

THEMES AND VISUAL ELEMENTS IN NEWS IMAGERY ABOUT CLIMATE CHANGE: CODEBOOK

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PROJECT SUMMARY

This research project builds upon a growing research effort to incorporate social and behavioral theory and analysis to create a clearer picture of the role of news media in shaping public awareness about global climate change and associated actions (or lack thereof). This research was motivated by a desire to better understand 1) the types of information that have been provided in news reports about climate change over the past several decades, and 2) how people are likely to interpret and react to and/or act upon the information contained in these news stories. A better understanding of the types of information that have been provided in news reports is being pursued through algorithmic text analysis and visualization of approximately 156,000 news texts from print, broadcast, and digital media, and a human-coded content analysis of approximately 350 images randomly sampled from among the images that appeared with the newspaper and magazine stories.

This is the codebook for the image content analysis project. The first column contains the broad Category for each theme, the second column contains the Specific Theme, the third column contains a description of the Specific Theme, and the fourth column contains the sequential number for the code. Themes are specific themes and were coded based on examination of the images. Categories are more general themes, and each was derived from the specific themes listed in its Description column. Here they are used to group specific themes for greater conceptual ease in coding the images for specific themes. The codebook contains 118 specific Themes within 19 Categories. The final Categories, Themes, and specific wording is the result of multiple codings of the 350 images using 123 codes by three coders, involving over 175,000 separate codings. All of the final 118 codes exhibited excellent agreements and reliabilities (available from the authors).

GENERAL CONSIDERATIONS

Regarding independent coding of images from the same article (codebook version):

For the purposes of this study, each image should be coded separately based only on the information contained in the image itself, its caption, the article headline. (In a few cases noted below, the publication in which an image appeared has been used as the basis for geographic coding.) Images that appeared with the same article should not be considered as context for each other. Later, when reporting themes that were represented in the images associated with a particular article, themes will be aggregated across all images for each article. After coding each image individually and aggregating results in this manner, all images for each article will be examined together to evaluate whether or not any themes that were apparent in context of the other images were not identified when images were coded separately.

Attention to text integrated with images:

Text that appears overlaid upon or embedded within an image should be read carefully and used, together with headline and caption text, to determine codes that apply to the image. Exception: image credit information (name of individual or organization) should not be used as a part of image coding, and should not be interpreted as information about the geographic region represented in the image.

General rule for exclusions: Codes that involve exclusions are marked with (#). Apply exclusion only if it applies to all objects or entities in the image. If there are two elements of the image, headline, or caption that refer to different things and one thing falls under the exclusion while the other doesn't, each thing should be coded separately. Exclusions do not apply to whole images, only to individual elements within those images.

Coding of geographic categories:

When coding geographic categories, use only the most specific code when multiple categories are hierarchically nested. 'North America', the 'US', and 'California' are the hierarchically nested geographic categories in this coding

scheme. If an image depicts or refers to something associated with California, ‘California’ should be selected, and ‘US’ and ‘North America’ should not be selected. If the image depicts interaction between two or more objects or people that are associated with different geographic regions (e.g., Al Gore [US] and Arnold Schwarzenegger [California]), then both geographic regions (e.g., ‘California’ and ‘US’) should be selected for that image. If the image contains a secondary (e.g., background) element that represents the US when the main subject of the image is associated primarily with California (e.g., a US flag hanging behind Arnold Schwarzenegger), the reference to the US should be coded as a reference to ‘US iconography’ but NOT as referring to the geographic region ‘US’.

Images that are coded as ‘global (or many countries)’ should also be coded for individual countries/regions mentioned or represented. *Images that include world maps or maps of large regions should only be coded for individual countries contained therein if the country is specifically identified by text indicating either the name of the country itself or the name of a city that is commonly associated with that country.

*Geographic codes include any mention of a country or region, even when the geographic feature being referred to is distant from the primary geographic area associated with that country/region (e.g., the Falkland Islands in the South Atlantic should be coded as an instance of Europe).

Pre-coding of geographic categories for regional political figures:

Geographic regions for some images have been pre-coded in accordance with the following rule. When an image/headline/caption combination depicting a political figure refers to this political figure by title (e.g., governor, attorney general) but does not explicitly state the geographic region with which the figure is associated, the following rule applies: For news sources with a national audience*, no assumption was made about the geographic region of the individual depicted in or referred to by the image. For news sources with primarily a regional audience (in this case, the California newspapers), the geographic region of the newspaper was assumed to be the region associated with the political figure. These assumptions do not apply for highly recognizable national level political figures such as US president and vice president. Images for which such assumptions were made came from the following regional news sources: The Los Angeles Times, The Sacramento Bee, The San Jose Mercury News, and The San Francisco Chronicle. Pre-coded instances are represented by a ‘2’ in the coding worksheet.

*Because the New York Times is both a regional and a national newspaper, no assumptions were made about geography for the purposes of this study.

Pre-coding of Al Gore as celebrity:

Because Al Gore was a political figure early in his career but then gained notoriety for his film about global warming, ‘An Inconvenient Truth,’ later in his career, he should be considered both a political figure in his late career images. Because it is not always possible to determine from the image, headline, and caption if an image depicting Al Gore dates from before or after he gained celebrity status due to his performance in the film, images of Al Gore that appeared after the premiere of AIT at the Sundance Film Festival (January 19-29, 2006) have been pre-coded for the ‘celebrities’ category. Pre-coded instances are represented by a ‘2’ in the coding worksheet.

