

INDEX

This index should be cited as:

IPCC, 2014: *Index*. In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Note: * indicates the term also appears in the Glossary (Annex I). Bold page numbers indicate page spans for entire chapters. Italicized page numbers denote tables, figures and boxed material.

A

- Ability-to-pay**, 319
Accessibility, 622, 642, 953, 956–957, 975
Accidents, energy-sector, 549–551
Active adaptive management (AAM), 173
Adaptability. See Adaptive capacity
Adaptation*, 1251
 AFOLU (Ch. 11), 843, 845–847
 Buildings (Ch. 9), 697–699
 capacity building, 1038
 cost, 213
 Energy Systems (Ch. 7), 537–538
 impact of uncertainties, 186–187
 Industry (Ch. 10), 764–765
 International Cooperation (Ch. 13), 1015
 Least Developed Countries, 138
 mitigation and, 140, 315, 316
 National and Sub-national Policies/Institutions (Ch. 15), 1186–1187
 population and demographic trends, 299
 Regional Development and Cooperation (Ch. 14), 1118–1119
 Transformation Pathways (Ch. 6), 441–443, 442
 Transport (Ch. 8), 622–623
 vulnerability reduction, 187
Adaptation Fund*, 1011, 1025, 1038–1039, 1251
Adaptive capacity*, 315–317, 1251
Adaptive management, 173
Additionality*, 835, 1045–1047, 1251
Adjusted Net Savings, 293
Administrative burden, 237
Adverse side-effects*, 116, 141, 155, 232–235, 237, 392, 392–394, 393, 468, 469–471, 472, 1251
 AFOLU (Ch. 11), 852–857, 856–857
 bioenergy, 883–886, 884
 Buildings (Ch. 9), 705–709, 706
 Energy Systems (Ch. 7), 544–549, 545, 548
 Human Settlements/Infrastructure (Ch. 12), 974–977, 975
 Industry (Ch. 10), 770–772, 773
 International Cooperation (Ch. 13), 1008, 1015, 1042
 Sustainable Development (Ch. 4), 293–294, 294, 323–325
 Transformation Pathways (Ch. 6), 468–477, 475
 Transport (Ch. 8), 630–633, 632
 welfare, 232–235
 See also Mitigation measures
Aerosol*, 360–361, 361, 486, 487, 611, 612, 776, 828, 1251
Afforestation*, 484, 486, 827, 830, 840, 841, 855, 857, 861, 864, 1251
Africa
 AFOLU (Ch. 11), 824, 840, 841, 845, 854, 866–868
 Buildings (Ch. 9), 682
 emission trends and drivers, 388
 Energy Systems (Ch. 7), 546, 547, 553
 Human Settlements/Infrastructure (Ch. 12), 932, 933, 936, 939–940, 941, 949, 951, 954
 indigenous climate change knowledge, 165
 Industry (Ch. 10), 748, 754
 Investment and Finance (Ch. 16), 1221
 National and Sub-national Policies/Institutions (Ch. 15), 1151, 1162, 1185
 Regional Development and Cooperation (Ch. 14), 1087, 1101, 1106, 1116
 risks and uncertainties in developing countries, 167
 Transport (Ch. 8), 608, 609, 610, 611, 641, 645
 waste management, 790, 792
African Union, 1024, 1119
Agriculture, 811–886
 damages from climate change, 244
 National and Sub-national Policies/Institutions (Ch. 15), 1187
 Regional Development and Cooperation (Ch. 14), 1105
 sustainable, 301, 1187
Agriculture, Forestry and Other Land Use (AFOLU)*, 811–886, 819, 1251–1252
 aquaculture, 834
 barriers and opportunities, 858–859
 biochar, 833
 bioenergy, 870–886, 871, 872, 874, 876, 878–879, 882, 884–885
 climate change feedback and adaptation, 843, 845–847
 co-benefits, risks, and spillovers, 852–858, 856–857
 costs and potentials, 847, 847–852, 849–852
 emission trends and drivers, 128, 128, 365, 365, 380, 383–384, 384, 819–829, 820–828
 human settlements, 945
 infrastructure and systemic perspectives, 836, 836–843, 838–840, 842–844
 mitigation technology, 829–835, 830–832
 mitigative and adaptive capacities, 316–317
 National and Sub-national Policies/Institutions (Ch. 15), 1158–1159
 Regional Development and Cooperation (Ch. 14), 1104–1106, 1105
 sectoral policies, 862–868, 863, 864, 866, 867
 sustainable development, 859–862, 860, 864
 transformation pathways, 859–862, 860, 864
 Transformation Pathways (Ch. 6), 435, 471, 478, 479, 479, 484
Air pollution, 233, 392–393, 393
 Buildings (Ch. 9), 708, 709
 Energy Systems (Ch. 7), 546–548, 550
 Human Settlements/Infrastructure (Ch. 12), 975–976
 Industry (Ch. 10), 771
 Transformation Pathways (Ch. 6), 473–475, 474
 waste management, 789
 See also Carbon monoxide (CO); Nitrogen oxides (NOx); Particulate matter (PM); Volatile Organic Compounds (VOCs)
Albania, 1116
Albedo*, 486, 487, 699, 879, 880, 1252
Alliance of Small Island States (AOSIS)*, 1025, 1252
Amazon region, 826, 845, 1029, 1110
Ambiguity aversion, 163–164
Ancillary benefits. See Co-benefits
Angola, 1116
Annex B Parties/countries*, 130, 133, 373, 1011, 1043–1045, 1049, 1252
 See also individual countries
Annex I Parties/countries*, 130, 132, 320, 394, 1252
 AFOLU (Ch. 11), 828
 Human Settlements/Infrastructure (Ch. 12), 927, 928, 938, 938–939, 943, 945, 947, 972
 International Cooperation (Ch. 13), 1011, 1021, 1025, 1031, 1041, 1043, 1045, 1048, 1050
 National and Sub-national Policies/Institutions (Ch. 15), 1150
 Transport (Ch. 8), 646
 See also Non-Annex I Parties/countries; individual countries
Annex II Parties/countries*, 320, 1035, 1210, 1212, 1214–1216, 1222, 1236, 1252
 See also individual countries
Anthropogenic emissions*. See Emission(s), anthropogenic
Anticipation effect, 180
Appliances, 683, 686, 690–692, 692
Aquaculture, 834
Arctic, 164, 165
Argentina, 721, 885, 972, 1020, 1109, 1119
Asia, 845, 1286
 AFOLU (Ch. 11), 820, 821, 822, 824, 825, 826, 828, 840, 849, 852, 852, 862, 863, 868
 bioenergy, 886
 Buildings (Ch. 9), 679, 680, 680, 682, 684–685, 711, 713, 721
 emission trends and drivers, 359, 359, 360, 365–367, 366, 367, 371, 371–373, 372, 374, 376, 376, 384, 385, 388, 391, 394
 Energy Systems (Ch. 7), 521–524, 524, 530, 569
 Human Settlements/Infrastructure (Ch. 12), 931, 932, 933, 939–941, 941, 947–949, 961, 963
 Industry (Ch. 10), 748, 752, 754, 759, 762, 778, 778
 Investment and Finance (Ch. 16), 1229
 National and Sub-national Policies/Institutions (Ch. 15), 1150, 1151
 Regional Development and Cooperation (Ch. 14), 1087, 1097–1102, 1105–1107, 1110, 1120–1122, 1124
 Transformation Pathways (Ch. 6), 434–436, 435, 459, 460
 Transport (Ch. 8), 608, 609, 611, 641, 645
 waste management, 790, 792
Asia Energy Efficiency and Conservation Collaboration Center (AEEC), 1120
Asia-Pacific Forum (APEC), 1118, 1120
Asia-Pacific Partnership on Clean Development and Climate (APP), 1029, 1120
Asian and Pacific Center for Transfer of Technology (APCTT), 1120
Assigned Amount (AA)*, 1252
 See also Kyoto Protocol
Assigned Amount Unit (AAU)*, 1030, 1216, 1252
 See also Banking (of emission permits/Assigned Amount Units); Kyoto Protocol, Kyoto Mechanisms (Flexibility Mechanisms)
Association of Southeast Asian Nations (ASEAN), 1120
Atmosphere*, 129, 214, 485–487, 877, 879, 1007, 1252
Australasia, 1110
Australia
 AFOLU (Ch. 11), 865
 carbon labeling, 309
 carbon pricing revenue, 234
 coal production, 521
 Human Settlements/Infrastructure (Ch. 12), 933, 934, 950, 952, 954, 964, 972
 indigenous climate change knowledge, 165
 Industry (Ch. 10), 748
 International Cooperation (Ch. 13), 1026, 1029, 1031, 1044

- Investment and Finance (Ch. 16), 1216
National and Sub-national Policies/Institutions (Ch. 15), 1151, 1163, 1165–1166, 1184
Regional Development and Cooperation (Ch. 14), 1086, 1090, 1091, 1102, 1103, 1120, 1121, 1123
Transport (Ch. 8), 609
- Austria**, 187, 375, 390, 838, 950, 1216
- Availability bias**, 164
- Azerbaijan**, 754
- B**
- Backstop technology***, 1252
- Bali Action Plan (BAP)**, 124, 868, 1153
- Bangladesh**, 950, 954, 1026, 1214, 1235
- Banking (of emission permits/Assigned Amount Units)***, 1166, 1252
- Barriers (and opportunities)**
AFOLU (Ch. 11), 858–859
Buildings (Ch. 9), 709
Energy Systems (Ch. 7), 551–554, 569
Industry (Ch. 10), 774–776, 775
Regional Development and Cooperation (Ch. 14), 1110–1122, 1112, 1116
Transport (Ch. 8), 633–636, 634–636
- Baseline/reference scenarios***, 134, 135, 424–429, 425–427, 429, 479, 479, 554–555, 556, 557, 1253
- BASIC countries**, 1025, 1045
- Behaviour***, 1253
AFOLU (Ch. 11), 842, 843, 844
biases, 162, 164, 248
Buildings (Ch. 9), 694–695, 694–696
Industry (Ch. 10), 756
responses to risk and uncertainty, 160–168
sustainable consumption and production, 308–309
- Behavioural change***, 1253
AFOLU (Ch. 11), 839
consumption and, 387–389
encouraging, 186
non-price interventions inducing, 253
Sustainable Development (Ch. 4), 299–300
Transport (Ch. 8), 616–618
uncertainties, 158
- Behavioural economics**, 252–254, 388–389
- Belarus**, 550
- Belgium**, 120, 950, 1153
- Belize**, 961
- Beneficiary pays principle (BPP)**, 218
See also Polluter pays principle (PPP)
- Benin**, 1235
- Bhutan, Kingdom of**, 255, 961
- Biochar***, 833, 1253
- Biochemical oxygen demand (BOD)***, 790, 1253
- Biodiversity***, 476–477, 548, 549, 837, 838, 842, 854, 855, 886, 1253
- Bioenergy***, 870–886, 1253
AFOLU (Ch. 11), 833, 835, 841, 854, 870–886, 871, 872, 874, 876, 878–879, 882, 884–885
co-benefits, 882
conversion technologies and management, 872, 873–877, 874, 876
Energy Systems (Ch. 7), 519, 525, 526, 529, 530, 537, 539, 540, 541, 545, 547, 551, 556–558
GHG emission estimates, 877–881, 878–879
sustainable development, 883–885, 884–885
technical potential, 870–873, 871
- tradeoffs and synergies, 886
Transformation Pathways (Ch. 6), 435, 445–448, 446, 447, 484
See also Combustible renewables and waste
- Bioenergy and Carbon Dioxide Capture and Storage (BECCS)***, 70, 72, 73, 447, 448, 451, 453, 485, 486, 533, 835, 873, 874, 875, 882, 883, 1253
- Bioethanol***, 881, 1253
- Biofuel***, 535, 616, 633, 643, 835, 882, 883, 1218–1220, 1253
- Biogas**, 522, 539, 877
- Biomass***, 1253
AFOLU (Ch. 11), 832–833, 835, 836, 837, 839
bioenergy, 870–886, 871, 872, 874, 876, 878, 882, 884–885
Buildings (Ch. 9), 693, 694
emission trends, 127
Energy Systems (Ch. 7), 521, 529, 539, 540, 542, 569
Industry (Ch. 10), 755, 760
- Biomass burning***, 828, 1254
- Biosphere (terrestrial and marine)***, 877, 879, 1254
- Black carbon (BC)***, 122, 360, 361, 363, 364, 474, 475, 611, 612, 1254
- Bolivia**, 1028
- Border adjustment measures (BAMs)**, 1032–1033
- Bosnia and Herzegovina**, 1116
- Botswana**, 750, 1116
- Brazil**
AFOLU (Ch. 11), 825, 866, 867, 867
bioenergy, 882
Buildings (Ch. 9), 688, 720, 721
emission trends and drivers, 375
Energy Systems (Ch. 7), 522, 530, 546
Human Settlements/Infrastructure (Ch. 12), 950, 954, 960–962, 967, 968, 972
Industry (Ch. 10), 748, 754, 758, 767
International Cooperation (Ch. 13), 1026, 1039
Investment and Finance (Ch. 16), 1214, 1231, 1236
National and Sub-national Policies/Institutions (Ch. 15), 1151, 1152, 1154, 1180
Regional Development and Cooperation (Ch. 14), 1098, 1104, 1107, 1119, 1121, 1122
Sustainable Development (Ch. 4), 115
- BRICS countries**, 1039
- Building code**, 719
- Buildings**, 424, 671–722, 680, 682, 684–685, 698, 963
barriers and opportunities, 709
climate change feedback and adaptation, 697–699
co-benefits, risks and spillovers, 705–709, 706–708
costs and potentials, 699–704, 699–705
emission trends and drivers, 127, 128, 128, 380, 381–384, 383, 678–686, 678–686
human settlements/infrastructure, 424
Human Settlements/Infrastructure (Ch. 12), 945, 947, 948, 950, 963
infrastructure and systemic perspectives, 696–697, 698
mitigation technology, 686–688, 686–696, 691–692, 694–696
National and Sub-national Policies/Institutions (Ch. 15), 1158–1159, 1170
sectoral policies, 715–721, 716–717
sustainable development, 710–715, 710–715
Transformation Pathways (Ch. 6), 479, 479, 481–483, 481–483, 710–715, 710–715
- Bulgaria**, 1216
- Burden sharing (effort sharing)***, 129–134, 131–133, 214, 294–296, 317–321, 457–459, 458, 459, 1011, 1021, 1254
See also Equity
- Burundi**, 873
- Business-as-usual (BAU)***, 134, 756, 1254
See also Baseline/reference
- C**
- Canada**, 130
Human Settlements/Infrastructure (Ch. 12), 950, 954, 960, 963, 965–966, 969, 972, 975
Industry (Ch. 10), 748, 750, 759, 767
International Cooperation (Ch. 13), 1015, 1026, 1027, 1029, 1031, 1043, 1049
National and Sub-national Policies/Institutions (Ch. 15), 1149, 1154, 1159, 1162, 1163, 1166
oil production, 522
Regional Development and Cooperation (Ch. 14), 1086, 1089, 1091, 1102, 1103, 1111, 1117–1121, 1123
See also International institutions and agreements
- Cancún Agreements*/Pledges***, 120–121, 134, 135, 527, 538, 564, 1009, 1017, 1018, 1024, 1024, 1048, 1254
- Cap, on emissions***, 233, 565, 1113, 1254, 1316
See also Emissions trading
- Cap-and-trade**, 864, 865, 1027, 1052, 1155, 1165–1167, 1180, 1182
See also Economic instrument; Emissions trading
- Capacity building**
international, 1037–1038
National and Sub-national Policies/Institutions (Ch. 15), 1170, 1184–1186
regional, 1090, 1091–1093, 1092
- Capital accounting-based (CAB) framework**, 293
- Carbon budget***, 319–321, 424, 430, 431, 432, 433, 435, 441, 525, 1254, 1312, 1314
- Carbon credit***. See Emission(s), emission permit
- Carbon cycle***, 845, 1254
- Carbon dioxide (CO₂)***, 1254
cumulative emissions, 129–130, 131, 360, 439
emission trends and drivers, 125, 128, 131, 132, 358, 358–362, 359, 362, 365–371, 366–369, 386 (See also specific sectors)
from fires, 828
Human Settlements/Infrastructure (Ch. 12), 927, 935, 935–939, 938, 943, 952
International Cooperation (Ch. 13), 1045
Investment and Finance (Ch. 16), 1221
National and Sub-national Policies/Institutions (Ch. 15), 1160–1161, 1161
Regional Development and Cooperation (Ch. 14), 1093, 1094, 1095, 1096, 1097, 1099, 1100, 1102, 1102–1105, 1103, 1105, 1107, 1118
regional trade agreements, 1118
Transformation Pathways (Ch. 6), 428, 429–431, 432, 433
- Carbon Dioxide Capture and Storage (CCS)***, 119, 1254
bioenergy, 873, 875
Energy Systems (Ch. 7), 532–537, 543, 548–549, 551, 565–566
health risks, 187–188, 533, 535, 544, 545, 546, 549
Industry (Ch. 10), 755, 758, 759, 765, 766, 770,

