas of habitat are broken into a number of smaller patches of smaller total area, isolated from each other by a matrix of habitats unlike the original habitat. (Fahrig 2003 [http://www.fs.usda.gov/r1])

### Halocarbons

Compounds containing either chlorine, bromine or fluorine and carbon. Such compounds can act as powerful greenhouse gases in the atmosphere. The chlorine and bromine containing halocarbons are also involved in the depletion of the ozone layer.

### Heat Island

An urban area characterized by temperatures higher than those of the surrounding non-urban area. As urban areas develop, buildings, roads, and other infrastructure replace open land and vegetation. These surfaces absorb more solar energy, which can create higher temperatures in urban areas.

### Heat Waves

A prolonged period of excessive heat, often combined with excessive humidity.

### Hydrocarbons

Substances containing only hydrogen and carbon. Fossil fuels are made up of hydrocarbons.

### Hydrochlorofluorocarbons

Compounds containing hydrogen, fluorine, chlorine, and carbon atoms. Although ozone depleting substances, they are less potent at destroying stratospheric ozone than chlorofluorocarbons (CFCs). They have been introduced as temporary replacements for CFCs and are also greenhouse gases. See ozone depleting substance.

HCFCs

### Hydrofluorocarbons

Compounds containing only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are powerful greenhouse gases with global warming potentials ranging from 140 (HFC-152a) to 11,700 (HFC-23).

HFCs

### Hydrologic Cycle

The process of evaporation, vertical and horizontal transport of vapor, condensation, precipitation, and the flow of water from continents to oceans. It is a major factor in determining climate through its influence on surface vegetation, the clouds, snow and ice, and soil moisture. The hydrologic cycle is responsible for 25 to 30 percent of the mid-latitudes’ heat transport from the equatorial to polar regions.

### Hydrosphere

The component of the climate system comprising liquid surface and subterranean water, such as: oceans, seas, rivers, fresh water lakes, underground water etc.

### Ice Core

A cylindrical section of ice removed from a glacier or an ice sheet in order to study climate patterns of the past. By performing chemical analyses on the air trapped in the ice, scientists can estimate the percentage of carbon dioxide and other trace gases in the atmosphere at a given time. Analysis of the ice itself can give some indication of historic temperatures.

### Indirect Emissions

Indirect emissions from a building, home or business are those emissions of greenhouse gases that occur as a result of the generation of electricity used in that building. These emissions are called “indirect” because the actual emissions occur at the power plant which generates the electricity, not at the building using the electricity.

### Industrial Revolution

A period of rapid industrial growth with far-reaching social and economic consequences, beginning in England during the second half of the 18th century and spreading to Europe and later to other countries including the United States. The industrial revolution marks the beginning of a strong increase in combustion of fossil fuels and related emissions of carbon dioxide.

### Infrared Radiation

Infrared radiation consists of light whose wavelength is longer than the red color in the visible part of the spectrum, but shorter than microwave radiation. Infrared radiation can be perceived as heat. The Earth’s surface, the atmosphere, and clouds all emit infrared radiation, which is also known as terrestrial or long-wave radiation. In contrast, solar radiation is mainly short-wave radiation because of the temperature of the Sun. See radiation, greenhouse effect, enhanced greenhouse effect, global warming.

### Intergovernmental Panel on Climate Change

The IPCC was established jointly by the United Nations Environment Programme and the World Meteorological Organization in 1988. The purpose of the IPCC is to assess information in the scientific and technical literature related to all significant components of the issue of climate change. The IPCC draws upon hundreds of the world’s expert scientists as authors and thousands as expert reviewers. Leading experts on climate change and environmental, social, and economic sciences from some 60 nations have helped the IPCC to prepare periodic assessments of the scientific underpinnings for understanding global climate change and its consequences. With its capacity for reporting on climate change, its consequences, and the viability of adaptation and mitigation measures, the IPCC is also looked to as the official advisory body to the world’s governments on the state of the science of the climate change issue. For example, the IPCC organized the development of internationally accepted methods for conducting national greenhouse gas emission inventories.

IPCC

### Inundation

The submergence of land by water, particularly in a coastal setting.

### Landfill

Land waste disposal site in which waste is generally spread in thin layers, compacted, and covered with a fresh layer of soil each day.