Words or phrases that imply climate change:

To be considered as referring to climate change (CC), an image must contain reference to ‘climate change’, ‘climate’, ‘global warming’, ‘warming’, or rising temperatures.

Ignore photo attributions.

Category	Specific Theme	Description	Code #
climate change	explicit reference to climate change or global warming	Image or caption explicitly refers to climate change, climate, global warming, warming, rising temperatures, or warmer-than-average temperatures.	1
communication	art/entertainment/mass media representation of environment (#)	The environment or environmental issues visually represented in art or in entertainment or other mass media. Includes visual or performance art, film, or music focused on environmental issues. Includes editorial news illustrations that refer to environmental issues. With the exception of editorial illustrations, includes only instances in which the environment or environmental issues are viewed through a 'double lens' (i.e., the image is a presentation of a visual representation of the environment that was created by a third party for a purpose other than supporting the news story that the image accompanied. (#) Does not include images of celebrities who advocate taking action on environmental issues unless the image also represents or refers to a art/media/entertainment representation of the environmental issue itself.	2
communication	efforts to distribute information/ raise awareness about environmental issues (#)	Image represents or refers to efforts by people or entities to communicate information about the environment. Includes communication efforts that include information or a warning about existence of an environmental problem, evidence for an environmental problem, human activities/behaviors associated with an environmental problem, or human activities/behaviors that can be adopted to address an environmental problem. (#) Does not include communication/interactions that are focused on negotiation of agreements, legislation, or enforcement of regulations if information of the types listed above is not part of the communication. (#) Does not include cases in which the news image itself is intended to communicate information/raise awareness about the environment unless communication efforts of people/entities are also referred to.	3
economic	businesses/companies/ brands	Businesses, companies, or brands are referred to either through visual presentation (e.g., logo) or caption. Businesses must be involved in commercial activities. Includes references to specific companies as well as general references to types of businesses such as industry, carmakers, utility/energy companies, etc. Does not include images that can be coded under 'energy generation' unless a company is mentioned or reference to a commercial activity is made. Does not include references to farming/agricultural activities unless reference to a commercial activity is made or activities represented could be considered industrial agriculture.	4
economic	cap and trade, carbon markets	Image refers in some way to carbon markets or emissions trading, including legislation related to such markets (e.g., cap-and-trade) or carbon/emissions prices in such markets.	5

Category	Specific Theme	Description	Code #
economic	economic concerns	Image refers to costs or economic situations either explicitly or implicitly. Examples include money, poor people, wealth, profit, revenue, mention of what is cheap or expensive, prices, jobs, taxes, GDP, funding, spending, giving away, economy, trade, development, markets, advertising, sales, and salespeople. Includes references to 'cost', even when not specifically referring to monetary cost (e.g., 'energy cost').	6
economic	energy/ fuel prices	Energy or fuel prices. Only includes instances where prices are described quantitatively or where relative differences in prices are mentioned.	7
economic	entrepreneur/ businessperson	An individual engaged in managing a business or engaging in entrepreneurial activities. Refers to the people aspect of business; not necessarily an individual.	8
economic	people at risk of negative economic impact of environmental policies	People who are likely to be negatively impacted economically by policy approaches to addressing environmental issues.	9
energy	energy consumption levels/rates	Levels or rates of energy consumption. Includes quantitative representations of energy consumption and qualitative references to energy conservation or increases or reductions in energy use. Includes references to energy levels required for production of consumer goods (including food). Includes information about energy consumption when expressed as miles per gallon (mpg). Does not include discussion of increases or reductions in GHG emissions when energy consumption is not specifically mentioned.	10
energy	energy efficiency	Energy efficiency or technologies associated with increased energy efficiency. Does not include energy conservation that does not involve increased energy efficiency. Includes references to fuel efficiency or fuel economy.	11
energy	energy generation	Locations, raw materials, sources, producers (e.g., utilities), byproducts, or technologies of energy generation. Does not include greenhouse gases. Does not include radiant energy from the sun unless represented in the context of technologies for capturing, storing and/or using this energy.	12
energy	energy intensity	Energy intensity, i.e., the quantity of energy produced per dollar or other unit of currency. Also includes more general references to 'energy-intensive' activities.	13
energy	fossil or combustible fuel type	Particular fuel types that are used to create electricity or power automobiles or other technologies. Includes general reference to 'fossil fuels' and references to traditional fuels such as 'coal', 'gasoline', 'natural gas', 'gas' (when not referring to greenhouse gas), 'diesel', 'petroleum', and 'oil'. Does not include references to fuel efficiency unless a specific type of fuel (e.g., gas, coal) is mentioned.	14
energy	nuclear energy	Nuclear energy or facilities or locations where nuclear energy is produced.	15

