

Semantic Glossar

Team NextGen Books

Co-Site

Co-Kreation in der Region –
Systemisch und innovativ
Transfer entwickeln

Technology
Arts Sciences
TH Köln

NextGen Book Services
Open Science Lab, TIB

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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](#).

Ein in Bearbeitung befindliches Beispiel ([semantisches Glossar](#)) 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](#) der US Environmental Protection Agency, EPA (2013), verwendet. Die EPA verwendet einen [Terminologieservice](#) und [Leitfaden](#) 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-Brille betrachten.

Verwandt: VR-Brille, Immersion

XR

Agenda 2030

siehe Sustainable Development Goals

Verwandt: sustainable development goals, SDG

Transformation

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.

Projekt

Akteur:innen

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

Projekt

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.

Projekt

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.

Weiterbildung

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.

Kommunikation

Anfälligkeit

siehe Vulnerabilität

Synonyme: Vulnerabilität

Risikomanagement

Anpassungsfähigkeit

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

Gefahr, KRITIS

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 Ele-

mente, wie Bilder oder Texte, in das Sichtfeld des Benutzers und ermöglichen so interaktive und erweiterte Erfahrungen.

Verwandt: Augmented Reality

Unterbegriff von: Head-Mounted Display

XR

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

XR

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

XR

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.

Wirkung

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

Wirkung

Begleitforschung

Synonym für formative Evaluation.

Synonyme: Formative Evaluation

Wirkung

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).

Weiterbildung

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

Projekt

Betriebliche Weiterbildung

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

Weiterbildung

Bevölkerungsschutz

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

Risikomanagement

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

Transformation

Blackout

Ungeplanter, großflächiger und langanhaltender Stromausfall.

KRITIS

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

GBI

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**

GBI

Change Agents

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

Transformation

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.

Partizipation

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

Partizipation

Co-Kreation

Gemeinschaftliche Gestaltung eines End- oder Zwischenprodukts unter Einbezug verschiedener Interessensgruppen

Partizipation

Co-kreative Wissenschaftskommunikation

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

Kommunikation

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 mehrerer Outputs, welche sowohl abstrakter als auch gestalterischer Natur sein können.

Partizipation

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.

Digitale Technologien

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

Projekt

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 Verständnis innerhalb des Projekts und darüber hinaus dar.

Einfache Beschreibung: Das Glossar des Projekts Co-Site.

Unterbegriff von: **Glossar**

Projekt

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.

GBI

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

Informationssystem, Daten

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.

InfoTool

Dateninteroperabilität

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

Daten

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.

Daten

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

InfoTool, Co-Site

Dezentrale Regenwasserversickerung

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

GBI

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

Kommunikation

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.

Weiterbildung

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, Urbaner Digitaler Zwilling

Digitale Technologien

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.

GBI

Dürreindex

Wert, der das Ausmaß, die Dauer und die Intensität von Dürrebedingungen angibt. Dürreindizes basieren in der Regel auf Niederschlags-, Verdunstungs-, und Bodenfeuchtigkeitsdaten einer Regi-

on. Geläufige Beispiele sind der Standardized Precipitation Evaporation Index (SPEI) oder Palmer Drought Severity Index (PDSI).

Naturgefahren, Risikomanagement

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.

GBI

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.

Projekt

Erweiterte Realität

Siehe Augmented Reality

XR

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.

Wirkung

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.

Ökosystem

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.

Projekt

Exposition

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

KRITIS

Exposition

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

Naturgefahr, Risikomanagement

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.

XR

Externe Wissenschaftskommunikation

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

Verwandt: *Interne Wissenschaftskommunikation*

Unterbegriff von: *Wissenschaftskommunikation*

Kommunikation

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 Black-out).

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

Naturgefahren

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.

Digitale Technologien

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, Indirekte Fassadenbegrünung

GBI

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.

Daten

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.

Naturgefahren

Fluviale Überflutung

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

Einfache Beschreibung: Überflutung durch überlaufende Gewässer

Naturgefahren

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

Synonyme: Wirkungsmonitoring

Wirkung

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).

Weiterbildung

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).

Daten

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.

Weiterbildung

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.

Digitale Technologien

Gamification

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

Digitale Technologien

Gefahr

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

Naturgefahren

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.

Risikomanagement

Gefahrenkarte (GK)

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

Naturgefahren

Gemeinwohlorientierung

Gemeinwohlorientierung fokussiert darauf, Entscheidungen und Maßnahmen zu treffen, die das Wohl der gesamten Gesellschaft im Fokus haben. Dabei steht nicht der individuelle oder wirtschaft-

liche Nutzen im Vordergrund, sondern der positive Einfluss auf das Gemeinwesen. Dies kann insbesondere, aber nicht ausschließlich, die Stärkung von benachteiligten Gruppen bedeuten.

Verwandt: **Impact**

Projekt

Geodaten

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

Daten, Informationssystem

Geodatenbank

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

InfoTool

Geodatendienste

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

InfoTool

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.