- 772–775, 775, 779, 780
 local support and concern, 188
 Transformation Pathways (Ch. 6), 447, 448, 451, 453, 485, 486
- Carbon dioxide fertilization***, 845, 1254
- Carbon Dioxide Removal (CDR)***, 219, 433–434, 434, 462, 464, 478, 485–486, 1022–1023, 1254–1255
- Carbon Disclosure Project**, 1041, 1050
- Carbon/emission(s) intensity**
 See also Lifecycle Assessment (LCA)
- Carbon/emission(s) intensity***, 40, 129, 129, 366, 368, 373–375, 378–380, 379, 443, 443, 444, 1255, 1259
 AFOLU, 829, 848, 851
 Buildings (Ch. 9), 677
 Energy Systems (Ch. 7), 523, 523
 Industry (Ch. 10), 746, 767, 768–769, 770, 777, 778, 791
 Transport (Ch. 8), 606, 607, 615–616, 639, 639, 640, 643, 646
- Carbon footprint***, 305–307, 309, 327, 526, 1255
- Carbon fund**, 1215
- Carbon leakage***, 237, 250, 385–386, 435, 1046, 1265
 AFOLU (Ch. 11), 834
 bioenergy, 875
 carbon dioxide storage, 533
 HFCs, 757, 776
 International Cooperation (Ch. 13), 1014, 1033, 1046, 1049
 methane, 527
 National and Sub-national Policies/Institutions (Ch. 15), 1155, 1163, 1167, 1181
 nitrogen, 855
 Regional Development and Cooperation (Ch. 14), 1104, 1110–1111
- Carbon market**, 298, 721, 864, 1165
 See also Economic instrument; Emissions trading
- Carbon monoxide (CO)**, 361, 361, 611
- Carbon pool**. See Reservoir
- Carbon price***, 225, 234, 239–240, 240, 449, 450–452, 1113, 1151, 1162, 1222, 1255
 See also Economic instrument; Emissions trading
- Carbon tax***, 160, 235, 839, 867, 948, 1052, 1159–1160, 1162, 1163, 1177, 1182, 1216, 1222, 1255
 See also Economic instrument; Emission(s), emission tax
- Caribbean Community Climate Change Centre**, 1121
- Caribbean region**, 934, 971, 1110, 1121
 See also Latin America and Caribbean (LAM)
- Cartagena Dialogue for Progressive Action**, 1026
- Causal responsibility**, 215, 318
- CCS-ready***, 1255
- Central Africa**, 1097, 1106, 1116, 1119
- Central America**, 790, 792, 824, 867, 1106, 1110, 1221
- Central Asia**, 934, 1116
- Central Pacific Asia**, 936
- Centralization of authority**, 1016–1019, 1017, 1022
 See also Decentralization of authority
- Centrally Planned Asia (CPA)**, 680, 680, 682, 684–685, 698, 935
- Certified Emission Reduction Unit (CER)***, 864, 1021, 1030, 1255
- Chemical oxygen demand (COD)***, 790, 1255
- Chicago Convention**, 1034
- China**
 acceptance of climate-related policies, 187
 AFOLU (Ch. 11), 825, 867
 Buildings (Ch. 9), 680, 681, 682, 688, 690, 692, 694, 694–695, 695, 709, 715, 720, 721
 consumption, 307
 economic growth, 297
 emission trends and drivers, 125, 129, 130, 133, 375, 377, 377, 378, 380, 386, 390, 393
 energy systems, 119, 120
 Energy Systems (Ch. 7), 521, 522, 524, 530, 531, 536–537, 544, 550
 Human Settlements/Infrastructure (Ch. 12), 931, 936, 938, 940–943, 943, 946–948, 950, 951, 952, 953, 954, 956–958, 961–964, 963, 971
 Industry (Ch. 10), 748, 748, 752, 754, 757, 759, 760, 762, 763, 765, 766, 772, 782, 783
 International Cooperation (Ch. 13), 1020, 1025, 1026, 1030, 1031, 1039, 1044–1046, 1049
 Investment and Finance (Ch. 16), 1214, 1222, 1236
 National and Sub-national Policies/Institutions (Ch. 15), 1151–1154, 1161–1163, 1177, 1188
 Regional Development and Cooperation (Ch. 14), 1086, 1089, 1091, 1097, 1098, 1101, 1102–1104, 1103, 1107, 1116, 1120–1123
 Sustainable Development (Ch. 4), 115
 Transformation Pathways (Ch. 6), 473
 Transport (Ch. 8), 609, 611, 614, 615, 621, 630, 631, 644, 645
 waste management, 787, 789, 790, 792
- Chlorofluorocarbons (CFCs)***, 1050, 1255
- Choice**
 architecture, 162, 177
 models, 160–163, 165, 175, 178–179, 186, 190, 1255
- Cities Climate Registry**, 1027
- Clean Development Mechanism (CDM)***, 115, 130, 184, 1020, 1255, 1258
 AFOLU (Ch. 11), 864
 Buildings (Ch. 9), 718, 721
 Energy Systems (Ch. 7), 566
 Industry (Ch. 10), 760
 International Cooperation (Ch. 13), 1021, 1030, 1031, 1032–1034
 Investment and Finance (Ch. 16), 1215
 National and Sub-national Policies/Institutions (Ch. 15), 1158
 performance assessment, 1045–1047
 Regional Development and Cooperation (Ch. 14), 1109–1110
 Transport (Ch. 8), 636
 See also Certified Emission Reduction Unit (CER)
- Clean energy**, 302, 467, 467
- Clean Energy Ministerial (CEM)**, 1029, 1121
- Clean Technology Fund (World Bank)**, 636, 1039
- Climate Alliance**, 1029
- Climate and Clean Air Coalition**, 1026–1027
- Climate change commitment***, 1255–1256
- Climate Change Expert Group**, 1026
- Climate engineering**. See Geoengineering
- Climate (change) feedback***, 843, 845, 1256
 AFOLU (Ch. 11), 843, 845–847
 Buildings (Ch. 9), 697–699
 Energy Systems (Ch. 7), 537–538
 Industry (Ch. 10), 764–765
 Transport (Ch. 8), 622–623
- Climate finance***, 1038–1040, 1122, 1188, 1211, 1212, 1213, 1217, 1230, 1233–1234, 1238, 1256
 incremental costs, 1212, 1221, 1256
 incremental investment, 1212, 1256
 private climate finance flowing to developing countries, 1212, 1256
 public climate finance flowing to developing countries, 1212, 1215, 1221–1223, 1222, 1234, 1256
 South-South, 1122
 total climate finance, 1212, 1214, 1233, 1256
 total climate finance flowing to developing countries, 1212, 1214–1215, 1234, 1256
 See also Investment and finance
- Climate model (spectrum or hierarchy)***, 242, 430, 1256
- Climate projection***, 1256
- Climate scenario***, 1256–1257
- Climate sensitivity***, 180, 181, 246, 440, 1257
- Climate system***, 158, 845, 1257
- Climate Technology Fund**, 1040
- Climate variability***, 141, 846, 1257
- Co-benefits***, 116, 141, 237, 392, 392–394, 393, 468, 469–471, 472, 1152, 1257
 AFOLU, 852–857, 856–857
 bioenergy, 883–886, 884
 Buildings (Ch. 9), 705–709, 706–708
 Energy Systems (Ch. 7), 544–549, 545, 548
 Human Settlements/Infrastructure (Ch. 12), 974–977, 975–976
 Industry (Ch. 10), 771–772, 773
 International Cooperation (Ch. 13), 1008, 1015, 1042
 National and Sub-national Policies/Institutions (Ch. 15), 1152, 1152–1154, 1179
 Sustainable Development (Ch. 4), 293–294, 294, 323–325
 Transformation Pathways (Ch. 6), 468–477, 473
 Transport (Ch. 8), 630–633, 632
 welfare, 232–235
- CO₂-equivalent (CO₂eq) concentration***, 428, 428, 430–432, 430–441, 434–440, 1257
- CO₂-equivalent (CO₂eq) emission***, 1257
- Coal**, 119
 cumulative use, 442
 emission trends, 129
 Energy Systems (Ch. 7), 519, 520, 521, 521–522, 525, 527, 538, 539, 548, 550, 553
- Cogeneration***, 528, 534, 755, 760, 766, 774, 1257
- Collective action**, 139, 255–256, 295, 1182–1183
- Colombia**, 609, 1119, 1214
- Combined-cycle gas turbine***, 1257
- Combined heat and power (CHP)**. See Cogeneration
- Combustible renewables and waste**, 519, 520, 521, 535
- Commodity price**, 117, 118, 118, 244
- Community Carbon and Biodiversity Association**, 1027
- Community pays principle (CPP)**, 218
- Compensatory justice**, 217–218, 224
- Comprehensive Assessment System for Built Environment Efficiency (CASBEE)**, 721
- Computable General Equilibrium (CGE) Model***, 238, 315, 1267
- Concentrating solar power (CSP)**, 529, 538, 539, 540, 545, 548, 548–549
- Concentration (of greenhouse gases)**
 historic, 125–129, 126–129, 357–361, 358, 359
 Transformation Pathways (Ch. 6), 428, 428, 430–432, 430–441, 434–440
- Conference of the Parties (COP)***, 120, 1011, 1031, 1039, 1185, 1215, 1257
- Confidence***, 157, 1258

- Congo**, 950, 954
Congo Basin, 1119
Connectivity, 956
Consumerism, 304–305
Consumption, 290
 AFOLU (Ch. 11), 822
 emission trends and drivers, 364, 373–375, 374, 386–389
 Regional Development and Cooperation (Ch. 14), 1101–1104, 1102–1104
 Sustainable Development and Equity (Ch. 4), 304–311
 system perspective, 394–395
Consumption-based accounting*, 305–307, 364, 368, 373–375, 386, 936–939, 937, 938, 1258
Consumption-based emissions. See Emission(s)
Consumption pattern, 817, 822, 836, 837–838, 838, 840–841, 844, 846, 857, 859, 861, 867, 869
 See also Production pattern
Contingent valuation method*, 243, 1258
Conventional fuels. See Fossil fuels
Cooling, 693
Copenhagen Accord*, 125, 1009, 1011, 1018, 1020, 1024, 1039, 1048, 1217, 1258
Cost. See Adaptation; Cost-benefit analysis (CBA); Cost-effectiveness; Cost-effectiveness analysis (CEA); Cost metrics; Economics; External cost; Incremental cost; Levelized cost; Macroeconomic cost; Marginal abatement cost (MAC); Mitigation cost metrics; Private cost; Social cost of carbon (SCC); Transaction cost; *specific sectors*
Cost-benefit analysis (CBA)*, 170–171, 178, 180, 224–235, 226, 229–231, 238, 428, 477, 1258
Cost-effectiveness analysis (CEA)*, 171–172, 178, 180, 225, 236, 238, 1009, 1258
 Buildings (Ch. 9), 702, 702–704, 703
 emission trading, 1164
 energy efficiency regulations, 1169–1170
 National and Sub-national Policies/Institutions (Ch. 15), 1157
 Transformation Pathways (Ch. 6), 428, 475, 477
Cost metrics, 1288–1293, 1293
Costa Rica, 1119, 1171
Coupled Model Intercomparison Project (CMIP5), 438, 440–441, 845
Croatia, 1116
Cropland management*, 830, 849, 852, 1258
Cultural factor, 254–256, 612–613, 636, 694
Cultural value, 221
Custom, 254, 255
Czech Republic, 1216
- D**
- Dangerous anthropogenic interference**, 213, 214, 215
Data set
 historical, 1302–1308, 1305–1307
 scenario data, 1308–1318, 1309–1318
Decarbonization*, 129, 379, 379, 443–445, 444, 523, 528, 559, 1258
 Buildings (Ch. 9), 697
 global fuel mix, 523
 Industry (Ch. 10), 770
 Transformation Pathways (Ch. 6), 479, 480
 Transport (Ch. 8), 637
Decentralization of authority, 1042
 See also Centralization of authority
Decision analysis, 169–170
Decision making, 159, 159, 162, 238–239, 307–309
Decomposition approach*, 523, 523, 677–678, 746, 746–747, 747, 942, 942–943, 1258
Decoupling, 304, 311
Default option, 162
Deforestation*, 825–829, 827, 828, 837, 855, 857, 861, 865, 867, 867, 1171, 1258
Deliberative decision making, 160–161, 164, 168–177
Demand side management (DSM), 721
Dematerialization*, 304, 1259
Democratic Republic of the Congo, 866, 873, 1116
Denmark
 emission trends and drivers, 391
 Human Settlements/Infrastructure (Ch. 12), 960, 961, 972
 Industry (Ch. 10), 764, 782
 International Cooperation (Ch. 13), 1029
 Investment and Finance (Ch. 16), 1216
 National and Sub-national Policies/Institutions (Ch. 15), 1160, 1162
 Regional Development and Cooperation (Ch. 14), 1115, 1121
 Transport (Ch. 8), 609
 waste management, 789
Density. See Urban density
Descriptive analysis*, 155, 156, 160–168, 1259
 See also Economics
Desertification*, 1259
Designated national authority (DNA)*, 1259
Developed countries. See Industrialized countries
Developing countries*, 530, 1264
 AFOLU (Ch. 11), 854, 865
 bioenergy, 877
 Buildings (Ch. 9), 691–693, 697, 708, 709, 721
 challenges, 167
 emission trends and drivers, 125, 129, 359, 372, 375, 386, 391
 Energy Systems (Ch. 7), 523, 528, 530, 546, 552, 553
 financial resources, 303
 global economic crisis, 116, 117, 117
 Human Settlements/Infrastructure (Ch. 12), 927, 928, 930, 933, 934, 940, 961, 967, 971, 973
 Industry (Ch. 10), 751, 754, 760
 International Cooperation (Ch. 13), 1006, 1011, 1014, 1021, 1024, 1024, 1025, 1033, 1038, 1046–1047, 1049, 1051
 Investment and Finance (Ch. 16), 1210, 1213, 1214–1215, 1217, 1221–1223, 1225, 1226, 1230, 1237, 1232, 1234–1236, 1235, 1238
 National and Sub-national Policies/Institutions (Ch. 15), 1148, 1162, 1174, 1175, 1187–1188
 payments, for emissions reductions, 225
 Regional Development and Cooperation (Ch. 14), 1086–1087, 1093, 1097, 1099–1101, 1104, 1106, 1123–1124
 suitable policy instruments, 242
 sustainable consumption and production, 308
 Sustainable Development (Ch. 4), 291, 641
 Transformation Pathways (Ch. 6), 457
 Transport (Ch. 8), 641
 uncertainties and risks impacting climate policy, 190–191
Development pathway*, 302–303, 311–315, 315, 1259
 See also Sustainable development (SD)
DICE model, 245–247, 257
Direct Air Capture (DAC)*, 485–486, 1259
Direct emissions*. See Emission(s), direct
Direct land-use change. See Land use change, direct
Discounting*, 228–232, 229–231, 1259
Distributional objective, 236, 237
Distributive justice, 216–217, 224, 1008
Dominica, 1119
Double dividend*, 234–235, 1259
Drivers of behaviour*, 388–389, 1259
Drivers of emissions*, 142, 356, 357, 364–394, 1259
 AFOLU (Ch. 11), 383–384
 baseline, 425–427, 425–427
 buildings, 383
 co-benefits/adverse side-effects of mitigation actions, 392–394
 consumption and behavioural change, 387–389
 consumption trends, 373, 373–375, 374
 demographic structure trends, 369–371
 economic growth and development, 371–380
 energy demand and supply, 375–380, 376, 377, 379
 industry, 383
 key drivers, 365–367, 365–367, 381–383
 Least Developed Countries, 384
 population trends, 368–369, 369
 production and trade patterns, 385–387
 production trends, 371, 371–373, 372
 structural changes in economies, 375
 technological change, 389–391
 waste, 385
 See also individual sectors
Durban Forum on Capacity Building, 1185
Durban Platform for Enhanced Action, 1025, 1048
Dynamic model, 314, 1101
- E**
- East Asia (EAS)**, 1286, 1287
 Human Settlements/Infrastructure (Ch. 12), 933, 934, 953, 954
 Regional Development and Cooperation (Ch. 14), 1086, 1087, 1089, 1090, 1091, 1092, 1093, 1094, 1094–1097, 1097, 1098, 1100–1105, 1101–1104, 1107, 1109, 1109, 1116, 1123
East Asia and Pacific, 1110
Easterlin paradox, 310
Eastern and Central Europe (EEU)
 Buildings (Ch. 9), 680, 682, 684–685, 698
 economic structure and, 375
 Human Settlements/Infrastructure (Ch. 12), 932, 935
 International Cooperation (Ch. 13), 1043
 Regional Development and Cooperation (Ch. 14), 1086, 1089, 1102, 1103, 1116, 1123
Eco-efficiency, 309
ECON4 regions, 1287, 1287–1288
Economic Community of West African States (ECOWAS), 1120
Economic effects. See Adverse side-effects; Co-benefits
Economic efficiency*, 236, 1009, 1259
Economic geography, 946, 947
Economic incentive, 239–240
Economic instrument, 565–567, 781, 781, 782, 1155, 1157, 1158, 1159–1163, 1167
 See also Carbon market; Carbon price; Emissions trading; Mitigation policies; Subsidy; Subsidy removal; Tax; *specific instruments*
Economic objective, 236
Economic regions (income-based), 116–118, 117, 1287–1288