Category	Specific Theme	Description	Code #
energy	smokestacks	Long columnar structure that is releasing (or would typically release) combustion byproducts into the air. Includes industrial smokestacks and smaller chimneys.	16
energy, alternative	alternative/emission-free energy sources (#)	Sources of energy that are not associated with production of greenhouse gas emissions or that include an alternative energy component. Includes alternative energy/fuel technologies such as geothermal, hydroelectric, tidal, nuclear, and renewables/alternative fuels such as biofuels or 'flex' fuels. (#) Does NOT include solar and wind energy technologies, which should be coded under separate codes.	17
energy, alternative	solar energy technology (#)	Solar energy technology.	18
energy, alternative	wind energy technology (#)	Wind energy technology.	19
environmental management	forest management/tree planting	Environmental management through forest preservation, restoration, and tree planting in general.	20
environmental management	human response to natural disasters or abrupt changes in environmental conditions	Human responses to natural disasters or abrupt changes in environmental conditions. Includes reactions (e.g., watching) not associated with purposeful action as well as rescue, evaluation, and restoration efforts.	21
geography	map indicating location	Image is a map that indicates location of a phenomenon, event, or entity.	22
geography	global (or many countries)	Image presents information that represents a global scale, or many countries distributed around the globe. Locations should be distributed on at least 4 continents (North America, South America, Antarctica, Africa, Europe, Asia, Australia) to be coded in this category. Does not include instances in which all or part of the globe is pictured but the caption or other visual elements focus attention on a particular region that does not meet the global (i.e., 4 continent) criterion. Includes references to the United Nations and any mention of 'global', 'world', or 'earth' or 'planet' when referring to the earth. Includes references to 'global warming'.	23
geography	Africa	Image represents or refers to Africa in some way. Includes cases in which Africa is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region.	24
geography	Antarctic	Image represents or refers to Antarctic in some way. Includes cases in which Antarctic is specifically named as part of a map, graph, or caption and cases in which life forms depicted (e.g., penguins) are specific to that region.	25
geography	Arctic	Image represents or refers to Arctic in some way. Includes cases in which Arctic is specifically named as part of a map, graph, or caption and cases in which life forms depicted (e.g., polar bears) are specific to that region.	26

Category	Specific Theme	Description	Code #
geography	Asia (other than China, Japan, India)	Image represents or refers to all or parts of Asia other than China, Japan, and India in some way. Includes cases in which Asia or individual Asian countries are specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region.	27
geography	Australia	Image represents or refers to Australia in some way. Includes cases in which Australia is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region.	28
geography	California	Image represents or refers to California in some way. Includes cases in which California is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people (e.g., Schwarzenegger), iconic landmarks (e.g., Golden Gate Bridge), or symbols (e.g., flags) related to the region.	29
geography	China	Image represents or refers to China in some way. Includes cases in which China is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks (e.g., Tiananmen Square), or symbols (e.g., flags) related to the region.	30
geography	Europe	Image represents or refers to Europe as a whole or to one or more individual European countries. Includes cases in which Europe or a European country is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Includes references to Nobel Prizes. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region.	31
geography	former USSR/ Russia	Image represents or refers to Russia or the former USSR in some way. Includes cases in which Russia/USSR is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region.	32
geography	India	Image represents or refers to India in some way. Includes cases in which India is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region.	33

Category	Specific Theme	Description	Code #
geography	Japan	Image represents or refers to Japan in some way. Includes cases in which Japan is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region. Does not include references to the Kyoto Protocol unless there is explicit focus on the location of the drafting of this agreement.	34
geography	Latin/South America	Image represents or refers to Latin America in some way. Includes cases in which Latin America is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Mexico is both part of Latin America and North America. South America should be coded as Latin America. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region.	35
geography	North America	Image represents or refers to North America as a whole or countries other than the US in some way. Includes cases in which North America is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) related to the region.	36
geography	US	Image represents or refers to the United States in some way. Includes cases in which the US is specifically named as part of a map, graph, or caption and cases in which life forms depicted are specific to that region. Also includes representations of famous people, iconic landmarks, or symbols (e.g., flags) or government entities and processes related to the region.	37
GHGs/ emissions	explicit reference to GHGs	Image explicitly depicts or refers to greenhouse gases. Terms that qualify as reference to greenhouse gases include 'greenhouse gas', 'greenhouse gas emissions', 'greenhouse emissions', 'emissions', 'gases tied to warming', 'gas emissions', 'greenhouse effect', 'greenhouse', 'carbon dioxide', 'carbon' (may be compounded with other words), 'CO2', methane, 'heat-trapping gases'. Also includes references to ozone that is in the troposphere (atmosphere that is near the earth's surface), but not to ozone that is in the stratosphere (upper atmosphere). [Note: the 'ozone hole' is in the stratosphere, so references to this phenomenon should NOT be coded as belonging to this category.] Images containing smokestacks or other GHG-emitting technologies or entities that are not accompanied by any of the preceding words or phrases should NOT be coded as containing this theme. Images that depict or refer to smog or pollution but are not accompanied by one of the previously mentioned words or phrases should NOT be coded as containing this theme.	38

Category	Specific Theme	Description	Code #
GHGs/ emissions	GHG emission levels (#)	<p>Image depicts or refers to levels (including reduction or increase) of emissions of greenhouse gases or specific types of greenhouse gases (e.g., carbon dioxide, methane). Includes cases where such levels are represented graphically or mentioned in captions.</p> <p>Includes references to carbon neutrality (when emissions are offset by equivalent levels of sequestration). (#) Does not include representations of atmospheric greenhouse gas concentrations in the atmosphere (these cases should be coded under "atmospheric GHG concentrations"); rather, focuses on rates or levels of emissions.</p> <p>Does not include images of smokestacks, etc. unless accompanied by caption referring specifically to emission levels. GHG emission levels are generally controllable by humans (i.e., humans can choose behaviors/technologies, etc. associated with higher or lower levels of emissions). In contrast, "atmospheric GHG concentrations" represent situations where GH gases already exist or have been released to the atmosphere and are no longer under human control.</p>	39
GHGs/ emissions	atmospheric GHG concentrations (#)	<p>Image refers specifically to concentrations of greenhouse gases or specific types of greenhouse gases (e.g., carbon dioxide, methane) in the atmosphere (often referred to in units of ppm or parts per million). Includes cases where such concentrations are represented graphically or mentioned in captions. (#) Does not include representations of amounts of greenhouse gases emitted; rather focuses on atmospheric concentrations. Does not include images of smokestacks, etc. unless accompanied by caption referring to atmospheric concentrations. Measures of concentration are ratios; often ppm (parts per million).</p>	40