Informationssystem, Daten

Geodateninfrastruktur

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

Informationssystem, Daten

Geodatensatz

eine Sammlung von Daten, die verwandten geografischen Merkmalen entsprechen

InfoTool

Geodatenverarbeitung

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

InfoTool

Geoinformationssystem

(GIS)

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

Informationssystem, Daten

Geokodierung

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

GIS, InfoTool

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.

Informationssystem

Geoportal

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

Informationssystem

Georeferenzierung

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

GIS, InfoTool

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.

InfoTool

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.

Informationssystem

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.

Transformation

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.

Projekt

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.

Weiterbildung

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.

GBI

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 steigt an und führt zu Überflutungen durch Grundhochwasser.

Naturgefahren

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

GBI

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

Digitale Technologien

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.

KRITIS, Risikomanagement

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.

XR

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.

Naturgefahren

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

Naturgefahren, Risikomanagement

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

Risikomanagement, Naturgefahren

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.

XR

Impact

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

Wirkung

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.

GIS, GeoNode

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.

GBI, KRITIS

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.

Wirkung

Interdependenz

Interaktion oder gegenseitige Beeinflussung zwischen verschiedenen kritischen Infrastrukturen.

KRITIS

Interne Wissenschaftskommunikation

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

Kommunikation

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*

Risikomanagement

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.

GBI, Daten

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.

KRITIS

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.

Naturgefahren, Risikomanagement

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.

Risikomanagement

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.

Hitzeinsel

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 synonym zu Klimawandelanpassung verwendet.

Klima

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.

Kommunikation

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.

Klima

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.

Klima

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.

Klima

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.

Transformation, Klima

Kollaborativ

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

Partizipation

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

Kommunikation

Koordinatensystem

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

GIS, InfoTool

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 Mitteln zu bewältigen ist und reputationsschädigend sein kann.

Risikomanagement

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.

Risikomanagement

KRITIS-Branche

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

Unterbegriff von: KRITIS-Sektoren

KRITIS

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

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.

KRITIS

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.

GBI, Daten

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.

Weiterbildung

Makroebene

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

Kommunikation

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.

Transformation

Mesoebene

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

Kommunikation

Metadaten

strukturierte Daten, die Informationen über andere Daten und Datenquellen enthalten

Daten

Mikroebene

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

Kommunikation

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.

XR

Modellregionen

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

Projekt

Monitoring

Synonym zu formativer Evaluation.

Wirkung

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.

Transformation

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.

Transformation

Nachhaltigkeitsstrategie

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

Transformation

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.

GBI

Nature-based Solution

siehe Naturbasierte Lösung

Verwandt: **Naturbasierte Lösung**

GBI

Naturgefahren

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

Gefahr

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.

Projekt

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.

Ökosystem

Ökosystemfunktion

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

Ökosystem

Open Geospatial Consortium (OGC)

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

GIS, InfoTool

Open Science

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

Wissensmanagement

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.

Wirkung

Output

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

Wirkung

Partizipation

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

Partizipation

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.

Kommunikation, Partizipation

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

Projekt

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.

GBI

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.

Naturgefahren

Pluviale Überflutung

Überflutung durch Sturzfluten aus Starkregen weit ab vom Gewässer

Einfache Beschreibung: Überflutung von Flächen durch Starkregen

Verwandt: *Fluviale Überflutung*

GBI

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.

Projekt

Prävention

Maßnahmen zur Vermeidung und Verringerung von Risiken.

Verwandt: *Risiko*

Risikomanagement

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

Kommunikation

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

Kommunikation

Prospektive Evaluation

Eine prospektive Evaluation findet ex-ante statt, d.h. auf Grundlage erster Ideen und Konzepte und vor deren Implementierung. 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

Wirkung

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.

Partizipation

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.

Weiterbildung

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.

Weiterbildung

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.

GIS, InfoTool

Räumliche Analyse

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

GIS, InfoTool

Räumliche Auflösung

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

Daten, Informationssystem

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**

Projekt

Reallabor

Ein Reallabor ist ein institutionell-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.

Projekt

Regenwasserbewirtschaftung

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

GBI

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.

GBI

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*

GBI

Resilienz

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

Ökosystem, Risikomanagement

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.

Kommunikation

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.

GBI

Revitalisierung

Wiederbelebung eines Naturraums, der durch den Menschen beeinträchtigt ist.

Verwandt: Renaturierung

Ökosystem

Risiko

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

Risikomanagement

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 Vorhandensein von Kulturstätten betrachtet.

Risikomanagement, Naturgefahren

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.

Risikomanagement

Rückhaltevolumen

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

urbaner Retentionsraum, GBI

Schaden

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

Einfache Beschreibung: Negative Auswirkungen auf ein Schutzgut.

Risikomanagement

Schutzgut

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

Risikomanagement

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.

GBI

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.

KRITIS

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.

XR

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.

XR, Digitale Technologien

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

Projekt

Stakeholder

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

Verwandt: Dialoggruppe, Zielgruppe

Projekt

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.