- emission trends and drivers, 125–130, 126, 128, 131, 132, 372–373, 380, 383
 International Cooperation (Ch. 13), 1036
 Investment and Finance (Ch. 16), 1236
 National and Sub-national Policies/Institutions (Ch. 15), 1161–1162, 1185
 Regional Development and Cooperation (Ch. 14), 1099
 short- and long-term priorities for countries, 167
 Sustainable Development (Ch. 4), 297
 See also Developing countries; Industrialized (developed) countries; Least Developed Countries (LDCs)
- Economic stimulus package**, 1217
- Economics**, 213–214, 223–258
 aggregation of costs and benefits, 225–235
 assessing methods of policy choice, 235–239
 behavioural economics, 252–254
 ethical considerations, 224–225 (See also Ethics)
 limits in guiding decision making, 224, 225
 metrics of costs and benefits, 242–252
 policy instruments and regulations, 239–242
 Regional Development and Cooperation (Ch. 14), 1089
 technological change, 256–258
 world macroeconomic situation, 116–118, 117
- Economies in Transition (EITs)***, 1259, 1286, 1286–1287
 AFOLU (Ch. 11), 820, 821, 822, 825, 826, 849, 852, 852, 862, 863
 Buildings (Ch. 9), 679, 699, 713
 emission trends and drivers, 357–360, 359, 365, 366, 366, 367, 371, 372, 376, 376, 378, 384, 394
 Energy Systems (Ch. 7), 521–524, 524
 Human Settlements/Infrastructure (Ch. 12), 931
 Industry (Ch. 10), 748, 752, 778, 778
 International Cooperation (Ch. 13), 1036
 National and Sub-national Policies/Institutions (Ch. 15), 1150
 Regional Development and Cooperation (Ch. 14), 1086, 1087, 1089, 1090, 1091, 1092, 1093, 1094, 1094–1097, 1099, 1100–1105, 1105, 1106, 1107, 1109, 1109, 1110, 1123
 Transformation Pathways (Ch. 6), 434, 435, 436, 459, 460
 Transport (Ch. 8), 608, 609
- Ecosystem***, 549, 828, 838, 845, 1259
- Ecosystem services***, 484, 819, 1259
- Effort sharing**. See Burden sharing
- Egypt**, 950, 954, 1174
- Electricity**
 bioenergy, 873, 874
 emission trends, 127
 Energy Systems (Ch. 7), 519, 520, 522, 523, 523, 527–533, 559–562, 560, 562
 Human Settlements/Infrastructure (Ch. 12), 977
 infrastructure, 697
 Investment and Finance (Ch. 16), 1218–1220
 Regional Development and Cooperation (Ch. 14), 1097
 Transformation Pathways (Ch. 6), 479, 479
 Transport (Ch. 8), 614–616
- Electronics (consumer electronics)**, 690–692
- Embodied emissions***. See Emission(s)
- Embodied energy***. See Energy
- Emission(s)***, 1260
 accounting methods, 305–307, 319 (See also Emissions accounting)
 agricultural, 127, 822–824, 822–824, 1260
 anthropogenic, 142, 358, 358–360, 359, 1260
 consumption-based, 117, 127, 133, 306–307, 364, 368, 373, 374–375, 386, 395–396, 930, 937, 938
 country shares, 129, 131–133
 cumulative, 129–130, 176, 252, 318–320, 359, 360, 428, 429–431, 435, 436, 438, 439, 441, 442, 447, 451, 452, 453, 454, 457, 458, 458, 460, 461, 464, 562, 563, 860, 879, 881, 882, 927, 1011, 1045, 1094, 1105, 1105
 direct, 123, 125, 478–481, 479, 480, 608–609, 678, 679, 749, 751, 769, 948, 1260
 drivers (See Drivers of emissions)
 embodied, 374, 951, 1260
 emission allowance (See Emission(s), emission permit)
 emission factor/intensity* (See Carbon/ emission(s) intensity)
 emission permit*, 234, 457–451, 460, 1113–1114, 1260 (See also Banking (of emission permits/Assigned Amount Units); Emissions trading)
 emission quota*, 1260
 emission scenario(s)*, 439–440, 525, 1260 (See also Emission(s), emission trajectory)
 emission standards*, 1169, 1260
 emission tax, 239–240, 240, 1162, 1222 (See also Carbon tax)
 emission trajectory*, 124–125, 367, 428, 428–441, 430–432, 434–440, 463, 464, 1260
 indirect, 123, 125, 127, 478–481, 608–609, 678, 679, 749, 751, 769, 820, 1260
 market penalties, 183–184
 metrics, 250–252, 251
 mitigation challenges and strategies, 137–140
 mitigation perspectives, 129–134, 131–133
 non-CO2 GHG emissions, 122–124, 123, 124 (See also specific gases: e.g. Methane)
 per-capita, 130, 132, 522, 524
 territorial, 117, 127, 133, 306–307, 357–359, 358, 359, 364, 365–368, 373, 373–375, 374, 386, 930, 937, 938, 1260
 trends (See Trends in emissions)
 uncertainty of stocks and flows, 158, 361, 362, 364
 See also Air pollution; Greenhouse gas (GHG); individual sectors
- Emissions accounting**, 936–939, 938
 supply chain, 937
 territorial, 937, 937–939, 938
- Emissions Reduction Unit (ERU)***, 1021, 1215–1216, 1260
- Emissions trading***, 122, 158, 182, 185, 239–240, 240, 565, 1021, 1027, 1052, 1163–1167, 1177, 1222, 1260–1261
 AFOLU (Ch. 11), 864–865
 National and Sub-national Policies/Institutions (Ch. 15), 1052, 1151, 1155, 1159–1160, 1163–1167
 performance assessment, 1044
 Transport (Ch. 8), 646
 uncertainties, 158
 See also Emission(s), emission permit; European Union (EU), Emissions Trading Scheme; Regional Greenhouse Gas Initiative (RGGI); Tradable allowance
- Employment**, 476, 544, 630, 705, 707, 707, 958–960
- Energy***
 embodied, 694, 1260
 energy access*, 476, 546, 697, 1097, 1174, 1237, 1261
 energy carrier*, 1261
 Energy Community, 1116
 energy cost curves, 543
 energy density*, 615–616, 1261
 energy poverty*, 290, 708, 1261
 energy security*, 119, 475, 544, 546, 630, 707, 976, 1261
 energy services*, 118, 376, 377, 472, 521, 549, 555, 695, 745, 1097, 1261
 primary, 129, 129, 378–380, 379, 1261, 1295–1297, 1296, 1297
 renewable, 119, 519, 520, 521, 522, 525–526, 528–529, 534, 535, 537–538, 539, 540, 542–544, 546, 548–549, 551–553, 558, 566, 567, 1115, 1116, 1177, 1218–1220, 1261
- Energy and Climate Partnership of the Americas (ECPA)**, 1119
- Energy efficiency (EE)***, 119–120, 130, 132, 1046, 1261
 adoption factors, 390
 behavioural change and, 186
 Buildings (Ch. 9), 687–696, 688, 691, 692, 694–696, 709, 715–721, 716–717
 emission drivers, 376, 376–378, 377
 Energy Systems (Ch. 7), 519, 521, 528, 535–536
 Industry (Ch. 10), 754–755, 771, 774, 775, 781, 781–782
 National and Sub-national Policies/Institutions (Ch. 15), 1168–1169
 rebound effects (See Rebound effect)
 Regional Development and Cooperation (Ch. 14), 1117
 sustainable production, 310
 Transport (Ch. 8), 640, 644
- Energy Efficiency Directive (EED)**, 718, 720
- Energy intensity***, 129, 136, 137, 1261
 Buildings (Ch. 9), 687, 688
 emission drivers, 375–378, 376, 377
 Industry (Ch. 10), 746, 748
 Transport (Ch. 8), 606, 607, 613–615, 639, 639, 643, 643–646
- Energy Management Systems (EnMS)**, 782
- Energy Performance Certificates (EPCs)**, 720
- Energy sector**, 518
 boundaries, 519
 emission trends and drivers, 360, 378–380, 379, 381–384, 390, 394–395
 energy consumption, 519, 521
 GHG emissions, 518, 522, 568–569
 Transformation Pathways (Ch. 6), 442–444, 442–445, 469, 478–483, 479–483, 538, 554–564, 555–558, 560–564
 See also Energy systems
- Energy systems***, 511–569, 1261
 availability, cost, and performance, 118, 118–120
 barriers and opportunities, 551–554, 569
 Buildings (Ch. 9), 696–697
 climate change and adaptation, 537–538
 co-benefits, risks, and adverse side-effects, 544–551, 545, 547, 548
 costs and potentials, 538–544, 539–541
 current status of markets, 519–522, 520, 521
 economic costs of climate change, 244
 emission trends and drivers, 123, 125, 127–129, 128, 131, 522–524, 523, 524
 financing low-carbon investment, 1223–1228, 1224, 1226
 future low-carbon investment, 1217–1223, 1218–1220, 1222
 Human Settlements/Infrastructure (Ch. 12), 945, 947
 Industry (Ch. 10), 755