Category	Specific Theme	Description	Code #
GHGs /emissions	dominant anthropogenic contributors to GHG emissions	Image includes depiction or reference to any human-controlled entity or technology that produces greenhouse gas emissions through fossil fuel combustion or microbial activity. Includes mention of ‘fuels’ (when not modified to indicate that they are alternative), ‘fossil fuels’, or specific fossil fuel types such as coal or gas. Includes traditional forms of transportation such as combustion engine vehicles and aircraft; however, does not include forms of public transportation or vehicles that use alternative energy sources. Includes combustion-based forms of energy generation such as burning of coal, oil, gasoline, petroleum, natural gas, or non-renewable biomass; does not include nuclear, wind, solar, geothermal, hydroelectric, tidal, or other alternative/renewable electricity generation methods. Includes images of or references to smokestacks and utilities only when a reference to GHG emissions or a conventional fuel is also represented. Includes agricultural cattle (e.g., cows, goats, sheep, pigs) production and rice production; does not include other forms of agriculture. Includes destruction of trees or forests. Also includes any entities or technologies that are explicitly referred to as producers of GHG emissions (possible references to GHGs include ‘greenhouse gas’, ‘greenhouse gas emissions’, ‘greenhouse emissions’, ‘emissions’, ‘gases tied to warming’, ‘gas emissions’, ‘greenhouse effect’, ‘greenhouse’, ‘carbon dioxide’, ‘carbon’ (may be compounded with other words), ‘CO2’, methane, ‘ozone’ (when in the troposphere), ‘heat-trapping gases’) but not included in the categories described above.	41
GHGs/ emissions	carbon footprint calculations (#)	Quantitative information related to carbon footprint (i.e., amount of GHG emitted) for a specific individual or group, activity (e.g., rice farming, meat production), or entity (e.g., power plant, automobile). Includes information that identifies the GHG emission levels (e.g., tons, pounds, proportions, percentages) of specific people (groups or individuals), activities, or entities, even when the term ‘carbon footprint’ is not used. (#) Does not include quantitative descriptions of emission amounts when specific activities, individuals, or entities are not specified (e.g., global carbon emissions produced each day).	42
GHGs/ emissions	emissions projections	Projections for emissions levels at some point in the future.	43
historic trend	historic temperature trend	Changes in temperature over some time period. Must be a specific reference rather than a vague reference to something that has changed. Must include more than one reference point to qualify as a ‘trend’.	44
historic trend	historic data trend (#)	Change in some quantity or location over some time period. (#) Does not include ‘historic temperature trends’. Must be a specific reference rather than a vague reference to something that has changed. Must include more than one reference point to qualify as a ‘trend’.	45

Category	Specific Theme	Description	Code #
human activity/behavior	people working together (#)	People who are working together. Description of or reference to the task they are working on together must be included in the caption or the image itself. Must depict or refer to the people who are working together; products of cooperative work are not included unless the people doing such work are a primary focus of the image or caption. Includes people engaged in cooperative effort; successful accomplishment is not necessary. (#) Does not include references that can be coded as 'cooperative agreement, treaty, pact, or accord'.	46
human activity/behavior	cooperative agreement, treaty, pact, or accord (#)	A cooperative agreement, treaty, pact, or accord between political, social, business, or environmental leaders that is being pursued or has been reached. Includes references to actions being taken to satisfy responsibilities based on such an agreement. Includes representations of signatures or signatories to an agreement. Includes any mention of the Kyoto Protocol. (#) Does not include references to commitments, pledges, or plans made independently by an entity that are not explicitly part of a cooperative agreement, treaty, pact, or accord.	47
human activity/behavior	independent commitment, pledge, or plan (#)	A commitment, pledge, or plan made independently (i.e., not obligatory) by any person or entity. Does not include discussion of such plans if commitments, pledges, or plans are not actually made. Includes references to plans for 'greener' activities. (#) Does not include cooperative agreements, treaties, pacts, or accords.	48
human activity/behavior	'green' or 'eco-' activities, choices, items, or lifestyles (#)	'Green' or 'eco-' activities, choices, items, or lifestyles. (#) Entities such as Greenpeace that have 'green' as part of their name should not be included here.	49
human activity/behavior	disagreement, difference of opinion, debate, or controversy	Disagreement, difference of opinion, debate, controversy, or protest about things such as current conditions, environmental issues, appropriate courses of action, economic or technological constraints, or interpretation of scientific data.	50
human activity/behavior	protest/demonstration	An organized protest or demonstration.	51
human activity/behavior	meat and food production and consumption	Production and/or consumption of meat and/or other types of food. Includes agricultural activities, food preparation, and sales of food products.	52
human activity/behavior	recycling/ waste disposal	Waste disposal or recycling. Includes references to sewage or manure.	53
human activity/behavior	things people do to adapt to environmental conditions	Things people do to adapt to or respond to changing environmental conditions. Includes building practices, controlled burning of vegetation, and other human behaviors that are employed or could be employed to tolerate changes that have been brought about by changes in the environment. Does not include activities focused primarily on mitigation (focused on limiting or decreasing the activities or behaviors that cause the problem) or prevention-focused behaviors.	54