### Latitude

The location north or south in reference to the equator, which is designated at zero (0) degrees. Lines of latitude are parallel to the equator and circle the globe. The North and South poles are at 90 degrees North and South latitude.

### Least Developed Country

A country with low indicators of socioeconomic development and human resources, as well as economic vulnerability, as determined by the United Nations.

### Longwave Radiation

Radiation emitted in the spectral wavelength greater than about 4 micrometers, corresponding to the radiation emitted from the Earth and atmosphere. It is sometimes referred to as ‘terrestrial radiation’ or ‘infrared radiation,’ although somewhat imprecisely. See infrared radiation.

### Megacities

Cities with populations over 10 million.

### Methane

A hydrocarbon that is a greenhouse gas with a global warming potential most recently estimated at 25 times that of carbon dioxide (CO₂). Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion. The GWP is from the IPCC’s Fourth Assessment Report (AR4). For more information visit EPA’s Methane site [https://www3.epa.gov/climatechange/ghgemissions/gases/ch4.html].

CH₄

### Metric Ton

Common international measurement for the quantity of greenhouse gas emissions. A metric ton is equal to 2205 lbs or 1.1 short tons. See short ton.

### Mitigation

A human intervention to reduce the human impact on the climate system; it includes strategies to reduce greenhouse gas sources and emissions and enhancing greenhouse gas sinks.

### Mount Pinatubo

A volcano in the Philippine Islands that erupted in 1991. The eruption of Mount Pinatubo ejected enough particulate and sulfate aerosol matter into the atmosphere to block some of the incoming solar radiation from reaching Earth’s atmosphere. This effectively cooled the planet from 1992 to 1994, masking the warming that had been occurring for most of the 1980s and 1990s.

### Municipal Solid Waste

Residential solid waste and some non-hazardous commercial, institutional, and industrial wastes. This material is generally sent to municipal landfills for disposal. See landfill.

MSW

### Natural Gas

Underground deposits of gases consisting of 50 to 90 percent methane (CH₄) and small amounts of heavier gaseous hydrocarbon compounds such as propane (C3H8) and butane (C4H10).

### Natural Variability

Variations in the mean state and other statistics (such as standard deviations or statistics of extremes) of the climate on all time and space scales beyond that of individual weather events. Natural variations in climate over time are caused by internal processes of the climate system, such as El Niño, as well as changes in external influences, such as volcanic activity and variations in the output of the sun.

### Nitrogen Cycle

The natural circulation of nitrogen among the atmosphere, plants, animals, and microorganisms that live in soil and water. Nitrogen takes on a variety of chemical forms throughout the nitrogen cycle, including nitrous oxide (N2O) and nitrogen oxides (NOx).

### Nitrogen Oxides

Gases consisting of one molecule of nitrogen and varying numbers of oxygen molecules. Nitrogen oxides are produced in the emissions of vehicle exhausts and from power stations. In the atmosphere, nitrogen oxides can contribute to formation of photochemical ozone (smog), can impair visibility, and have health consequences; they are thus considered pollutants.

NOx

### Nitrous Oxide

A powerful greenhouse gas with a global warming potential of 298 times that of carbon dioxide (CO₂). Major sources of nitrous oxide include soil cultivation practices, especially the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning. The GWP is from the IPCC’s Fourth Assessment Report (AR4). Natural emissions of N₂O are mainly from bacteria breaking down nitrogen in soils and the oceans. Nitrous oxide is mainly removed from the atmosphere through destruction in the stratosphere by ultraviolet radiation and associated chemical reactions, but it can also be consumed by certain types of bacteria in soils.

N₂O

### Non-Methane Volatile Organic Compounds

Organic compounds, other than methane, that participate in atmospheric photochemical reactions.

NMVOCs

### Ocean Acidification

Increased concentrations of carbon dioxide in sea water causing a measurable increase in acidity (i.e., a reduction in ocean pH). This may lead to reduced calcification rates of calcifying organisms such as corals, mollusks, algae and crustaceans.

### Oxidize

To chemically transform a substance by combining it with oxygen.