- infrastructure and systemic perspectives, 534–537
mitigation technology, 527–533, 530
National and Sub-national Policies/Institutions (Ch. 15), 1158–1159, 1170
Regional Development and Cooperation (Ch. 14), 1094–1099, 1095–1097, 1114–1119, 1116
resources and resource availability, 524–526, 525
sectoral policies, 564–568
transformation pathways and sustainable development, 554–564, 555–558, 560–564
urbanization, 1099–1101, 1100
- England**, 631
- Ensemble analyses**, 175–177, 176
- ENTICE model**, 257
- Environmental effectiveness***, 236, 1009, 1261
- Environmental effects**. *See* Adverse side-effects; Co-benefits
- Environmental input-output analysis***, 386, 1261
- Environmental Kuznets Curve***, 373, 1261
- Environmental objective**, 236, 237
- Epistemic uncertainty**, 178
- Equality**, 319
- Equity**, 259, 287–292, 1008
approaches and indicators, 294–296
consumption and, 304–311
distributional, 1009–1010, 1012
framing issues in sustainable development, 321–325, 323
justice and, 215–219
See also Burden sharing (effort sharing)
- ESCO model**, 720
- Estonia**, 1216
- Ethics**, 213–223
assessing methods of policy choice, 235–239
concepts and principles, 214–215
economics, rights, and duties, 223–225
justice, equity, and responsibility, 215–219
values and wellbeing, 220–223
- Ethiopia**, 754, 950, 1186
- Eurasia**, 792
- Europe**
AFOLU (Ch. 11), 824, 825, 828, 839, 840
bioenergy, 881, 885
Buildings (Ch. 9), 688, 690, 720
emission trends and drivers, 375
Energy Systems (Ch. 7), 522, 528, 530, 536, 537
financial crisis, 116
Human Settlements/Infrastructure (Ch. 12), 932, 932, 933, 934, 937, 939, 941, 951, 954, 961, 962, 963, 971, 972
Industry (Ch. 10), 759, 760, 764, 766, 782
International Cooperation (Ch. 13), 1029
Investment and Finance (Ch. 16), 1216
National and Sub-national Policies/Institutions (Ch. 15), 1147, 1160, 1161, 1173
Regional Development and Cooperation (Ch. 14), 1098, 1100, 1110
Transport (Ch. 8), 608, 609, 611, 613, 621, 633, 643, 645
waste management, 790, 792
- Europe/Commonwealth of Independent States region**, 1122
- European Commission**, 1120, 1121, 1214, 1215
- European Union (EU)**
AFOLU (Ch. 11), 867
Buildings (Ch. 9), 691, 691–693, 718–720
emission trends and drivers, 130, 385
Emissions Trading Scheme, 115–116, 184, 258, 646, 760, 782, 864, 865, 1028–1029, 1034, 1111–1114, 1151, 1163–1164, 1184
Energy Systems (Ch. 7), 528, 565
- Human Settlements/Infrastructure (Ch. 12), 936, 952
induced innovation, 256
Industry (Ch. 10), 755, 760, 762, 764, 767, 783
International Cooperation (Ch. 13), 1018, 1021, 1026, 1029, 1030, 1031, 1033, 1034, 1037, 1043–1045, 1049
Investment and Finance (Ch. 16), 1222
legal responsibility for harm, 218
National and Sub-national Policies/Institutions (Ch. 15), 1159, 1163–1164, 1166, 1167, 1172, 1177, 1180–1181
Regional Development and Cooperation (Ch. 14), 1089, 1111–1117, 1116, 1121, 1122, 1124
revenue from permits, 234
sustainable consumption and production, 308, 309
Sustainable Development (Ch. 4), 115
Transport (Ch. 8), 613, 624, 645, 646
waste management, 786–789
- European Union Allowance (EUA)**, 1113
- Evidence***, 157, 1261
- Expected utility theory**, 168–169
- Experimental economics**, 1157
- External benefit***, 957, 1008, 1261
- External cost***, 235, 235, 542, 550, 568, 957, 1007, 1008, 1023, 1170, 1261
- Externality***, 115, 116, 118, 181, 214, 219, 227, 233–236, 237, 240, 253, 256, 257, 1261
Buildings (Ch. 9), 689, 709, 722
emissions drivers, 390
Energy Systems (Ch. 7), 565, 566
Human Settlements/Infrastructure (Ch. 12), 947, 951, 958, 959, 962, 963
Industry (Ch. 10), 776
International Cooperation (Ch. 13), 1008, 1033, 1040
National and Sub-national Policies/Institutions (Ch. 15), 1160, 1170, 1171, 1173, 1181, 1183, 1190
Sustainable Development (Ch. 4), 303, 313
Transformation Pathways (Ch. 6), 456
Transport (Ch. 8), 619
- Extreme weather/climate**, 244
- F**
- Fairness**, 259, 1009–1010
See also Equity; Justice
- Fast Start Finance (FSF)**, 1039
- Fat tailed distribution**, 1300–1301
- Fat tails problem**, 154, 171, 246
- Fatalities, energy-sector-related**, 549–551
- Feebate**, 240
- Feed-in tariff (FIT)***, 178–179, 185, 566, 1228, 1262
- Finance**. *See* Investment and finance
- Finland**, 532, 542, 764, 960, 1115, 1121, 1216
- First-generation biofuel***, 1253
- Flaring***, 547, 1262
- Fluorine-based (fluorinated) gases (F-gases)**, 127, 360, 363, 611, 692–693, 753, 753
- Food**, 301, 761–762, 834, 838–842, 886
- Food security***, 475, 818, 838, 839, 853, 884, 1262
- Forest***, 447, 825–826, 845–847, 868, 871, 880–881, 1171, 1187, 1262
forest management*, 824, 825–826, 830, 868, 871, 1262
See also Agriculture, Forestry and Other Land Use (AFOLU)
- Forestry and Other Land Use (FOLU)**, 824, 825–829, 826, 827, 1105, 1221
See also Agriculture, Forestry and Other Land Use (AFOLU)
- Former Soviet Union (FSU)**, 680, 680, 682, 684–685, 698
economic structure, 375
Human Settlements/Infrastructure (Ch. 12), 935, 946
Industry (Ch. 10), 760
International Cooperation (Ch. 13), 1043
Regional Development and Cooperation (Ch. 14), 1086, 1089, 1091, 1102, 1103, 1123
- Former Yugoslav Republic of Macedonia**, 1116
- Fossil fuels***, 1262
AFOLU (Ch. 11), 822, 823
baseline emissions, 426–427, 427
bioenergy, 872, 873, 874
carbon intensity, 379
CO₂ emissions, 358, 358–362, 359, 362, 365–367, 366, 368
emission trends, 127
Energy Systems (Ch. 7), 524–525, 525, 527–528, 538, 548, 552, 554, 566–567
Industry (Ch. 10), 751, 752, 771
Investment and Finance (Ch. 16), 1218–1220
See also Coal; Natural gas; Oil; Oil sands and oil shale; Shale gas
- France**
Buildings (Ch. 9), 720
carbon dioxide storage, 188
Human Settlements/Infrastructure (Ch. 12), 950, 958, 959, 972, 972
Industry (Ch. 10), 782
International Cooperation (Ch. 13), 1026, 1029, 1049
National and Sub-national Policies/Institutions (Ch. 15), 1151, 1153
nuclear energy, 530, 532, 534, 542
Regional Development and Cooperation (Ch. 14), 1110, 1121
See also International institutions and agreements
- Free Rider***, 213, 214, 1262
- Fuel cell***, 614–615, 1262
- Fuel poverty***, 706, 708, 709, 1262
- Fuel switching***, 527–528, 754, 759, 760, 774–775, 775, 1262
- Fukushima**, 188
- FUND model**, 245–247
- G**
- G8**, 1042, 1049
- G20**, 1026, 1049, 1217
- Game theory**, 1012, 1014
- General equilibrium analysis***, 238, 315, 476, 1262
- Geoengineering***, 219, 484–489, 1022–1023, 1262
See also Carbon Dioxide Removal (CDR)
- Geothermal energy***, 519–521, 525, 529, 535, 537, 539, 540, 542, 545, 549, 551, 556–558, 1262
- Germany**
AFOLU (Ch. 11), 866
Buildings (Ch. 9), 693, 709, 720
emission trends and drivers, 130, 390, 391
energy systems, 120
Energy Systems (Ch. 7), 535, 544
feed-in tariff, 185
Human Settlements/Infrastructure (Ch. 12), 950, 961, 972, 974

- Industry (Ch. 10), 748, 782, 783
 International Cooperation (Ch. 13), 1026, 1036, 1049
 Investment and Finance (Ch. 16), 1214, 1216, 1217, 1224
 National and Sub-national Policies/Institutions (Ch. 15), 1151, 1153, 1153, 1154, 1176, 1177
 Regional Development and Cooperation (Ch. 14), 1110, 1121
 Transport (Ch. 8), 609, 645
 waste management, 789
 See also International institutions and agreements
- Ghana**, 690, 1026
- Global Climate Change Alliance (GCCA)**, 1027
- Global Cost Potential (GCP)**, 250–252
- Global Damage Potential (GDamP)**, 250–252
- Global Environment Facility (GEF)***, 636, 721, 1011, 1039, 1040, 1109–1110, 1188, 1262
- Global financial/economic crisis**, 116, 117, 385, 1113, 1217
- Global mean surface temperature***, 251, 431, 438–440, 438–441, 487–488, 1048, 1262
- Global North**, 1119
- Global South**, 942, 962, 1104, 1111, 1119, 1120
- Global Superior Energy Performance Partnership (GSEP)**, 1029, 1120
- Global Temperature Change Potential (GTP)**, 251, 252
- Global warming***, 134, 1263
- Global Warming Potentials (GWPs)***, 122, 124, 250–252, 251, 358, 437, 1050, 1263
- Gold Standard**, 1027, 1046
- Governance***, 1263
 bioenergy, 885
 building institutions/capacity, 292
 Human Settlements/Infrastructure (Ch. 12), 864, 866, 883–885, 944, 966–967
 International Cooperation (Ch. 13), 1017, 1023
 Investment and Finance (Ch. 16), 1228–1229, 1229
 National and Sub-national Policies/Institutions (Ch. 15), 1149–1155, 1150, 1152
 private sector-led initiatives, 1040–1041
 Regional Development and Cooperation (Ch. 14), 1092, 1092
 solar radiation management (SRM), 488
 Sustainable Development (Ch. 4), 292, 297–298
- Government provision of public goods or services**, 241, 567–568, 781, 781, 1156, 1159, 1170–1171
 See also Mitigation policies
- Grazing land management***, 831, 849, 852, 1263
- Great Britain**, 187
- Green building**, 720–721
- Green Climate Fund (GCF)***, 858, 1011, 1025, 1038, 1228, 1263
- Green Deal**, 720
- Green default**, 162
- Greenhouse effect***, 1263
- Greenhouse gas (GHG)***, 122–124, 123, 124, 1263
 See also Carbon dioxide (CO₂); Emission(s); Methane (CH₄); Mitigation policies; *specific sectors*
- Gross Domestic Product (GDP)***, 116, 117, 129, 132, 933, 1263
 Buildings (Ch. 9), 683, 685
 emission trends and drivers, 365–378
 Energy Systems (Ch. 7), 523
 Human Settlements/Infrastructure (Ch. 12), 933, 972
 Industry (Ch. 10), 747
- International Cooperation (Ch. 13), 1049
 Regional Development and Cooperation (Ch. 14), 1093–1097
 sustainable development, 304, 310
 Transformation Pathways (Ch. 6), 425, 426, 450
 Transport (Ch. 8), 608, 639
 waste management, 787
- Gross National Expenditure (GNE)***, 367, 368, 1263
- Gross National Happiness (GNH)**, 255
- Gross National Product (GNP)***, 1263
- Gross World Product***, 1263
- Growth rates**, 1301–1302
- Guatemala**, 961
- ## H
- Haiti**, 1235
- Halocarbons**, 692–693
 See also Fluorine-based (fluorinated) gases (F-gases)
- Harmful conduct**, 218
- Health**, 392, 393
 AFOLU (Ch. 11), 854
 Buildings (Ch. 9), 706, 708, 708–709
 carbon dioxide capture and storage, 188–189
 economic costs, 244–245
 Energy Systems (Ch. 7), 545, 546–549, 548
 Human Settlements/Infrastructure (Ch. 12), 975, 975–977, 976
 Industry (Ch. 10), 771–772
 perception of risks, 167
 Transformation Pathways (Ch. 6), 473–475, 474
 Transport (Ch. 8), 630–633, 632
- Heat**
 Buildings (Ch. 9), 681–683, 682, 683, 687, 688, 697, 702, 703
 emission trends, 127, 882
 Energy Systems (Ch. 7), 81, 519, 520, 522, 523, 523, 528, 535–536
 fuel poverty, 708, 709
 Industry (Ch. 10), 755
- Heat island***, 977, 1263
- Heating and cooling networks**, 535–537
- High Global Warming Potential gas**, 360
- High Income Countries (HIC)**, 1287
 See also Economic regions (income-based)
- Historical responsibility**, 217–219, 318
- Household size, emissions and**, 371
- Human capital**, 300–301
- Human Development Index (HDI)***, 221, 291, 1090, 1263–1264
- Human rights**, 1027–1028
- Human settlement**, 929–942
 1950 to 2050, 930
 emissions trends and drivers, 930–942, 931, 932, 935, 937–941
 National and Sub-national Policies/Institutions (Ch. 15), 1158–1159
 policies and mitigation options across sectors, 945
 Transformation Pathways (Ch. 6), 471
 Transport (Ch. 8), 619–621
 uncertainties in choices, 158–159
 urbanization-emissions link, 369–370
 See also Human settlements/infrastructure; Infrastructure; Spatial planning; Urban planning
- Human settlements/infrastructure**, 923–978
 boundaries, 930
 Buildings (Ch. 9), 696–697
- climate mitigation, 969–974, 970–973
 co-benefits, tradeoffs, and spill-over effects, 974–977, 975, 976
 economies and GDP, 933
 emissions accounting methods, 936–939, 938
 emissions trends and drivers, 391, 930, 931, 939–949, 943, 945, 946, 949, 950
 expansion, 930–932, 930–942, 934, 935, 938–941, 948, 951, 953, 957, 958, 959, 960, 962–966, 968, 969, 974
 governance, institutions, and finance, 966–969, 968
 infrastructure, 947, 949, 951, 952, 957
 land use, 933, 934, 940, 941, 941, 953, 955, 955–956, 967
 National and Sub-national Policies/Institutions (Ch. 15), 1158–1159, 1170
 population, 929–932, 930–932, 939–942, 940
 Regional Development and Cooperation (Ch. 14), 1099–1101, 1101
 share of global emissions, 935–936
 spatial planning, 949, 957, 958–966, 959, 970
 sprawl (See Human settlements/infrastructure, expansion)
 sustainable development, 974
 transport, 951, 952, 956, 960, 961, 965–967, 968, 969, 975, 976
 Transport (Ch. 8), 612–613, 618–621, 647
 urban form and infrastructure, 949–957, 950, 952–955
 urbanization-emissions link, 369–370
 See also Human settlement; Infrastructure; Spatial planning; Urban planning
- Hungary**, 950, 1216
- Hybrid vehicle***, 610, 613–617, 617, 625, 1264
- Hydrochlorofluorocarbons (HCFCs)**, 1050
- Hydrofluorocarbons (HFCs)***, 122–124, 1264
 baseline emissions, 429
 Buildings (Ch. 9), 676, 693
 emission trends, 123, 125, 135, 360, 363, 383
 greenhouse gas emission metrics, 124, 1302
 Industry (Ch. 10), 745, 753, 753, 755, 757, 767, 769, 770, 776, 782–783
 International Cooperation (Ch. 13), 1050
 Regional Development and Cooperation (Ch. 14), 1095
 Transformation Pathways (Ch. 6), 437
 Transport (Ch. 8), 606, 608, 611
- Hydrogen fuel**, 616, 758
- Hydropower***, 1264, 1308
 Energy Systems (Ch. 7), 519–521, 521, 522, 525, 526, 529, 530, 535, 537–538, 539, 540, 541, 542, 545, 548, 548–551, 557–558
 Regional Development and Cooperation (Ch. 14), 1116–1117
- ## I
- Iceland**, 1111, 1160
- Income**, 310–311, 371, 371–373, 934, 946–948
 See also Economic regions (income-based)
- Incremental cost***, 1212, 1221, 1256
- Incremental investment***, 1212, 1256
- India**
 AFOLU (Ch. 11), 825
 Buildings (Ch. 9), 692, 693, 697, 721
 consumption, 307
 economic growth, 297
 emission trends and drivers, 133, 375, 377, 377, 378, 391