Category	Specific Theme	Description	Code #
human activity/behavior	tourism	Tourism.	55
human activity/behavior	people using natural world for recreation	One or more people using the natural world for recreational or leisure purposes. Includes tourism focused on experiencing the natural world.	56
impacts	abnormal weather patterns (#)	(#) Depictions of or references to weather patterns or anomalies that cannot be coded as 'colder than usual temperatures', 'warmer than usual temperatures', 'precipitation', 'hurricanes or large storms', 'flooding', or 'drought or water shortage'.	57
impacts	colder than usual temperatures	Weather or climate patterns that involve current or recent temperatures that are colder than usual or historic temperatures. Includes colder than usual average temperatures, colder extreme temperatures, and colder or longer winters. Only includes representations of greater than usual snowfall if colder temperatures are specifically mentioned.	58
impacts	warmer than usual temperatures	Weather or climate patterns that involve current or recent temperatures that are warmer than usual or historic temperatures. Includes warmer than usual average temperatures, warmer extreme temperatures (e.g., heat waves), and milder or shorter winters.	59
impacts	melting ice	Melting ice or snow.	60
impacts	precipitation	Some type or instance of precipitation such as rain, snow, hail, etc. Does not include fog or smog. Includes discussion of changes in the quantity or frequency of precipitation. Does not include references to drought or water shortages when forms of precipitation or precipitation events are not specifically mentioned.	61
impacts	hurricanes or large storms	Hurricanes or other large storms.	62
impacts	land loss due to storms	Loss of land area or land-based structures due to intense storms.	63
impacts	sea level rise	Rise in sea levels. Includes areas predicted to be inundated under rising sea level conditions.	64
impacts	flooding	Flooding or abnormally large quantities of water or damage due to flooding or high water conditions.	65
impacts	drought or water shortage	Image represents of refers to drought or water shortage. May include visual depictions of dry or scorched earth, or graphs or captions that indicate decreased water availability, or declines in precipitation.	66
impacts	fire	Fire or damage due to fire.	67
impacts	forest/tree loss	Loss of forest areas, large groups of trees, or individual trees.	68

Category	Specific Theme	Description	Code #
impacts	impact on agriculture (#)	A negative change or situation that an agricultural crop/system or livestock production system is currently experiencing or has experienced recently. Does not include depictions of agricultural crops/systems or livestock production systems that are vulnerable to impacts of climate change but have not yet experienced those impacts. (#) Impacts on landscapes or ecosystems that are primarily agricultural should be coded under this category rather than under the 'impact on landscapes' code.	69
impacts	impact on animals	A negative change or situation that an animal species is currently experiencing or has experienced recently. Does not include depictions of animals that are vulnerable to impacts of climate change but have not yet experienced those impacts.	70
impacts	impact on human health	A negative impact on human health. Does not include depictions of people that are vulnerable to impacts of climate change but have not yet experienced those impacts. Does not include representations that can be coded as 'pollution/ emissions impact on people'. Also includes use of a health metaphor such as allusions to sickness or death.	71
impacts	impact on landscapes (#)	A negative change or situation that a landscape or ecosystem is currently experiencing or has experienced recently. Does not include depictions of landscapes or ecosystems that are vulnerable to impacts of climate change but have not yet experienced those impacts. (#) Does not include impacts on agricultural crops.	72
impacts	pollution/ emissions impact on people	Direct impacts of air pollution on people or environments in which large groups of people are exposed to air pollution. Includes depictions of smog in urban environments. Does not include depictions of smog in industrial environments or depictions of smog in environments when it is not possible to discern if environment is urban or industrial. Does not include secondary impacts on people due to climate change.	73
landscape	agricultural landscape (#)	Any landscape, vista, or scene that contains elements related to agricultural production. Does not include textual references to agriculture or abstract visual representations such as maps and graphs. Includes livestock and plant-based agriculture. (#) Industrial-type agricultural scenes should be coded as both 'industrial landscape' and 'agricultural landscape'.	74
landscape	private space, scene or landscape (#)	Private space (e.g., home, private office, or laboratory), scene, or landscape. Includes indoor home scenes and images of individual homes or neighborhoods. Includes private portions of public or commercial institutions such as offices or laboratories. (#) Does not include urban landscapes.	75
landscape	industrial landscape (#)	Any landscape, vista, or scene that contains elements related to industrial production. Does not include textual references to industry or abstract visual representations such as maps and graphs. Includes energy production and manufacturing facilities. (#) Industrial-type agricultural scenes should be coded as both 'industrial landscape' and 'agricultural landscape'.	76