### Ozone

Ozone, the triatomic form of oxygen (O₃), is a gaseous atmospheric constituent. In the troposphere, it is created by photochemical reactions involving gases resulting both from natural sources and from human activities (photochemical smog). In high concentrations, tropospheric ozone can be harmful to a wide range of living organisms. Tropospheric ozone acts as a greenhouse gas. In the stratosphere, ozone is created by the interaction between solar ultraviolet radiation and molecular oxygen (O2). Stratospheric ozone plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric ozone, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet (UV-) B radiation. See atmosphere, ultraviolet radiation.

O₃

### Ozone Depleting Substance

A family of man-made compounds that includes, but are not limited to, chlorofluorocarbons (CFCs), bromofluorocarbons (halons), methyl chloroform, carbon tetrachloride, methyl bromide, and hydrochlorofluorocarbons (HCFCs). These compounds have been shown to deplete stratospheric ozone, and therefore are typically referred to as ODSs. See ozone.

ODS

### Ozone Layer

The layer of ozone that begins approximately 15 km above Earth and thins to an almost negligible amount at about 50 km, shields the Earth from harmful ultraviolet radiation from the sun. The highest natural concentration of ozone (approximately 10 parts per million by volume) occurs in the stratosphere at approximately 25 km above Earth. The stratospheric ozone concentration changes throughout the year as stratospheric circulation changes with the seasons. Natural events such as volcanoes and solar flares can produce changes in ozone concentration, but man-made changes are of the greatest concern. See stratosphere, ultraviolet radiation.

### Ozone Precursors

Chemical compounds, such as carbon monoxide, methane, non-methane hydrocarbons, and nitrogen oxides, which in the presence of solar radiation react with other chemical compounds to form ozone, mainly in the troposphere. See troposphere.

### Particulate matter

Very small pieces of solid or liquid matter such as particles of soot, dust, fumes, mists or aerosols. The physical characteristics of particles, and how they combine with other particles, are part of the feedback mechanisms of the atmosphere. See aerosol, sulfate aerosols.

PM

### Parts Per Billion

Number of parts of a chemical found in one billion parts of a particular gas, liquid, or solid mixture. See concentration.

ppb

### Parts Per Million by Volume

Number of parts of a chemical found in one million parts of a particular gas, liquid, or solid. See concentration.

ppmv

### Parts Per Trillion

Number of parts of a chemical found in one trillion parts of a particular gas, liquid or solid. See concentration.

ppt

### Perfluorocarbons

A group of chemicals composed of carbon and fluorine only. These chemicals (predominantly CF4 and C2F6) were introduced as alternatives, along with hydrofluorocarbons, to the ozone depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are also used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they are powerful greenhouse gases: CF4 has a global warming potential (GWP) of 7,390 and C2F6 has a GWP of 12,200. The GWP is from the IPCC’s Fourth Assessment Report (AR4). These chemicals are predominantly human-made, though there is a small natural source of CF4. See ozone depleting substance.

### Permafrost

Perennially (continually) frozen ground that occurs where the temperature remains below 0°C for several years.

### PFCs

### Phenology

The timing of natural events, such as flower blooms and animal migration, which is influenced by changes in climate. Phenology is the study of such important seasonal events. Phenological events are influenced by a combination of climate factors, including light, temperature, rainfall, and humidity.

### Photosynthesis

The process by which plants take CO₂ from the air (or bicarbonate in water) to build carbohydrates, releasing O2 in the process. There are several pathways of photosynthesis with different responses to atmospheric CO₂ concentrations. See carbon sequestration, carbon dioxide fertilization.

### Precession

The wobble over thousands of years of the tilt of the Earth’s axis with respect to the plane of the solar system.

### Radiation

Energy transfer in the form of electromagnetic waves or particles that release energy when absorbed by an object. See ultraviolet radiation, infrared radiation, solar radiation, longwave radiation.

### Radiative Forcing

A measure of the influence of a particular factor (e.g. greenhouse gas (GHG), aerosol, or land use change) on the net change in the Earth’s energy balance.

### Recycling

Collecting and reprocessing a resource so it can be used again. An example is collecting aluminum cans, melting them down, and using the aluminum to make new cans or other aluminum products.

### Reflectivity

The ability of a surface material to reflect sunlight including the visible, infrared, and ultraviolet wavelengths.