- energy systems, 119, 120
 Energy Systems (Ch. 7), 521, 524, 531, 546
 Human Settlements/Infrastructure (Ch. 12), 940, 941, 950, 952, 954, 956, 958, 962, 967, 973, 975
 Industry (Ch. 10), 748, 748, 749, 754, 757, 759, 765, 766
 International Cooperation (Ch. 13), 1020, 1025, 1026, 1039, 1049
 Investment and Finance (Ch. 16), 1216
 National and Sub-national Policies/Institutions (Ch. 15), 1151–1154, 1162, 1177
 Regional Development and Cooperation (Ch. 14), 1101, 1104, 1107, 1120–1122
 subsidies, 167
 Sustainable Development (Ch. 4), 115
 Transformation Pathways (Ch. 6), 473
 Transport (Ch. 8), 611, 631
 waste management, 787, 790
- Indigenous peoples***, 255, 853, 1264
Indirect emission*. See Emission(s)
Indirect land use change (iLUC)*, 835, 878, 880–881, 1265
- Indonesia**
 AFOLU (Ch. 11), 866
 bioenergy, 882
 Energy Systems (Ch. 7), 521
 Human Settlements/Infrastructure (Ch. 12), 950, 967
 Industry (Ch. 10), 748
 International Cooperation (Ch. 13), 1026
 Investment and Finance (Ch. 16), 1214
 National and Sub-national Policies/Institutions (Ch. 15), 1162, 1171
 Regional Development and Cooperation (Ch. 14), 1104, 1121
 Transport (Ch. 8), 645
 waste management, 792
- Industrial Revolution***, 1264
Industrialized (developed) countries*, 1264
 Buildings (Ch. 9), 708, 709
 economic structure and emissions, 375
 emission trends, 125, 126, 129
 emissions share, 130
 Energy Systems (Ch. 7), 528, 552
 global economic crisis, 116, 117
 Human Settlements/Infrastructure (Ch. 12), 934, 937, 967
 induced innovation (See Innovation, induced)
 Industry (Ch. 10), 748, 751, 754, 762
 International Cooperation (Ch. 13), 1006, 1011, 1021, 1024, 1024, 1029, 1033, 1035, 1046–1047
 Investment and Finance (Ch. 16), 1210, 1212, 1213, 1214, 1217, 1221–1223, 1229, 1230, 1233–1234
 Regional Development and Cooperation (Ch. 14), 1086, 1097, 1099, 1100, 1103, 1104
 suitable policy instruments, 242
 sustainable consumption and production, 308, 309
 Sustainable Development (Ch. 4), 297
 Transformation Pathways (Ch. 6), 457
 waste management, 790
- Industry, 739–792, 745, 746**
 barriers and opportunities, 774–776, 775
 baseline emissions, 426–427, 427
 cement, 758–759
 chemicals (plastics/fertilizers/others), 759–760
 climate change feedbacks and adaptation, 764–765
 co-benefits, risks and spillovers, 770–776, 773
 costs and potentials, 765–770, 766, 768, 769
 emission trends and drivers, 124, 125, 127, 128, 128, 131, 380, 381–384, 383, 749–753, 750–753, 882
 food processing, 761–762
 Human Settlements/Infrastructure (Ch. 12), 945, 946–948, 950
 infrastructure and systemic perspectives, 763–764
 iron and steel, 757–758
 manufacturing, 747, 747–749, 748
 mineral extractive, 747, 748, 749
 mining, 762–763
 mitigation technology, 753–763
 National and Sub-national Policies/Institutions (Ch. 15), 1158–1159
 non-ferrous metals, 761
 pulp and paper, 760–761
 sectoral policies, 780–783, 781
 services, 747, 749
 sustainable development, 776–780, 777–780
 sustainable production, 309–310
 textiles and leather, 762
 Transformation Pathways (Ch. 6), 471, 479, 479–483, 776–780, 777–780
 waste, 785–792
- Inequality aversion**, 230
Information programme, 241, 567, 781, 781, 868, 1156, 1158, 1170
 See also Mitigation policies
- Infrastructure**, 391
 AFOLU (Ch. 11), 836, 836–843, 838–840, 842–844
 Buildings (Ch. 9), 696–697, 698
 Energy Systems (Ch. 7), 534–537, 697
 Human Settlements/Infrastructure (Ch. 12), 947, 949–957, 950, 952–955, 957
 Industry (Ch. 10), 763–764
 Least Developed Countries, 138
 Transformation Pathways (Ch. 6), 471
 Transport (Ch. 8), 618, 618–621, 620, 623, 647
 See also Human settlement; Human settlements/infrastructure; Spatial planning; Transport; Urban planning
- Innovation, induced**, 256
Input-output analysis, 1298–1299
 See also Environmental input-output analysis
- Institution***, 120–122, 166, 1264
 AFOLU (Ch. 11), 853, 858–859
 collective action, 255–256
 effective governance, 292
 Human Settlements/Infrastructure (Ch. 12), 966–967, 968
 International Cooperation (Ch. 13), 1010, 1012, 1013, 1025
 Investment and Finance (Ch. 16), 1228–1231, 1231
 National and Sub-national Policies/Institutions (Ch. 15), 1149–1155
- Institutional feasibility***, 237, 1010, 1114, 1264
Integrated assessment*, 544, 555–558, 555–559, 1101, 1264
 See also Integrated model
- Integrated Design Process (IDP)**, 686, 690
Integrated Model*, 238–239, 259, 1267
 aggregate climate damages, 245
 aggregate costs of mitigation (See Mitigation Scenario)
 bioenergy, 484, 882, 883, 886
 carbon dioxide removal, 486
 co-benefits, 469–477, 474
 Least Developed Countries, 459
 metrics of costs and benefits, 243–249
 social cost of carbon, 249
 technological change, 257, 466–467
 Transformation Pathways (Ch. 6), 422–424
 treatment of impacts and adaptation, 441–442
 treatment of uncertainty, 178–181, 179
 See also Risk management; individual sectors under Transformation pathway
- Intellectual property (IP)**, 302, 1175
Intellectual property right, 1036–1037
Intergenerational justice/equity, 216–217, 294, 1091
International Civil Aviation Organization (ICAO), 121, 646, 1034, 1050
International cooperation, 121–122, 1001–1054
 agreements, 1012–1016, 1013
 among governments, 1024, 1024–1027
 assessment criteria, 1009–1012
 burden sharing, 129–134, 131–133
 capacity building, 1037–1038
 climate change mitigation policy and trade, 1030–1035, 1031
 collective action, 139
 framing concepts and principles, 1007–1009
 Investment and Finance (Ch. 16), 1038–1040, 1228–1229
 linkages with national policies, 1029–1030
 non-state, 1027–1028
 performance assessment, 1041–1053, 1042–1043, 1047
 policy architectures, 1016–1023, 1017, 1019, 1022, 1051–1053
 public- and private-sector roles, 1040–1041
 and regional cooperation, 1028–1029
 technology and knowledge development, 1035–1037
- International Council for Local Environmental Initiatives (ICLEI)—Local Governments for Sustainability**, 1027
International Energy Agency (IEA), 121, 375, 755, 1026, 1175–1176
International environmental agreement (IEA), 1012, 1014–1016, 1111
 See also International cooperation
- International institutions and agreements**, 120–122
 under uncertainty, 181–183, 1015
International Maritime Organization (IMO), 121, 645, 1023, 1034, 1050
International Paretianism, 295
International Renewable Energy Agency (IRENA), 121, 1026
International trade, 307, 385–387, 396, 461–462, 546, 1030–1035, 1031, 1117
International transport (INT TRA), 1286, 1287, 1288
 See also Economic regions (income-based)
- International treaty**, 181–182
Intra-generational justice/equity, 217–218, 294, 295, 295
Intuitive decision making, 160–164
Investment and finance, 120, 1207–1238
 AFOLU (Ch. 11), 858
 Buildings (Ch. 9), 720–721
 concepts of climate finance, 1212, 1213
 developed countries, 1233–1234
 developing countries, 1234, 1236
 enabling environments, 1223
 global financial crisis, 116, 117
 Human Settlements/Infrastructure (Ch. 12), 968–969
 institutional financing arrangements, 1228–1231, 1231
 International Cooperation (Ch. 13), 1035–1040

- Least Developed Countries, 138, 1235
 low-carbon investment, 1217–1228, 1218–1220, 1222, 1224, 1226
 National and Sub-national Policies/Institutions (Ch. 15), 1187–1188
 promoting, 139–140
 Regional Development and Cooperation (Ch. 14), 1109, 1109–1110, 1122
 scales at short-, mid-, and long-term, 1213–1223, 1218–1220, 1222
 Sustainable Development (Ch. 4), 303
 synergies and tradeoffs between mitigation and adaptation, 1231–1233
 Transformation Pathways (Ch. 6), 464, 465
 Transport (Ch. 8), 636
- I=PAT equation.** See IPAT identity
- IPAT identity***, 309, 368, 942–944, 1264
- Iran**, 522, 748, 950, 1162
- Ireland**, 782, 1216
- Iron fertilization***, 485, 1264
- Istanbul Programme of Action**, 138
- Italy**
 Buildings (Ch. 9), 720
 CO₂ storage, 188
 Human Settlements/Infrastructure (Ch. 12), 950, 972
 Industry (Ch. 10), 782
 International Cooperation (Ch. 13), 1026, 1029, 1049
 Investment and Finance (Ch. 16), 1216, 1224
 Regional Development and Cooperation (Ch. 14), 1121
 See also International institutions and agreements
- J**
- Jamaica**, 961
- Japan**
 Buildings (Ch. 9), 694, 721
 emission trends and drivers, 375, 377, 377, 390
 energy systems, 120, 140
 Energy Systems (Ch. 7), 530, 532, 537, 568
 financial crisis, 116
 Human Settlements/Infrastructure (Ch. 12), 934, 950, 951, 952, 954, 972, 972
 Industry (Ch. 10), 748, 757–759, 763, 764, 782
 International Cooperation (Ch. 13), 1021, 1026, 1027, 1029, 1030, 1031, 1036, 1043, 1049
 Investment and Finance (Ch. 16), 1216, 1217, 1224
 National and Sub-national Policies/Institutions (Ch. 15), 1160, 1163, 1165, 1172–1173, 1176, 1177, 1182
 Regional Development and Cooperation (Ch. 14), 1086, 1089, 1091, 1102–1104, 1110, 1120, 1121, 1123
 Transport (Ch. 8), 609, 613–615, 642, 645
 See also International institutions and agreements
- Joint Implementation (JI)***, 718, 1021, 1044, 1265
 See also Emissions Reduction Unit (ERU)
- Jordan**, 967
- Justice**, 213–219, 259
 See also Equity
- K**
- Kaya identity***, 128, 129, 129, 366–368, 425, 942, 1265
 See also IPAT identity
- Kazakhstan**, 522, 535, 1236
- Kenya**, 1177
- Knowledge development**, 1037
- Korea, Republic of**
 Energy Systems (Ch. 7), 530–532, 537
 International Cooperation (Ch. 13), 1026, 1031
 Regional Development and Cooperation (Ch. 14), 1086, 1089, 1091, 1107, 1120, 1121, 1123
- Kyoto Protocol***, 120–122, 252, 298, 390, 1265
 AFOLU (Ch. 11), 864
 change of emissions, 130, 133
 International Cooperation (Ch. 13), 1009, 1011, 1015, 1016, 1018, 1021, 1024, 1024, 1025, 1028–1031, 1031, 1034
 Kyoto Mechanisms (Flexibility Mechanisms)*, 1020–1021, 1029–1030, 1035, 1042, 1044, 1265
 national target setting, 1153, 1166
 performance assessment, 1042, 1043–1047
 technological change, 390
 See also Annex B Parties/countries; Annex I Parties/countries; Annex II Parties/countries; Assigned Amount Unit (AAU); Clean Development Mechanism (CDM); Joint Implementation (JI)
- L**
- Land use***, 837, 840, 1265
 baseline emissions, 427, 428
 bioenergy, 880–883
 Buildings (Ch. 9), 696
 emission trends, 127
 Energy Systems (Ch. 7), 546, 547
 GHG fluxes, 825–829, 826, 827
 Human Settlements/Infrastructure (Ch. 12), 933, 934, 953, 955, 955–956, 962, 963, 967
 Investment and Finance (Ch. 16), 1221
 Least Developed Countries, 138
 National and Sub-national Policies/Institutions (Ch. 15), 1186–1187
 Transformation Pathways (Ch. 6), 435–436, 436, 445–448, 446, 447, 484
 Transport (Ch. 8), 619–621
 See also Agriculture, Forestry and Other Land Use (AFOLU)
- Land use, land use change and forestry (LULUCF)***, 356, 824, 1265
 See also Forestry and Other Land Use (FOLU)
- Land use change (LUC)***, 820, 824, 827, 837–842, 845, 862, 1265
 bioenergy, 835, 878, 880–883
 direct, 880–881
 emissions trends, 358–360, 359, 363
 Human Settlements/Infrastructure (Ch. 12), 940–941, 941
 Transformation Pathways (Ch. 6), 484
- Land value capture***, 969, 1265
- L'Aquila G8 Summit**, 124–125
- Latin America (LAM)**
 AFOLU (Ch. 11), 820, 821, 825, 826, 840, 841, 849, 852, 852, 863
 Buildings (Ch. 9), 711, 713
 emission trends and drivers, 359, 359, 360, 366, 367, 371, 372, 376, 376, 384, 394
 Energy Systems (Ch. 7), 521, 523, 524, 524
 Human Settlements/Infrastructure (Ch. 12), 931, 934, 935, 939, 940, 941, 961, 971
 Industry (Ch. 10), 748, 752, 773, 778, 778
 National and Sub-national Policies/Institutions (Ch. 15), 1150, 1151
 Regional Development and Cooperation (Ch. 14), 1087, 1093, 1098, 1099, 1100, 1106, 1107, 1110, 1124
 Transformation Pathways (Ch. 6), 434, 435, 436, 459, 460
 Transport (Ch. 8), 609
- Latin America and Caribbean (LAM)**, 1286, 1287
 AFOLU (Ch. 11), 866
 Buildings (Ch. 9), 679, 682, 684–685
 emission trends and drivers, 365, 366
 Regional Development and Cooperation (Ch. 14), 1086, 1087, 1089, 1090, 1091, 1092, 1094, 1094–1097, 1099–1100, 1100–1105, 1104–1106, 1107, 1109, 1109, 1110, 1122, 1123
 Transport (Ch. 8), 608
- Latvia**, 1216
- Leakage.** See Carbon leakage
- Leapfrogging**, 258, 1106–1109, 1107, 1108
- Learning-by-doing (LBD)**, 256–257
- Learning curve/rate***, 257, 566, 1176, 1265
- Least Developed Countries (LDCs)***, 1265
 AFOLU (Ch. 11), 862–863, 936
 Buildings (Ch. 9), 679
 emission trends and drivers, 384
 Energy Systems (Ch. 7), 547, 552
 Human Settlements/Infrastructure (Ch. 12), 971
 Industry (Ch. 10), 748, 754
 International Cooperation (Ch. 13), 1011, 1025, 1029, 1031, 1036
 Investment and Finance (Ch. 16), 1235
 mitigation challenges/opportunities, 137, 138
 National and Sub-national Policies/Institutions (Ch. 15), 1148, 1162, 1174, 1186
 Regional Development and Cooperation (Ch. 14), 1090, 1091, 1092, 1093, 1094, 1097, 1102, 1105, 1121, 1123–1124
 Transformation Pathways (Ch. 6), 459, 476
 Transport (Ch. 8), 609
- Least Developed Country Fund (LDCF)**, 1011
- Legal issues**, 218–219, 636, 1019, 1019–1020
- Lesotho**, 1116
- Levelized cost**, 1288, 1331–1353
 levelized cost of conserved carbon (LCCC), 623–624, 625–629, 699–704, 699–705, 765–770, 766, 768–769, 847, 847–852, 849–852, 1290, 1336, 1337–1343, 1344–1353, 1345, 1347–1348, 1350–1352
 levelized cost of conserved energy (LCCE), 699–704, 699–705, 1290
 levelized cost of energy (LCOE), 541, 542, 1288–1290
- Liechtenstein**, 1111
- Lifecycle Assessment (LCA)***, 306, 309, 538–542, 539, 541, 548, 610, 625–628, 694, 835, 839–841, 874, 876, 878, 951, 1266, 1299–1300
- Lifecycle energy analysis**, 694
- Lifestyle**, 694–695
- Lighting**, 690–692
- Likelihood***, 157, 1266
- Linear thinking**, 164
- Liquefied Natural Gas (LNG) markets**, 522
- Liquid fuel**, 519, 520, 522, 528, 536
 See also specific types of fuels
- Lithuania**, 1216
- Lock-in***, 313, 391, 465, 553–554, 563, 618–619,