Category	Specific Theme	Description	Code #
landscape	ocean/coastal landscape	Any landscape, vista, or scene that contains mostly or exclusively marine or coastal environment. Does not include textual references to oceans or marine/coastal environment or abstract visual representations such as maps and graphs.	77
landscape	ice/snow landscape	Any landscape, vista, or scene that is entirely or mostly covered by snow or ice. Does not include snowy/icy scenes that are in developed areas such as cities, towns. Does not include textual references to snow or ice or abstract visual representations such as maps and graphs.	78
landscape	public or semi-public social space (#)	Image landscape, vista, or scene is a social space that is open and accessible either freely, by paying, or by membership in a formally or informally-defined group. Includes parks, streets, town squares, public spaces in government or educational institutions, commercial districts or shops, meeting halls, conferences, ceremonies, performance venues, showrooms, transportation centers, or places of business that customers regularly visit. Does not include cases in which these locations do not serve as the setting for a person or event. Does not include places of business that are rarely visited by customers. Does not include private portions of public or commercial institutions such as offices or laboratories. (#) Does not include spaces which can be classified under the “agricultural”, “industrial”, “ocean/coastal”, “ice/snow”, or “wilderness” landscape types.	79
landscape	urban landscape	Any landscape or vista that contains mostly or exclusively urban environment (i.e., a high-density built environment that includes tall, densely-packed commercial, office, or residential buildings or high-capacity streets/highways). Does not include textual references to cities or urban environments or abstract visual representations such as maps and graphs. Does not include images in which office buildings, residences, or shops cannot be identified in the image. An image containing many buildings of unidentifiable uses does not qualify as an urban landscape.	80
landscape	wilderness landscape (#)	Any landscape, vista, or scene that contains mostly or exclusively undeveloped and pristine areas. Does not include textual references to wilderness or abstract visual representations such as maps and graphs. (#) Does not include polar or ocean landscapes.	81
landscape	vision of future landscape	Imagined landscapes of the future or modifications of current landscapes that provide information about future landscapes. Does not include textual references to future landscapes or abstract visual representations such as maps and graphs.	82
miscellaneous	general environmental problems (#)	(#) Representation of hazards or threats to the environment, landscapes, or ecosystems that cannot be coded under any of the ‘impacts’ or ‘vulnerability’ categories. Includes references to environmental ‘hazards’, ‘threats’, ‘problems’, ‘crises’, ‘dangers’, or to hazards or threats to the Earth.	83

Category	Specific Theme	Description	Code #
miscellaneous	comparisons between entities, people, groups of people, countries, etc.	Image presents information that can be used to make comparisons between entities, people, organizations, businesses, groups of people, countries, etc., between the activities of the aforementioned, or between levels of emissions associated with different activities. Also includes information that can be used to make comparisons between different time periods or scenarios. Possibility for comparison needs to be contained within the image and associated text; possible comparisons with things not represented or referred to in the image should not be coded under this category.	84
miscellaneous	educational institution	Formal educational institution such as K-12 school, college or university. Does not include informal education venues.	85
miscellaneous	health and medical institutions, personnel, or conditions	Medical institutions such as hospitals or clinics, or personnel such as doctors and nurses.	86
miscellaneous	volcanic eruptions	Volcanic eruptions or particulates from volcanic eruptions that are suspended in the atmosphere.	87
people	audience	Representation includes an audience that is attending to a speaker/performer. Includes situations in which person featured appears to be speaking to an audience (e.g., using a microphone, podium, presentation screen, or stage) and reference is made to a presentation, conference, meeting, performance, or similar.	88
people	celebrity (#)	A celebrity such as a film, TV, sports, or music star. (#) Does not include political figures unless individual is also a film, TV, sports, or music star.	89
people	child/children	A child or children.	90
people	journalist/columnist	The journalist, columnist, or other public figure who wrote the article. Head shots of people that are presented in a black and white engraving style should be included in this code.	91
people	military/police/rescue personnel	Military, police, or rescue personnel.	92
people	non-political leaders (#)	Influential people who do not hold political positions. (#) Does not include scientists or celebrities. Does include business leaders, environmental non-profit leaders, journalists, and people in leadership roles in environmental or climate activism. Includes non-political experts (e.g., professors) if not explicitly identified as scientists. If an individual is not identified by name or title but appears in a situation or dressed in a manner that suggests an influential role, this code should be used. NOTE: Individuals whose identities or roles are ambiguous should be coded either as 'non-political leaders' or as 'regular people', so decisions should be made on the basis of context/dress in these cases.	93

Category	Specific Theme	Description	Code #
people	political figures (#)	Individuals who have been elected or appointed to political office. Lawmakers and all leaders who occupy high-level positions in federal and state agencies. Individuals who lead federal agencies are considered political figures. Includes general references to leaders of political parties such as ‘Democrats’ or ‘Republicans’ or the ‘GOP’. Includes references to political entities such as ‘Washington’, ‘the Capitol’, or the ‘administration’ when information about activities, positions, or advocated policies of these entities is provided. (#) Does not include references to legislation, bills, politics, etc. unless political figures associated with these activities are also mentioned. (#) Does not include medical personnel; these should be coded under ‘health and medical institutions, personnel, or conditions’. (#) Does not include scientists or environmental leaders who are engaging in political activities; includes only figures elected or appointed to political office.	94
people	regular people (#)	People who do not hold positions of influence. (#) Does not include celebrities, journalists/columnists, non-political leaders, political figures, or scientists, but includes all representations of people that cannot be coded under one of these categories. Includes references to groups such as ‘the public’, ‘skeptics’, ‘consumers’, ‘residents’, ‘visitors’, ‘environmentalists’, ‘drivers’, when there is no indication that these people occupy leadership positions. People attending events that appear to be exclusive (i.e., not open to the general public either freely or by paying) should not be coded for this category. NOTE: Individuals whose identities or roles are ambiguous should be coded either as ‘non-political leaders’ or as ‘regular people’, so decisions should be made on the basis of context/dress in these cases.	95
policy	international government programs or policies, legislation, legal issues	Any representation of international government involvement in an issue. International-level government programs, policies, legislation, or legal cases/lawsuits. Includes reference to reports or studies released by an international governmental body such as the United Nations (UN) or the Intergovernmental Panel on Climate Change (IPCC). Actions or policies that involve at least 2 national governments should be included in this code. Actions or policies of Europe as a whole (not individual countries) or the EU should be included in this code. Includes policy statements or official actions of political figures that represent 2 or more national governments. Does not include information that allows comparison of activities or conditions (such as emissions levels, GDP levels) globally or of 2 or more countries if a governmental policy, entity, or representative is not explicitly mentioned. Carbon trading schemes and carbon markets should be considered government programs.	96