### Reforestation

Planting of forests on lands that have previously contained forests but that have been converted to some other use.

### Relative Sea Level Rise

The increase in ocean water levels at a specific location, taking into account both global sea level rise and local factors, such as local subsidence and uplift. Relative sea level rise is measured with respect to a specified vertical datum relative to the land, which may also be changing elevation over time.

### Renewable Energy

Energy resources that are naturally replenishing such as biomass, hydro, geothermal, solar, wind, ocean thermal, wave action, and tidal action.

### Residence Time

The average time spent in a reservoir by an individual atom or molecule. With respect to greenhouse gases, residence time refers to how long on average a particular molecule remains in the atmosphere. For most gases other than methane and carbon dioxide, the residence time is approximately equal to the atmospheric lifetime.

### Resilience

A capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment.

### Respiration

The process whereby living organisms convert organic matter to CO2, releasing energy and consuming O2.

### Salt Water Intrusion

Displacement of fresh or ground water by the advance of salt water due to its greater density, usually in coastal and estuarine areas.

### Scenarios

A plausible and often simplified description of how the future may develop based on a coherent and internally consistent set of assumptions about driving forces and key relationships.

### Sea Surface Temperature

The temperature in the top several feet of the ocean, measured by ships, buoys and drifters.

### Sensitivity

The degree to which a system is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g., a change in crop yield in response to a change in the mean, range or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea level rise).

### Short Ton

Common measurement for a ton in the United States. A short ton is equal to 2,000 lbs or 0.907 metric tons. See metric ton.

### Sink

Any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas or aerosol from the atmosphere.

### Snowpack

A seasonal accumulation of slow-melting snow.

### Soil Carbon

A major component of the terrestrial biosphere pool in the carbon cycle. The amount of carbon in the soil is a function of the historical vegetative cover and productivity, which in turn is dependent in part upon climatic variables.

### Solar Radiation

Radiation emitted by the Sun. It is also referred to as short-wave radiation. Solar radiation has a distinctive range of wavelengths (spectrum) determined by the temperature of the Sun. See ultraviolet radiation, infrared radiation, radiation.

### Storm Surge

An abnormal rise in sea level accompanying a hurricane or other intense storm, whose height is the difference between the observed level of the sea surface and the level that would have occurred in the absence of the cyclone.

### Stratosphere

Region of the atmosphere between the troposphere and mesosphere, having a lower boundary of approximately 8 km at the poles to 15 km at the equator and an upper boundary of approximately 50 km. Depending upon latitude and season, the temperature in the lower stratosphere can increase, be isothermal, or even decrease with altitude, but the temperature in the upper stratosphere generally increases with height due to absorption of solar radiation by ozone.

### Stratospheric Ozone

See ozone layer.

### Streamflow

The volume of water that moves over a designated point over a fixed period of time. It is often expressed as cubic feet per second (ft3/sec).

### Subsiding/Subsidence

The downward settling of the Earth’s crust relative to its surroundings.

### Sulfate Aerosols

Particulate matter that consists of compounds of sulfur formed by the interaction of sulfur dioxide and sulfur trioxide with other compounds in the atmosphere. Sulfate aerosols are injected into the atmosphere from the combustion of fossil fuels and the eruption of volcanoes like Mt. Pinatubo. Sulfate aerosols can lower the Earth’s temperature by reflecting away solar radiation (negative radiative forcing). General Circulation Models which incorporate the effects of sulfate aerosols more accurately predict global temperature variations. See particulate matter, aerosol, General Circulation Models.

### Sulfur Hexafluoride

A colorless gas soluble in alcohol and ether, slightly soluble in water. A very powerful greenhouse gas used primarily in electrical transmission and distribution systems and as a dielectric in electronics. The global warming potential of SF6 is 22,800. This GWP is from the IPCC’s Fourth Assessment Report (AR4). See Global Warming Potential.

SF6

### Teragram

1 trillion (1012) grams = 1 million (106) metric tons.

### Thermal Expansion

The increase in volume (and decrease in density) that results from warming water. A warming of the ocean leads to an expansion of the ocean volume, which leads to an increase in sea level.