- 697, 698, 715, 947, 1266
 See also Path dependence
- Loss aversion**, 161–162
- Low-Carbon Society (LCS)**, 477
- Low-carbon technology**, 1093
 capital managers, 1224
 developing countries, 1235, 1236
 enabling investment environments, 1223
 Energy Systems (Ch. 7), 534–537, 547
 financing, 1223–1228, 1224, 1226
 future investments, 1217–1223, 1218–1220, 1222
 leapfrogging, 1106–1109, 1107, 1108
- Low Income Countries (LIC)**, 1288
 See also Economic regions (income-based)
- Lower Middle Income Countries (LMC)**, 1288
 See also Economic regions (income-based)
- ## M
- Macroeconomic cost**, 1212
- Macroeconomic situation, world**, 116–118, 117
- MAGICC model**, 430, 438, 439, 440, 440
- Major Economies Forum on Energy and Climate (MEF)**, 1026, 1042, 1049
- Malawi**, 1116
- Malaysia**, 792, 882, 950, 961
- Marginal abatement cost (MAC)***, 249, 543–544, 765, 767, 1266
- Market barrier***, 1266
 See also Barriers (and opportunities)
- Market-based mechanism**, 1266
 See also Economic instrument
- Market exchange rate (MER)***, 366, 377, 378, 1266, 1285
- Market failure***, 233, 240, 256, 449, 455–456, 957, 1035, 1157, 1174–1176, 1181, 1182, 1266
- Material flow analysis (MFA)***, 694, 1266, 1297–1298
- Measures**, 1266
 See also Mitigation measures
- Meeting of the Parties (CMP)***, 1266
- Mental accounting**, 163, 389
- Methane (CH₄)***, 122–124, 1266
 AFOLU (Ch. 11), 820, 822, 828, 830, 831, 833, 834, 840, 860, 861
 baseline emissions, 428, 429
 emission trends, 123, 125, 127, 135, 360, 361, 361, 363, 364, 383
 Energy Systems (Ch. 7), 522, 527, 536
 Global Methane Initiative, 1040
 greenhouse gas emission metrics, 124, 250–252, 1302
 Human Settlements/Infrastructure (Ch. 12), 935
 Industry (Ch. 10), 745, 753
 recovery*, 786, 791, 1266
 Regional Development and Cooperation (Ch. 14), 1095, 1105
 Transformation Pathways (Ch. 6), 436, 437, 437, 475
 Transport (Ch. 8), 611, 615–616
 waste management, 786, 786–792
- Mexico**
 emission trends and drivers, 375
 Human Settlements/Infrastructure (Ch. 12), 950, 954, 961, 972
 Industry (Ch. 10), 754
 International Cooperation (Ch. 13), 1026
 Regional Development and Cooperation (Ch. 14), 1104, 1117–1119, 1121
 waste management, 792
- Mexico City Pact**, 1027
- Middle East and Africa (MAF)**, 1286
 AFOLU (Ch. 11), 820, 821, 822, 826, 849, 852, 852, 862, 863
 Buildings (Ch. 9), 679, 680, 684–685, 699, 711, 713
 emission trends and drivers, 359, 359, 360, 365, 366, 366, 367, 371, 372, 376, 376, 384, 394
 Energy Systems (Ch. 7), 521, 522, 524, 524
 Human Settlements/Infrastructure (Ch. 12), 931
 Industry (Ch. 10), 752, 778, 778
 National and Sub-national Policies/Institutions (Ch. 15), 1150
 Regional Development and Cooperation (Ch. 14), 1105, 1105, 1106
 Transformation Pathways (Ch. 6), 434–435, 435, 436, 459, 460
 Transport (Ch. 8), 608, 609, 645
- Middle East and North Africa (MNA)**, 1286, 1287
 Human Settlements/Infrastructure (Ch. 12), 935
 National and Sub-national Policies/Institutions (Ch. 15), 1160
 Regional Development and Cooperation (Ch. 14), 1086, 1089, 1090, 1091, 1092, 1093, 1094, 1094–1097, 1099, 1101, 1102, 1103, 1104, 1109, 1109, 1110, 1123
- Millennium Development Goals (MDGs)***, 137, 138, 297, 472, 1266
- Mitigation capacity***, 315–321, 1090, 1091–1093, 1092, 1267
- Mitigation cost metrics**, 1291–1292
- Mitigation measures**
 AFOLU (Ch. 11), 828, 829–835, 830–835
 Buildings (Ch. 9), 686–695, 691–692, 694–696
 drivers of emissions, 392–394
 Energy Systems (Ch. 7), 527–533, 530
 human settlements/infrastructure, 525
 Human Settlements/Infrastructure (Ch. 12), 969–977, 972, 975, 976
 Industry (Ch. 10), 753–763, 756
 Investment and Finance (Ch. 16), 1223–1224
 measurement, reporting, and verification regimes, 182–183
 metrics of costs and benefits, 242–252, 246–248
 negative private cost, 247–248
 projecting costs, 136, 137
 short-term, 162–163
 Transport (Ch. 8), 612–618
 See also Technology
- Mitigation policies**, 120–122, 190
 AFOLU (Ch. 11), 843, 845, 862–868, 863, 864, 866, 867
 balanced with adaptation, 140
 Buildings (Ch. 9), 715–722, 716–717
 choice and design under uncertainty, 183–187
 co-benefits and adverse side-effects, 393, 394
 complementarity, 241
 development guidelines, 177
 evaluating, 235, 235–239, 237
 failure, 241–242
 Human settlements/infrastructure (Ch. 12), 944, 945
 Industry (Ch. 10), 780–783, 781
 instruments and regulations, 239–242, 242
 interactions, 241, 455, 455–456
 International Cooperation (Ch. 13), 1016–1023, 1017, 1019, 1022, 1029–1035, 1031
 link with Sustainable Development (Ch. 4), 293
 national and sub-national, 1155–1156
 objectives, 235–238
 policy architectures, 1016–1023, 1017, 1019, 1022
- public support/opposition, 187–189
 Regional Development and Cooperation (Ch. 14), 1111
 as risk management, 155
 risk perception and responses, 160–168
 science-policy interface, 178
 solar radiation management, 487–489
 timing of emissions reductions, 433–434, 434
 Transport (Ch. 8), 642–647, 643
 uncertainties, 157–159, 159, 190
 See also Economic instrument; Government provision of public goods or services; Information programme; Regulatory approach; Voluntary action; Voluntary agreement (VA)
- Mitigation potential**
 AFOLU (Ch. 11), 830–832, 847, 847–852, 849–852, 869
 Buildings (Ch. 9), 699–704, 699–705
 Industry (Ch. 10), 765–770, 766, 768, 769
 Regional Development and Cooperation (Ch. 14), 1106
 Transport (Ch. 8), 623–624, 625–629, 648–649
 waste management, 790, 791, 791–792
- Mitigation scenario***, 134, 135, 136, 1267
 aggregate costs, 48, 49, 247, 249, 448–455, 450, 452–455, 1291–1292, 1293
 bioenergy, 445–448, 446, 447, 835, 873, 875, 878, 881–883, 886
 cross-sectoral, 478–484, 480–483
 human settlements/infrastructure, 939–942, 940–941, 948, 951, 952, 975–976
 long-term, 134, 135, 136
 near-term, 463, 464–465, 465
 regional costs, 456–462, 457, 460, 461
 regional development and cooperation, 1101, 1101, 1105, 1105–1106
 risks, 478
 sustainable development/multiple objectives, 312, 315, 468–477, 469–471, 474
 technological innovations, 256
 Transformation Pathways (Ch. 6), 420–422, 428–437, 449–452, 450–451
 See also individual sectors under Transformation pathway
- Models***, 1267
 development pathways, 314–315
 Transport (Ch. 8), 637–641, 638–640
 See also specific models
- Modern bioenergy**, 446, 447, 882
- Modern biomass***, 447, 521, 1254
 See also Modern bioenergy
- Moldova**, 1116
- Monetary evaluation**, 227–228, 243
- Mongolia**, 750, 1086, 1089, 1091, 1102, 1103, 1123
- Montenegro**, 1116
- Montreal Protocol***, 121, 122, 1013, 1014–1026, 1042, 1050, 1267
- Moral responsibility**, 215, 318
- Mozambique**, 881, 1116
- Multi-criteria analysis (MCA)***, 171, 232, 238, 239, 1267
- Multi-gas***, 250, 1042, 1267
- Multilateral development bank (MDB)**, 1039, 1215
- ## N
- Namibia**, 750, 1116
- National and sub-national policies/institutions**, 120, 182, 1141–1190

- capacity building, 1184–1186
emissions trading, 1163–1167
evaluating, 1156–1157
government provision and planning, 1170–1171
harmonized policies, 1018, 1022, 1042, 1052
information measures, 1170
institutions and governance, 1149–1155, 1150, 1152
Investment and Finance (Ch. 16), 1187–1188, 1229–1230
Least Developed Countries, 1174
linkages across jurisdictions, 1052–1053, 1181–1183
linkages with international policies, 1029–1030
links to adaptation, 1186–1187
Nationally Appropriate Mitigation Action, 1153
performance assessment, 1157–1173, 1158
policy instruments and packages, 1155–1156
regulatory approaches, 1168–1170
stakeholder roles, 1183–1184
synergies and tradeoffs, 1179–1182
taxes, charges, and subsidies, 1159–1163, 1167
technology policy and R&D policy, 1174–1179
voluntary actions, 1171–1173
- National Flood Insurance Program (NFIP)**, 163
Nationally Appropriate Mitigation Action (NAMA)*, 636, 862–863, 1013, 1024, 1038, 1152, 1153, 1230, 1267
- Natural gas**, 119
cumulative use, 442
Energy Systems (Ch. 7), 519, 520, 521, 522, 525, 525, 527, 535, 536, 538, 539, 553
regional grids, 1116
Transport (Ch. 8), 615
- Natural gas combined-cycle (NGCC) power plants**, 527
- Natural resources**, 302–303
- Near East**, 954
- Nepal**, 546, 721, 1214
- Net zero energy building (NZEB)**, 689, 690, 703
- Netherlands**
AFOLU (Ch. 11), 838
emission trends and drivers, 391
Human Settlements/Infrastructure (Ch. 12), 950, 972
Industry (Ch. 10), 759, 760, 782
International Cooperation (Ch. 13), 1016, 1029
Investment and Finance (Ch. 16), 1216
National and Sub-national Policies/Institutions (Ch. 15), 1154, 1159, 1160, 1172, 1186
Transport (Ch. 8), 609
- New Zealand**
International Cooperation (Ch. 13), 1031, 1043, 1044
Investment and Finance (Ch. 16), 1216
National and Sub-national Policies/Institutions (Ch. 15), 1163–1166, 1184
Regional Development and Cooperation (Ch. 14), 1086, 1090, 1091, 1102, 1103, 1123
See also International institutions and agreements
- Nigeria**, 547, 792, 950, 959, 1162
- Nitrogen oxides (NOx)***, 1267
emission trends, 361, 361, 363
environmental impact, 548
Human Settlements/Infrastructure (Ch. 12), 976
National and Sub-national Policies/Institutions (Ch. 15), 1163, 1165, 1166, 1177
- Nitrogen trifluoride (NF3)**, 122–124, 124, 757
- Nitrous oxide (N2O)***, 122–124, 1267
AFOLU (Ch. 11), 820, 822, 828, 830–834, 840, 860, 860–861, 867, 879
- baseline emissions, 428, 429
bioenergy, 879
Buildings (Ch. 9), 678, 679
emission trends, 123, 125, 127, 135, 251, 358, 360, 363, 383
Energy Systems (Ch. 7), 523, 523
greenhouse gas emission metrics, 124, 1302
Human Settlements/Infrastructure (Ch. 12), 935
Industry (Ch. 10), 745, 753, 753, 755, 759, 770, 772, 783
International Cooperation (Ch. 13), 1030
Regional Development and Cooperation (Ch. 14), 1095, 1105
Transformation Pathways (Ch. 6), 436, 437, 437
Transport (Ch. 8), 611
waste management, 787, 789–792
- Non-Annex I Parties/countries***, 132, 320, 386, 938, 938–939, 943, 944, 947, 948, 1011, 1021, 1045, 1048, 1150, 1267
See also Annex I Parties/countries; individual countries
- Non-human value**, 220–221
- Normative analysis***, 155, 156, 160, 162, 168–177, 214, 1267
adaptive management, 173
cost-benefit analysis and uncertainty, 170–171
cost-effectiveness analysis and uncertainty, 171–172
decision analysis, 169–170
discount rate, 230
expected utility theory, 168–169
precautionary principle, 172–173
Sustainable Development (Ch. 4), 294
uncertainty analysis techniques, 173–177, 176
See also Economics; Ethics
- North America (NAM)**, 1286, 1286
AFOLU (Ch. 11), 824, 838, 840, 867
Buildings (Ch. 9), 680, 682, 684–685, 698, 699
emission trends and drivers, 385
Human Settlements/Infrastructure (Ch. 12), 932, 932, 933, 934, 935, 936, 939, 941, 956–957
Industry (Ch. 10), 760
Regional Development and Cooperation (Ch. 14), 1086, 1087, 1089, 1090, 1091, 1092, 1093, 1094, 1094–1097, 1097, 1099, 1100–1105, 1103, 1104, 1106, 1107, 1110, 1117–1118, 1123
Transport (Ch. 8), 608, 609, 610, 611, 622
waste management, 792
- North American Agreement on Environmental Cooperation (NAAEC)**, 1117
- North American Free Trade Agreement (NAFTA)**, 1117
- Northern Africa**, 934
- Northern Europe**, 1159
- Norway**
AFOLU (Ch. 11), 866
Human Settlements/Infrastructure (Ch. 12), 972, 974
Investment and Finance (Ch. 16), 1216, 1217
National and Sub-national Policies/Institutions (Ch. 15), 1160, 1163, 1177
Regional Development and Cooperation (Ch. 14), 1111, 1115, 1121
unconventional gas share, 522
- Nuclear energy**, 120
Energy Systems (Ch. 7), 520, 521, 522, 526, 530–532, 534, 535, 538, 539, 540, 542, 544, 548–553, 567, 569
Investment and Finance (Ch. 16), 1218–1220
perceived risks, 189
- Numeracy**, 168
- O**
- Ocean energy***, 525, 526, 529, 537, 539, 540, 541, 548–549, 551, 556, 558, 1268
- Ocean fertilization**, 485
- Oceania**, 939, 941, 1110
- OECD-1990 countries**, 1286
AFOLU (Ch. 11), 820, 821, 822, 826, 849, 852, 852, 862, 863
Buildings (Ch. 9), 679, 686, 713
emission trends and drivers, 359, 359, 360, 365, 366, 366, 367, 367, 371, 372, 373–374, 374, 376, 376, 380, 383–385, 394
Energy Systems (Ch. 7), 521–523, 524
Human Settlements/Infrastructure (Ch. 12), 931
Industry (Ch. 10), 752, 778
National and Sub-national Policies/Institutions (Ch. 15), 1150
Regional Development and Cooperation (Ch. 14), 1106
Transformation Pathways (Ch. 6), 434–435, 435, 436, 459, 460
- OECD countries**, 320
AFOLU (Ch. 11), 825
Buildings (Ch. 9), 678, 683, 690, 711, 713
emission trends and drivers, 359, 359, 380, 383, 385
energy transmission and distribution losses, 528
Human Settlements/Infrastructure (Ch. 12), 933, 948
International Cooperation (Ch. 13), 1026, 1036, 1045
Investment and Finance (Ch. 16), 1217, 1218, 1218–1220, 1233
National and Sub-national Policies/Institutions (Ch. 15), 1160, 1161
Regional Development and Cooperation (Ch. 14), 1093, 1099, 1103, 1105
Transport (Ch. 8), 608, 609, 613, 620, 621, 633, 641, 643–645
- Office equipment**, 690–692
- Official development assistance (ODA)**, 1215
- Offset (in climate policy)***, 254, 306, 864, 865, 1006, 1013, 1021, 1050–1051, 1113, 1165–1167, 1228, 1268
- Oil**, 119
cumulative use, 442
Energy Systems (Ch. 7), 519, 520, 521, 521, 522, 525, 525, 528, 535, 538, 550–551
- Oil sands and oil shale***, 426, 525, 528, 548, 633, 1268
- OPEC countries**, 631
- Organic carbon (OC)**, 360, 361, 363, 364, 392
- Organisation for Economic Co-operation and Development (OECD)**, 1026, 1215
- Organization of the Petroleum Exporting Countries (OPEC)**, 522
- Overshoot pathways/scenarios***, 134, 430, 431, 433–434, 434, 439, 440, 441, 445, 462, 464, 486, 563, 1268
- Ozone (O3)***, 121, 122, 125, 360, 392, 436–437, 473, 487, 611–612, 834, 975, 1026, 1050, 1268
Tropospheric ozone, 122, 361, 361
- Ozone-depleting substance (ODS)**, 125, 693, 753, 1042, 1050
- P**
- Pacific Asia (PAS)**
AFOLU (Ch. 11), 841, 866, 867