Category	Specific Theme	Description	Code #
policy	national government programs or policies, legislation, legal issues	Any representation of national government involvement in an issue. National-level government programs, policies, legislation, or legal cases/lawsuits. Includes reference to reports or studies decisions released by a national governmental body such as the EPA or the Supreme Court. Includes references to actions or policies of the federal government. Includes policy statements or official actions of political figures that represent a national government. References to actions or policies of the national or federal government that involve national-level governments of more than one country should be coded as ‘international government programs or policies, legislation, legal issues’. Does not include information about national-level activities or conditions (such as emissions levels, GDP levels) if a governmental policy, entity, or representative is not explicitly mentioned. Carbon trading schemes and carbon markets should be considered government programs.	97
policy	state government programs or policies, legislation, legal issues (#)	Any representation of state or regional government involvement in an issue. State- or province-level government programs, policies, legislation, or legal cases/lawsuits. (#) Does not include elected officials (such as Congressional representatives) who represent a state within a national-level governmental body; these instances should be coded under ‘national government programs or policies, legislation, legal issues’. Includes reference to reports or studies released by a state governmental body. Includes references to actions or policies of a single state government or multiple state governments. Does not include information about state-level activities or conditions (such as emissions levels, GDP levels) if a governmental policy, entity, or representative is not explicitly mentioned. Carbon trading schemes and carbon markets should be considered government programs.	98
policy	local government programs or policies, legislation, legal issues	Any representation of local government involvement in an issue. Government programs, policies, legislation, or legal cases/lawsuits implemented at a regional level that is smaller than a state/province. Includes programs, policies, legislation, or legal issues at city, county, or sub-state regional levels. Includes reference to reports or studies released by a local governmental body. Includes references to actions or policies of a single local government or multiple local governments. Does not include information about local-level activities or conditions (e.g., emissions levels, GDP levels) if a governmental policy, entity, or representative is not explicitly mentioned. Carbon trading schemes and carbon markets should be considered government programs.	99
policy	non-specific government programs or policies, legislation, legal issues	Any representation of government involvement in an issue for which the level of government (international, national, state, local, etc.) is not specified. Government programs, policies, legislation, or legal cases/lawsuits for which the level of government (international, national, state, or local) is not explicit. Includes reference to reports or studies released by such a governmental body. Carbon trading schemes and carbon markets should be considered government programs.	100

Category	Specific Theme	Description	Code #
policy	skepticism or opposition to taking action to address an environmental issue	Representation of skepticism about the existence and/or causes of an environmental problem or expression of opposition to action intended to mitigate or adapt to changes related to an environmental issue. Includes opposition to or attempts to delay actions to increase production of renewable/alternative energy. Includes efforts to prevent, weaken, or eliminate environment-related regulations or agreements. Includes challenges to existing environment-related law through the judicial system (e.g., arguing before the Supreme Court, image of a gavel representing a legal case). A single image may include representations of both skeptical/oppositional viewpoints and supportive positions regarding taking action on an environmental issue.	101
policy	action or expression of support for taking action to address an environmental issue (#)	Representation of action or expression of support for action intended to raise awareness about an environmental issue, mitigate an environmental problem, or adapt to changes brought about by an environmental situation. Includes actions or support for actions that reduce GHG emissions, increase fuel efficiency or use of alternative energy sources, alter building practices or land use, enforce regulations, use economic incentives, or raise awareness through public dialog, protest, education, or communication efforts. Includes all references to environmentalists or environmental advocates. Includes editorial illustrations that convey messages supportive of taking action on an environmental issue. (#) Does not include references to research conducted to better understand an environmental system or impact unless mitigation or adaptation measures are also being advocated. A single image may include representations of both skeptical/oppositional viewpoints and supportive positions regarding taking action on an environmental issue.	102
policy	political action including non-political figures	Individuals who were not elected or appointed to political office but who are engaging in political action (e.g., testifying before congress, engaging in protests/demonstrations, publicly expressing support or criticism of political figures' actions or positions)	103
policy	public opinion (#)	Commentary or results from surveys about public opinion. (#) Does not include depictions of organized protests or demonstrations.	104
policy	US iconography	US icons such as the American flag, the Statue of Liberty, Uncle Sam, etc.	105
science	scientists	Individuals who are scientists by profession or engage regularly in scientific research. Includes mention of individuals working in specific fields (e.g., climatologists, ecologists) or of 'experts' when this term is used in relation to scientific research.	106
science	research equipment or technique	Research techniques, equipment (e.g., satellites, thermometers), or interpretation of data gathered using such techniques or equipment. Includes references to data of any type and computational models or quantitative/statistical analysis.	107