### Thermohaline Circulation

Large-scale density-driven circulation in the ocean, caused by differences in temperature and salinity. In the North Atlantic the thermohaline circulation consists of warm surface water flowing northward and cold deep water flowing southward, resulting in a net poleward transport of heat. The surface water sinks in highly restricted sinking regions located in high latitudes.

### Trace Gas

Any one of the less common gases found in the Earth’s atmosphere. Nitrogen, oxygen, and argon make up more than 99 percent of the Earth’s atmosphere. Other gases, such as carbon dioxide, water vapor, methane, oxides of nitrogen, ozone, and ammonia, are considered trace gases. Although relatively unimportant in terms of their absolute volume, they have significant effects on the Earth’s weather and climate.

### Troposphere

The lowest part of the atmosphere from the surface to about 10 km in altitude in mid-latitudes (ranging from 9 km in high latitudes to 16 km in the tropics on average) where clouds and “weather” phenomena occur. In the troposphere temperatures generally decrease with height. See ozone precursors, stratosphere, atmosphere.

### Tropospheric Ozone

See ozone.

O₃

### Tropospheric Ozone Precursors

See ozone precursors.

### Tundra

A treeless, level, or gently undulating plain characteristic of the Arctic and sub-Arctic regions characterized by low temperatures and short growing seasons.

### Ultraviolet Radiation

The energy range just beyond the violet end of the visible spectrum. Although ultraviolet radiation constitutes only about 5 percent of the total energy emitted from the sun, it is the major energy source for the stratosphere and mesosphere, playing a dominant role in both energy balance and chemical composition. Most ultraviolet radiation is blocked by Earth’s atmosphere, but some solar ultraviolet penetrates and aids in plant photosynthesis and helps produce vitamin D in humans. Too much ultraviolet radiation can burn the skin, cause skin cancer and cataracts, and damage vegetation.

UV

### United Nations Framework Convention on Climate Change

The Convention on Climate Change sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The Convention enjoys near universal membership, with 189 countries having ratified. Under the Convention, governments: (1) gather and share information on greenhouse gas emissions, national policies and best practices. (2) launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries. (3) cooperate in preparing for adaptation to the impacts of climate change. The Convention entered into force on 21 March 1994.

UNFCCC

### Vulnerability

The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed; its sensitivity; and its adaptive capacity.

### Wastewater

Water that has been used and contains dissolved or suspended waste materials.

### Water Vapor

The most abundant greenhouse gas, it is the water present in the atmosphere in gaseous form. Water vapor is an important part of the natural greenhouse effect. While humans are not significantly increasing its concentration through direct emissions, it contributes to the enhanced greenhouse effect because the warming influence of greenhouse gases leads to a positive water vapor feedback. In addition to its role as a natural greenhouse gas, water vapor also affects the temperature of the planet because clouds form when excess water vapor in the atmosphere condenses to form ice and water droplets and precipitation. See greenhouse gas.

### Weather

Atmospheric condition at any given time or place. It is measured in terms of such things as wind, temperature, humidity, atmospheric pressure, cloudiness, and precipitation. In most places, weather can change from hour-to-hour, day-to-day, and season-to-season. Climate in a narrow sense is usually defined as the “average weather”, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years. The classical period is 30 years, as defined by the World Meteorological Organization (WMO). These quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system. A simple way of remembering the difference is that climate is what you expect (e.g. cold winters) and ‘weather’ is what you get (e.g. a blizzard). See climate.

# Glossare

## Co-Site - Eingabeformular

Demonstration der Verwendung eines Eingabe- und Bearbeitungsformulars für die Pflege und Speicherung von Glossaren als Linked Open Data.

## Begriffe zum Klimawandel: EPA

Name: Glossar der Begriffe zum Klimawandel

Beschreibung: Glossar der auf der EPA-Website zum Klimawandel verwendeten Begriffe.

Veröffentlichende Organisation: Office of Air and Radiation/Office of Atmospheric Protection/Climate Change Division

Letzte Aktualisierung: 9. September 2013

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Terminologieservice: [Link](https://sor.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=Glossary%20Climate%20Change%20Terms)

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# Mitwirkende

## Programmierung

Siehe: Software Citation

# Literatur

EPA, OEI. 2013. “Climate Change Terms.” <https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=Glossary%20Climate%20Change%20Terms>.