- Buildings (Ch. 9), 682, 684–685, 699
 Human Settlements/Infrastructure (Ch. 12), 934, 935, 971
 Industry (Ch. 10), 783
 Investment and Finance (Ch. 16), 1229
- Pacific Island countries**, 1117
 indigenous climate change knowledge, 165
- Pacific LDCs**, 754
- Pacific OECD (POECD)**, 682, 684–685, 699, 935, 1286, 1286
- Pacific OECD-1990 (POECD)**, 1086, 1087, 1089, 1090, 1091, 1092, 1093, 1094, 1094–1097, 1097, 1100–1105, 1106, 1107, 1123
- PAGE model**, 245–247
- Pakistan**, 950
- Paradigmatic uncertainty**, 178
- Paratransit***, 1268
- Pareto improvement**, 227
- Pareto optimum***, 225, 227, 1268
- Particulate matter (PM)***, 473, 547, 547–548, 611, 615, 631, 644, 708, 975, 976, 1097, 1268
- Passive adaptive management (PAM)**, 173
- Passive design***, 686, 688, 693, 697, 1268
- Passive House standard**, 687–690, 705
- Passive solar**, 470, 687, 700
- Path dependence***, 256, 312–313, 323, 554, 618–621, 697, 698, 942, 944, 1268
- Payback period***, 690, 694, 767, 771, 774, 775, 944, 1226, 1268
- Peat**, 519, 520, 521, 845–846
- Per-capita emissions**. See Emission(s), per-capita
- Perfluorocarbons (PFCs)***, 122–124, 1268
 baseline emissions, 429
 Buildings (Ch. 9), 676, 693
 emission trends, 123, 125, 135, 360, 363, 383
 Industry (Ch. 10), 745, 753, 753, 757, 761, 767, 772, 782–783
 International Cooperation (Ch. 13), 1050
 Regional Development and Cooperation (Ch. 14), 1095
 Transformation Pathways (Ch. 6), 437
 Transport (Ch. 8), 611
- Permit trading**. See Emissions trading
- Peru**, 631, 1119
- Philippines**, 631, 950
- Photovoltaic cells (PV)***, 519–521, 529, 530, 530, 539, 541, 542, 544, 545, 548, 548–549, 1268
- Pilot Program on Climate Resilience**, 1027
- Poland**, 535, 709, 950, 972, 1216
- Policies**, 1268
 See also Mitigation policies
- Political economy, for sustainable development**, 297–298
- Political feasibility**, 237–238, 292
- Political identity**, 165, 186
- Politics**, 178, 219, 484, 1089, 1154
- Polluter pays principle (PPP)***, 217–218, 318, 1268
- Pollution**
 air (See Air pollution)
 soil (See Soil pollution)
 water (See Water, pollution)
- Population**
 emissions drivers, 368, 368–369, 369
 Human Settlements/Infrastructure (Ch. 12), 929–932, 930–932, 939–942, 940
 rural, 931, 932
 Sustainable Development (Ch. 4), 299
 valuing, 223
- Portugal**, 782, 950, 972
- Positive analysis**. See Descriptive analysis
- Potential**. See Mitigation potential; Technical potential
- Power pool**, 1115, 1116
- Precautionary Principle***, 172–173, 1009, 1268
- Precursors***, 360–361, 361, 473, 603, 612, 828, 1269
- Prescriptive analysis (risk and uncertainty)**, 155, 156, 177–189
 choice and design of policy instruments, 183–187, 185
 guidelines for policy development, 177
 international negotiations and agreements, 181–183
 public support/opposition to climate policy, 187–189
 science-policy interfaces, 178
 stabilization pathways, 178–181, 179
- Present bias**, 162
- Present value***, 170, 228, 238, 249, 449, 1212, 1221, 1269
- Pressure-state-response (PSR)**, 293
- Primary energy***, 129, 129, 377–380, 379, 519, 519, 556, 560, 561, 752, 935, 1261, 1295–1297, 1296, 1297
- Primary energy accounting**, 1293–1295, 1294
- Primary production***, 819, 837, 1269
- Prisoners' Dilemma**, 166
- Private climate finance flow**, 1039–1040
- Private climate finance flowing to developing countries***, 1212, 1256
- Private cost***, 170, 247–248, 542, 1169, 1269
- Probability weighting function**, 165
- Process and production method (PPM)**, 1033–1034
- Process model**, 314
- Production**
 bioenergy, 872, 873
 emission trends and drivers, 371, 371–373, 386–387
 Regional Development and Cooperation (Ch. 14), 1101–1104, 1102–1104
- Production-based accounting***, 288, 306, 373, 937, 1269
- Production pattern**, 60–62, 817, 829, 831–835, 837–842, 839, 844, 845–849, 852–855, 854, 857, 859, 861, 867–869
 See also Consumption pattern
- Property Assessed Clean Energy (PACE)**, 186, 389, 720
- Prospect theory**, 162, 165
- Public benefits charge**, 721
- Public climate finance flowing to developing countries***, 1212, 1215, 1221–1223, 1222, 1234, 1256
- Public funding**, 1038–1039, 1109–1110, 1175–1176, 1233–1234
- Public good***, 214, 241, 253–256, 301, 567, 781, 1007, 1014, 1156, 1159, 1170–1171, 1182–1183, 1269
 See also Government provision of public goods or services
- Public perception**, 551, 772–773, 857–858
- Public-private partnership**, 1040, 1109
- Purchasing power parity (PPP)***, 366, 377, 1269, 1285
- Q**
- Qatar**, 522
- Qualitative Uncertainty Analysis (QLUA)**, 173, 174
- Quantitative Uncertainty Analysis (QNUA)**, 173–174
- Quasi-hyperbolic time discounting**, 162
- Quota system**, 185
- R**
- Radiative forcing***, 176, 250, 360, 361, 428–432, 429–431, 438–441, 487–488, 611, 880, 977, 1105, 1269, 1312–1315, 1312–1315
- Rebound effect***, 163, 249–250, 390–391, 617–618, 633, 707–708, 1168–1169, 1269
- Recycled revenue**, 1162–1163
- Recycling**, 549, 755, 761, 763, 788, 864
- REDD (Reducing Emissions from Deforestation and Forest Degradation)***, 866, 1110, 1269
- REDD+**, 845, 858, 863, 864, 865–867, 866, 1013, 1026, 1110, 1112, 1217, 1231, 1269
- Reference point**, 161, 162
- Reference scenario**. See Baseline/reference
- Reforestation***, 476–477, 485, 825, 830, 843, 851, 857, 1269
- Regional development and cooperation**, 1083–1124
 AFOLU, 1104–1106, 1105
 consumption and production patterns, 1101–1104, 1102–1104
 development trends and emissions, 1093–1110
 emission trends and drivers, 1093–1095, 1094, 1095
 energy and development, 1094–1099, 1095–1097
 future options, 1122
 Human Settlements/Infrastructure (Ch. 12), 958–960, 959
 importance, 1089, 1091
 Investment and Finance (Ch. 16), 1109, 1109–1110
 leapfrogging low-carbon development, 1106–1109, 1107, 1108
 linkages with international policies, 1030
 low-carbon development, 1093
 opportunities and barriers, 1110–1122, 1112, 1116
 sustainable development and mitigation capacity, 1090, 1091–1093, 1092
 Transformation Pathways (Ch. 6), 434–435, 435, 456–462, 457–461
 urbanization and development, 1099–1101, 1101
- Regional Greenhouse Gas Initiative (RGGI)**, 1165
- Regional Innovation and Technology Transfer Strategies and Infrastructures (RITTS)**, 1119–1120
- Regional trade agreements (RTAs)**, 1117–1118
- Region Categorization 5 (RC5)**, 1286, 1287
- Region Categorization 10 (RC10)**, 1286, 1286
- Region Categorization 10 EIT (RC10 EIT)**, 1288
- Regions**, 1286–1288
- Regulatory approach**, 1158
 AFOLU (Ch. 11), 867
 direct, 240, 241
 energy system GHG mitigation, 567
 Human Settlements/Infrastructure (Ch. 12), 962, 963
 Industry (Ch. 10), 781, 781, 782
 National and Sub-national Policies/Institutions (Ch. 15), 1155, 1168–1170
 Transport (Ch. 8), 644
 uncertainties, 158
 See also Standards
- Renewable energy (RE)***, 119, 1261

- Energy Systems (Ch. 7), 519, 520, 521, 522, 525–526, 528–529, 534, 535, 537–538, 539, 540, 542–544, 546, 548–549, 551–553, 558, 566, 567
- Investment and Finance (Ch. 16), 1218–1220
- National and Sub-national Policies/Institutions (Ch. 15), 1177
- Regional Development and Cooperation (Ch. 14), 1115, 1116
- See *also* Bioenergy; Geothermal energy; Hydropower; Ocean energy; Solar energy; Wind energy
- Renewable Portfolio Standards**, 1168
- Rent-seeking**, 241, 242
- Representative Concentration Pathways (RCPs)***, 175–176, 176, 369, 426–432, 427, 429–432, 438–439, 438–441, 485, 555, 846, 1105, 1270, 1313, 1313, 1317
- Research, Development, Deployment, and Diffusion (RDD&D)**, 183–186, 185
- Research and development (R&D)**
- emission trends and drivers, 387
 - Energy Systems (Ch. 7), 567–568
 - geoengineering, 219
 - inducing, 256, 257
 - International Cooperation (Ch. 13), 1037
 - National and Sub-national Policies/Institutions (Ch. 15), 1174–1179
 - Transformation Pathways (Ch. 6), 466–467
- Reservoir***, 485, 486, 533, 540, 545, 548, 845, 1270
- Resilience***, 292, 321, 474, 475, 546, 630, 698–699, 706, 842, 846, 856, 1152, 1186, 1231, 1270
- Resource sharing**, 319–320
- Responsibility**, 215–219, 318–319
- Retrofitting**, 690, 704
- Revegetation***, 831, 1270
- RICE model**, 245
- Right to development**, 319
- Risk***, 155, 159, 160, 1270
- AFOLU (Ch. 11), 847, 858, 875, 885
 - bioenergy, 835
 - Buildings (Ch. 9), 705
 - defined, 155
 - Energy Systems (Ch. 7), 532–533, 549–551
 - Industry (Ch. 10), 772
 - investment, 1177–1178, 1223–1227, 1234, 1235, 1237
 - likelihood and consequences estimates, 155
 - low-carbon investment, 1225–1228
 - metrics, 157
 - modeling, 154, 158, 174–177, 179, 184, 185
 - risk assessment*, 1270
 - risk aversion, 163
 - risk perception*, 160–168, 1270
 - risk tradeoff*, 1270
 - risk transfer*, 1270
 - sustainability evaluation, 321
 - Transformation Pathways (Ch. 6), 472, 476, 478
 - Transport (Ch. 8), 633
- Risk management***, 137–139, 151–191, 1270
- descriptive analysis, 160–168
 - framework, 155–157
 - metrics of uncertainty and risk, 157
 - new AR5 information, 159–160
 - normative analysis, 168–177
 - prescriptive analysis, 177–189
 - uncertainties relevant to climate policy choices, 157–159, 159
- Robust decision making (RDM)**, 172–173
- Romania**, 950
- Rural areas**, 546, 885, 930, 930–932, 931
- Russia**
- emissions trends, 130
 - Energy Systems (Ch. 7), 120, 522, 524, 530, 531, 550
 - Human Settlements/Infrastructure (Ch. 12), 950, 952
 - Industry (Ch. 10), 748, 757
 - International Cooperation (Ch. 13), 1026, 1039, 1043, 1044, 1049
 - Investment and Finance (Ch. 16), 1216
 - Regional Development and Cooperation (Ch. 14), 1104, 1121
 - Transport (Ch. 8), 645
 - waste management, 792
 - See *also* International institutions and agreements
- Russian Federation**, 535, 536
- Rwanda**, 1186, 1235