Category	Specific Theme	Description	Code #
science	evidence or potentially-verifiable evidence	Presentation of or reference to quantitative information that could be produced or verified through scientific study. Does not include representation of conceptual scientific information that is not explicitly quantitative. Does not include quantitative information that is describing the criteria or structure of a program (e.g., level of subsidy associated with a particular level of increase in fuel efficiency, relative portion of emission allowances designated for particular economic sectors).	108
science	uncertainty	Uncertainty, including scientific uncertainty. Includes use of words such as 'may', 'might', 'could', 'can' (when used to indicate uncertainty), other words or phrases referring to possibility, or questions that highlight uncertainty about an issue. Includes mentions of 'uncertainty' or 'confidence'. Questions that cannot be addressed empirically (i.e., ethical or moral questions) are not included. Includes error bars, confidence intervals, dotted lines, shaded regions, etc. on graphic representations of scientific data or stated ranges for values when values are presented in textual format. Includes questions such as those about the existence of conditions or future possibilities. Includes references to multiple possible theories/explanations for a phenomenon.	109
science	visual representation of data or quantitative information	Visual depictions of quantitative information such as tables, charts, graphs, or maps that include quantitative or categorical data representations. Includes photographic images that allow evaluation of differences in the quantity(ies) of some object(s) or phenomenon(a). Includes data representations that are used for illustration purposes (i.e., meant to convey the concept of a graph or chart but not necessarily intended to communicate quantitative information) as well as those that are used to communicate specific values or relationships between values.	110
science	climate projections (#)	Image presents or refers to climate projections (e.g., changes in average temperature, season length, sea level, precipitation) for some date in the future. (#) Does not include projections for greenhouse gas emissions or atmospheric concentrations.	111
science	diagram or description of natural, earth or human systems	Image includes a diagrammatic representation or conceptual description of some components of or interactions, causal dependencies, or relationships between the earth's physical or biological systems (e.g., atmosphere, oceans, land, ecosystems), human systems (e.g., sociocultural, technological, biological), or of/between between earth and human systems. Must include information that illustrates or describes relationships or interactions between components or elements of the systems.	112
science	general reference to science (#)	General reference to science or scientific information including use of scientific terms. (#) Includes references to scientific reports or studies or representations of science-related information that that cannot be coded as 'climate predictions', 'diagram or description of earth or human systems', 'research equipment or technique', 'scientists', or 'uncertainty'.	113

Category	Specific Theme	Description	Code #
technology	geoengineering	Technologies or mechanisms intended to deliberately modify earth's climate. Refers to human activities intended to counteract or compensate for global climate change/global warming by interfering with the natural climate system, therefore making the climate system less "natural".	114
technology	LED or compact fluorescent	LED or compact fluorescent light bulbs.	115
technology	view of globe from space	Image depicts globe as viewed from space. May be photorealistic images or iconic illustrations. May include all or part of the globe. Does not include aerial photographs of local regions (i.e., where individual features such as trees or houses are visible). Does not include maps that are projected on a flat plane; does include maps that appear to be projected on a sphere.	116
transportation	generic transportation vehicles (#)	(#) Automobiles or other means of transportation that do not fit into the categories of 'high-efficiency and/or reduced carbon automobiles' or 'public/alternative transportation'. Includes representations of aircraft, boats, traffic, and indirect references to automobiles such as automobile manufacturers.	117
transportation	high-efficiency and/or reduced carbon automobiles	Automobiles or other forms of transportation that have higher-than-typical fuel efficiency or reduced carbon emissions through hybrid and electric technologies. Biodiesel or flex fuel vehicles are also included. (#) Means of public transportation are not included.	118
transportation	inefficient vehicles	Automobiles or other forms of transportation that have low fuel efficiency or create high levels of carbon emissions. Includes standard aircraft. DEPRECATED. DO NOT USE THIS CODE.	119
transportation	public/alternative transportation	Means of public transportation or people using public or alternative transportation. Includes bicycle transportation.	120
vulnerability	animals vulnerable to effects of climate change or other environmental degradation (#)	Image depicts animals in a way that highlights their vulnerability to negative impacts of climate change or other environmental degradation. Vulnerability may be suggested through visual means or through caption. (#) Does not include images depicting past or current impacts on animals unless image and/or caption refer both to current impacts and to vulnerability to additional future impacts.	121
vulnerability	people vulnerable to effects of climate change or environmental degradation (#)	Image depicts people in a way that highlights their vulnerability to negative impacts of climate change or other environmental degradation. Vulnerability may be suggested through visual means or through caption. (#) Does not include images depicting past or current impacts on people or on human health unless image and/or caption refer both to current impacts and to vulnerability to additional future impacts.	122

Category	Specific Theme	Description	Code #
vulnerability	places vulnerable to effects of climate change or environmental degradation (#)	Image depicts places or landscapes in a way that highlights their vulnerability to negative impacts of climate change or other environmental degradation. Vulnerability may be suggested through visual means or through caption. (#) Does not include images depicting past or current impacts on places/landscapes unless image and/or caption refer both to current impacts and to vulnerability to additional future impacts. Does not include representations of vulnerability that are not specific to a certain place.	123