Naturgefahren

Starkregengefahrenkarte (SRGK)

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

Naturgefahren, Risikomanagement

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.
Naturgefahr

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.
Risikomanagement, Naturgefahren

Staudamm

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

Sturmflut

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

Summative Evaluation

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

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 nach-

haltige Entwicklung dienen. Sie richten sich an Regierungen, die Zivilgesellschaft, Wirtschaft und Wissenschaft.

Verwandt: Agenda 2030

Synonyme: SDG

Transformation

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.

GBI, KRITIS, Projekt

Systemwissen

Beobachtungswissen über den Ist-Zustand eines Systems

Wissensmanagement

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.

GBI

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.

Naturgefahren

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).

Naturgefahren

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.

Projekt

Transfer

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

Verwandt: **Wissenstransfer**

Wissensmanagement

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.

Projekt

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**

Wissensmanagement

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, Wissenserzeugung

Wissensmanagement

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

Wissensmanagement

Transformation

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

Transformation

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.

Weiterbildung

Transformationsnetzwerk

Im Transformationsnetzwerk wirken verschiedene regionale Vertreter: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.

Projekt

Transformationswissen

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

Verwandt: *Systemwissen*

Wissensmanagement

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.

Transformation

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.

Weiterbildung, Transformation

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.

Naturgefahren

Urbane Resilienz

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

Transformation

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.

GBI

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

Digitale Technologien

Vektordaten

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

GIS, InfoTool

Verletzlichkeit

Siehe Vulnerabilität

Risikomanagement

Verwundbarkeit

siehe Vulnerabilität

Synonyme: Vulnerabilität, Anfälligkeit

Risikomanagement

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).

XR

Virtuelle Realität (VR)

Siehe Virtual Reality.

XR

Vision

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

Transformation

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.

XR

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.

XR

VUCA (VUCA)

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

Verwandt: Ambiguität

Projekt

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

Risikomanagement

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.

Risikomanagement

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, Schwammstadt, Grüne Infrastruktur, Regenwasserbewirtschaftung
GBI

Web Feature Service (WFS)

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

GIS, InfoTool

Web Map Service (WMS)

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

InfoTool, GIS

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.

Weiterbildung

Wirkung

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

Wirkung

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.

Wirkung

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.

Wirkung

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.

Wirkung

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.

Weiterbildung

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.

Kommunikation

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.

Wissensmanagement

Wissenstransfer

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

Wissensmanagement

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.

Partizipation

Zeitliche Auflösung

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

Daten

Zeitreihe

Zeitlich geordnete Messdaten, die regelmäßig erfasst wurden.

Daten

Zielgruppe

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

Verwandt: Dialoggruppe

Projekt

Zielwissen

Gemeinsam generiertes Wissen über gewünschte zukünftige Entwicklungen eines Systems

Wissensmanagement

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

Risikomanagment

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 niño

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's 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 niño

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%A0**ensemble**

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 alkalization/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.

thermohaline 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

CO²

carbon dioxide

CO²-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

HN03

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 cost mbpd, 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

N²O

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-building and 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 vehicle pkm, 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

S02

sulphur dioxide

S04²⁻

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

SRCL

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 programme
vkm, 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

WBG

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

addfsdfs

sdfsdf

Beschreibung (einfach):

sdfsdfs

Status:

Entwurf

Verwandt:

black carbon

Unterbegriff von:

Gordon Shumway

Synonyme:

black carbon

Begriff

Beschreibung

Status:

Entwurf

Begriff2

Beschreibung

Status:

Entwurf

Tags:

Monday

Unterbegriff von:

Katze

Bishopskin

Band aus London

Status:

Entwurf

dssdfdf

sdsdfsd

Beschreibung (einfach):

sdsdfsd

Status:

Entwurf

Verwandt:

black carbon

Synonyme:

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, Waschbär, Hund

Kilgore Trout

Fiktionaler Schriftsteller

Status:

In Review

Synonyme:

Theodore Sturgeon

Kinsbishop

UK BAND

Status:

Entwurf

Tags:

Player

Unterbegriff von:

Bishopskin

Link

About the link <https://link.com/>

Status:

Entwurf

long descr test

vv1WcFGDNsBbqMf6DKkuTybDfNBBs2qco9THNE0Y1N421lukAtSgO74HDgyRTeiOeb7v0LkRijr2Bijlzmly0pPOtEF2eC

Status:

Entwurf

Pferd

Vierbeiniges Säugetier

Beschreibung (einfach):

Vierbeiniges Säugetier

Status:

Entwurf

sdfsdf

sdfsdf

Beschreibung (einfach):

sdfsdf

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, APP

Unterbegriff von:

APEC

Synonyme:

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

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

Letzte Aktualisierung: 9. September 2013

Programm-Website: <https://www.epa.gov/climate-research>

Terminologieservice: [Link](#)

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 (PM_{2.5}).

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. $\text{MMTCO}_2\text{Eq} = (\text{million metric tons of a gas}) * (\text{GWP of the gas})$ 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 person's 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 overlies 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 (NO_x).

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.

NO_x

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. Alt-

though 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.

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