S

- Safety**, 167, 631
- Saliency**, 164
- Samoa**, 1214
- Saudi Arabia**, 950, 1025
- Scandinavia**, 1115, 1159, 1160
- Scenario***, 1270, 1308–1318, 1309–1318
- baseline (See Baseline/reference scenarios)
 - categorization (See Transformation Pathway)
 - cost-effective, 421, 449–451, 452, 1048
 - data, 1308–1318, 1309–1318
 - delayed participation/fragmented action, 421, 421, 433–435, 434, 445, 453, 453–454, 1048
 - emissions (See Emission(s), emission scenario(s))
 - idealized implementation, 421, 434, 445, 449–451, 452, 462
 - investment and finance, 1217–1223, 1218–1219, 1236
 - land use, 427–428, 445–447
 - Least Developed Countries (See Integrated Model)
 - limited technology, 421, 421, 445, 451–453, 453, 454
 - (low) energy intensity, 425, 425–426, 426, 443, 444, 445, 557, 557–558
 - mitigation (See Mitigation scenario)
 - negative emissions, 135, 432–435, 433–434, 464, 465, 486, 533, 563
 - overshoot (See Overshoot pathways/scenarios)
 - renewable energy, 479–483, 482, 558, 558–559, 560–563
 - scenario analysis, 175–177
 - scenario family*, 1272
 - technological change (See Integrated Model)
 - Transformation Pathways (Ch. 6), 423–424
 - See *also* individual sectors under Transformation pathway
- Science-policy interface**, 178, 189
- Scope 1, Scope 2, and Scope 3 emissions***, 127, 935, 935–938, 937, 1260
- Scotland**, 867, 868
- Sea-level rise**, 244
- Second-generation biofuel***, 616, 631, 878, 882, 882, 1253
- defined, 835
- Sectoral Model***, 480, 482, 483, 484, 637–641, 638, 640, 710–712, 710–714, 776–780, 777, 780, 1267, 1317–1318
- Sectoral Policies**
- AFOLU (Ch. 11), 862–868, 863, 864, 866, 867
 - Buildings (Ch. 9), 715–721, 716–717
 - Energy Systems (Ch. 7), 564–568
 - Industry (Ch. 10), 780–783, 781
 - Transport (Ch. 8), 642–647
- Senegal**, 631, 1235
- Sensitivity analysis***, 170, 174, 704, 704–706, 706, 881, 1270–1271, 1289
- Sequestration***, 485, 563, 818, 829, 830, 831, 832, 835, 837, 838, 840, 841, 842, 846, 861, 862, 881, 964, 1165, 1171, 1271, 1353
- Serbia**, 1116
- Shadow pricing***, 467, 1052, 1149, 1271
- Shale gas**, 119, 522, 525, 527
- Shared socio-economic pathways (SSPs)***, 1271
- Short-lived climate pollutant (SLCP)***, 121–122, 360–361, 361, 436–437, 474, 475, 631, 648, 877, 885, 1271
- Short-term goal**, 163
- Simulation model**, 948
- Sincity model**, 948
- Singapore**, 958, 962, 965, 966
- Sink***, 114, 447, 480, 484, 485, 540, 818, 825, 825, 828, 834, 840, 845, 868, 871, 881, 964, 1023, 1105, 1271
- See *also* Source (of greenhouse gases)
- Slovakia**, 1216
- Slovenia**, 1216
- Smart grid***, 120, 186, 534, 535, 676, 686, 1271
- Smart meter***, 186, 534, 676, 686, 963, 1271
- Social amplification of risk**, 165
- Social capital**, 300, 301
- Social comparisons**, 166
- Social cost of carbon (SCC)***, 249, 957, 1040, 1160, 1271
- Social effect**, 213, 254–256
- AFOLU (Ch. 11), 844
 - bioenergy, 884, 885
 - human rights, 1027–1028
 - Least Developed Countries, 138
 - National and Sub-national Policies/Institutions (Ch. 15), 1152, 1178
 - production systems, 310
 - Regional Development and Cooperation (Ch. 14), 1090, 1091
 - Transformation Pathways (Ch. 6), 467, 468
 - Transport (Ch. 8), 612–613
 - See *also* Adverse side-effects; Co-benefits; Ethics
- Social learning**, 166, 1010
- Social norm**, 165–166, 186
- Social planner perspective**, 178–181
- Social value**, 221–223, 223
- Social welfare function (SWF)**, 222–223, 223, 225, 227, 229
- Socio-demographic driver**, 947, 948
- Socio-economic effect**
- concepts/principles, 214–215
 - Sustainable Development (Ch. 4), 296–303, 321–322
 - See *also* Adverse side-effects; Co-benefits
- Socio-economic scenario***, 1271
- Soil pollution**, 546–548, 550
- See *also* Nitrous oxide (N2O)
- Solar energy**
- See *also* Photovoltaic cells (PV)
- Solar energy***, 1271
- Energy Systems (Ch. 7), 519–521, 522, 525, 526, 529, 530, 535–537, 539, 542–544, 545, 548–549, 551, 552, 556–558
 - See *also* Concentrating solar power (CSP); Passive Solar
- Solar Radiation Management (SRM)***, 158, 219, 486–489, 1022–1023, 1271
- See *also* Iron fertilization

- Source (of greenhouse gases) ***, 1271
See also Sink
- South Africa**
Buildings (Ch. 9), 721
Energy Losses Management Program, 553
Human Settlements/Infrastructure (Ch. 12), 950, 961, 972, 972
Industry (Ch. 10), 750
International Cooperation (Ch. 13), 1026, 1039
National and Sub-national Policies/Institutions (Ch. 15), 1151, 1177
Regional Development and Cooperation (Ch. 14), 1109, 1116, 1121
Transport (Ch. 8), 608
- South America**
AFOLU (Ch. 11), 824, 845, 867
Human Settlements/Infrastructure (Ch. 12), 954
Investment and Finance (Ch. 16), 1221
LNG market, 522
Regional Development and Cooperation (Ch. 14), 1098, 1121
Transport (Ch. 8), 609, 611
waste management, 790, 792
- South Asia (SAS)**, 1286, 1287
Buildings (Ch. 9), 679, 680, 680, 682, 684–685, 697
Human Settlements/Infrastructure (Ch. 12), 934, 935, 936, 954, 971
Regional Development and Cooperation (Ch. 14), 1086, 1090, 1091, 1092, 1094, 1094–1097, 1097–1099, 1100–1105, 1101, 1102, 1104, 1109, 1109, 1110, 1110, 1123
waste management, 790
- South East Asia**, 828, 834, 933, 934, 954, 967, 1098, 1106, 1221, 1235
- South East Asia and Pacific (PAS)**, 1086, 1087, 1090, 1090, 1091, 1092, 1094, 1094–1097, 1100, 1101, 1102, 1102–1105, 1104, 1108, 1109, 1109, 1123, 1286, 1287
- South East Europe**, 1114–1115, 1116
- South Korea**
Buildings (Ch. 9), 720
energy systems, 120
Human Settlements/Infrastructure (Ch. 12), 950, 958–962, 964, 972
Investment and Finance (Ch. 16), 1236
National and Sub-national Policies/Institutions (Ch. 15), 1154, 1163, 1166
Regional Development and Cooperation (Ch. 14), 1102, 1103
- South-South technology agreements**, 1121
- Southern Asia**, 1235
- Spain**, 544, 709, 950, 972, 1121, 1177
- Spatial planning**, 949, 957, 958–966, 959, 970
See also Human settlement; Infrastructure; Transport; Urban planning
- Special Climate Change Fund (SCCF)**, 1011
- Spill-over effect***, 455, 459, 546, 566, 1010, 1271
See also Technological/knowledge spillovers
- SRES scenario***, 1271–1272
- Standards***, 240, 567, 631, 643, 644, 687–691, 715, 718–719, 782, 868, 873, 963, 1050, 1117, 1155, 1158–1159, 1168–1169, 1272
See also Emissions(s), emission standards
- Status quo bias**, 162
- Strategic Climate Fund**, 1039
- Stratosphere***, 486–489, 1023, 1272
- Stratospheric aerosol injection**, 486, 487
- Structural change***, 1272
- Structured expert judgment**, 173–174
- Sub-Saharan Africa (SSA)**, 1286, 1287
AFOLU (Ch. 11), 838, 839
bioenergy, 877
Buildings (Ch. 9), 680, 682, 684–685
Human Settlements/Infrastructure (Ch. 12), 934, 935, 971
Investment and Finance (Ch. 16), 1235
Regional Development and Cooperation (Ch. 14), 1086, 1087, 1089, 1090, 1091, 1092, 1094, 1094–1097, 1097–1101, 1100, 1102–1105, 1107, 1108–1110, 1109, 1123–1124
- Subjective well-being (SWB)**, 310–311
- Subsidiarity***, 1272
- Subsidy**, 240, 1158
Buildings (Ch. 9), 721
International Cooperation (Ch. 13), 1032
National and Sub-national Policies/Institutions (Ch. 15), 1155, 1159, 1161, 1163
Regional Development and Cooperation (Ch. 14), 1099
Transformation Pathways (Ch. 6), 466–467
- Subsidy removal**, 154, 155, 157, 160, 183–186, 190, 1155, 1157, 1159–1163, 1167
- Sulphur dioxide (SO₂)**, 122, 233–234, 360, 361, 363, 364, 392, 393, 393, 473, 474, 548, 611, 708, 975, 1164–1166, 1177
- Sulphur hexafluoride (SF₆)***, 122–125, 1272
baseline emissions, 429
Buildings (Ch. 9), 676, 693
emissions trends, 123, 125, 135, 360, 363, 383
greenhouse gas emission metrics, 124, 1302
Industry (Ch. 10), 745, 753, 753, 757, 761, 782–783
International Cooperation (Ch. 13), 1050
Regional Development and Cooperation (Ch. 14), 1095
Transformation Pathways (Ch. 6), 437
Transport (Ch. 8), 611
- Sulphur oxides**, 548
- Sustainability***, 292, 297, 307–310, 315, 321–324, 526, 835, 868, 883, 1272
- Sustainable consumption and production (SCP)**, 307–310, 756, 783
- Sustainable development (SD)***, 115–116, 287–292, 1009, 1272
AFOLU (Ch. 11), 818, 842, 843, 843, 859–862, 860, 864
approaches and indicators, 292–293, 293
bioenergy, 883–885, 884–885
Buildings (Ch. 9), 710–715, 710–715
consumption patterns, 304–307
determinants, 296–303
developing countries, 291
development pathways, 311–315, 315
Energy Systems (Ch. 7), 549–551, 554–564, 555–558, 560–564
framing issues, 321–322
Human Settlements/Infrastructure (Ch. 12), 974
implications, 322–325
Industry (Ch. 10), 776–780, 777–780
mitigation and adaptation linkages/mitigative and adaptive capacities, 315–321
priorities, 137
Regional Development and Cooperation (Ch. 14), 1090, 1091–1093, 1092
relationship of consumption and well-being, 310–311
sustainable consumption and production, 307–310
Transformation Pathways (Ch. 6), 468–477, 469–471, 474
Transport (Ch. 8), 637–642, 638–641
- Sustainable Energy Technology at Work (SETatWork)**, 1121
- Swaziland**, 1116
- Sweden**
AFOLU (Ch. 11), 839, 867
Buildings (Ch. 9), 690
emission trends and drivers, 378, 391
Human Settlements/Infrastructure (Ch. 12), 950, 960, 961, 972, 973
Industry (Ch. 10), 764, 774, 782
International Cooperation (Ch. 13), 1026
Investment and Finance (Ch. 16), 1216
National and Sub-national Policies/Institutions (Ch. 15), 1151, 1159–1163, 1177
Regional Development and Cooperation (Ch. 14), 1115, 1121
Transport (Ch. 8), 645
- Switzerland**, 120, 645, 759, 958, 1114, 1216
- System of Integrated Environmental-Economic Accounting (SEEA)**, 293
- T**
- Taiwan, province of China**, 762, 1102, 1103, 1172, 1173
- Tanzania**, 754, 959, 1116, 1177, 1214
- Target**, 134, 135, 1020, 1151, 1153, 1218, 1219
- Tariff**, 1032–1033
- Tax**, 155–156, 160, 183–186, 190, 1155, 1157, 1159–1163, 1167
See also Carbon tax; Emission(s), emission tax
- Technical potential***, 525–526, 537–538, 558, 702, 755, 847, 850, 851, 870–873, 871, 875, 1268
- Technological change (TC)***, 118, 136, 136, 256–258, 1272
bioenergy, 884, 885
development and, 301
economic growth, 372–373
emissions trends and drivers, 129, 378, 389–391, 396
National and Sub-national Policies/Institutions (Ch. 15), 1174–1177
promoting, 139–140
Regional Development and Cooperation (Ch. 14), 1091–1093, 1092
Transformation Pathways (Ch. 6), 423, 428, 466–467, 467
transitions, 313–314
uncertainties, 158
See also Learning-by-doing (LBD); Learning curve/rate; Research and Development (R&D)
- Technological/knowledge spillovers***, 257, 387, 456, 466, 546, 632, 633, 773, 774, 858, 1091, 1272
- Technological paradigm**, 313
- Technological regime**, 313
- Technology**
AFOLU (Ch. 11), 829–835, 830–833
bioenergy, 872, 873–877, 874, 876
Buildings (Ch. 9), 686–688, 686–696, 691–692, 694–696, 722
Energy Systems (Ch. 7), 534–537, 542, 547, 567
Human Settlements/Infrastructure (Ch. 12), 947, 948
Industry (Ch. 10), 753–763, 767, 772
limited technology scenarios, 421, 421–422, 445, 451–453, 453, 454
National and Sub-national Policies/Institutions (Ch. 15), 1174–1179
Regional Development and Cooperation (Ch. 14), 1119–1121
Transformation Pathways (Ch. 6), 433–434, 451, 453, 453, 464–466, 465, 490

- Transport (Ch. 8), 613–617, 617, 622, 633–636, 634–636
waste management, 788–791, 790, 791
See also Research and development (R&D)
- Technology Mechanism**, 1011
See also Research and Development (R&D)
- Technology transfer**, 257–258, 302, 1033, 1035–1037, 1106–1109, 1107, 1108
- Temperature goal**, 428, 428, 430–432, 430–441, 434–440
- Territorial emissions***. See Emission(s)
- Territorial emissions accounting**, 305–307, 364, 373–375, 386, 937, 937–939, 938
- Thailand**, 631, 721, 767, 938, 950, 967, 1046
- Thermal energy storage**, 697
- Thermal power plant**, 535, 538, 548–549
- Third-generation biofuel***, 616, 631, 878, 882, 882, 1253
- Total climate finance***, 1212, 1214, 1233, 1256
- Total climate finance flowing to developing countries***, 1212, 1214–1215, 1234, 1256
- Total primary energy supply (TPES)**, 519–523, 520, 521, 523
- Trace gas***, 1273
- Traceable account**, 157
- Tradable allowance**, 1158
See also Emission(s), emission permit; European Union Allowance (EUA)
- Tradable allowance***
See also Assigned Amount (AA)
- Tradable (green) certificates scheme***, 1158, 1273
- Trade**
agreement, 121, 1117
international (See International trade)
regional, 1117
sanction, 1014–1015
- Traditional biomass***, 379, 379, 519, 529, 835, 871, 872–873, 882, 883, 1097, 1253–1254
- Transaction cost***, 236–238, 448, 858, 1012, 1046–1047, 1153, 1222, 1225, 1273
- Transformation pathway***, 413–490, 1273
AFOLU (Ch. 11), 435, 471, 478, 479, 479, 484, 840–842, 850, 859–862, 860, 864
aggregate economic implications, 448–452, 450, 452–455, 457–461
baseline scenarios (See Baseline/reference scenarios)
Buildings (Ch. 9), 480, 686, 697, 698, 710–715, 710–715
categorization, 428, 428, 430–432, 430–441, 434–440
Energy Systems (Ch. 7), 442–444, 442–445, 541, 554–564, 555–558, 560–564
framing and evaluating, 420
geoengineering options, 484–489
impacts and adaptation, 441–443, 442
Industry (Ch. 10), 471, 479, 479–483, 765, 768–769, 776–780, 777–780
integrated modelling tools, 422–424
integrating long- and short-term perspectives, 462–465, 463, 465
integrating sector analyses and scenarios, 478–484, 479–483
integrating societal change, 467, 468
integrating technological change, 466–467, 467
land use and bioenergy, 445–448, 446, 447, 835, 875, 878, 881–886
new mitigation scenarios, 420–422
risks, 478
sustainable development, 315, 468–477, 469–471, 474
Transport (Ch. 8), 630, 637–642, 638–641
- Transit oriented development (TOD)***, 649, 959, 960, 961, 1273
- Translational uncertainty**, 178
- Transnational climate governance initiatives**, 1027–1028
- Transport**, 599–649
aviation, 614, 615, 626, 628, 646
barriers and opportunities, 633–636, 634–636
behavioural aspects, 616–618
climate change feedbacks and adaptation, 622–623
co-benefits, risks, and spillovers, 630–633, 632
costs and potential, 623–629, 625–629
emission trends and drivers, 124, 127, 128, 128, 380, 381–384, 391, 610–613
freight, 613–614, 621, 621, 622
freight and passenger, 605–610, 606–610
GHG emissions, 606–608, 608–609, 647–648
human settlements/urban areas, 945, 947, 948, 950, 951, 952, 956, 960, 961, 965–967, 968, 969, 975, 976
infrastructure and systemic perspectives, 618, 618–621, 620
mitigation technology, 613–617, 617
modal shift, 620, 620–621, 621
National and Sub-national Policies/Institutions (Ch. 15), 1158–1159, 1170–1171
passenger, 613, 620, 620–621
rail, 614, 615, 626, 628, 645
road, 625, 627, 642–645, 643
sectoral policies, 642–647
shipping, 628, 646
sustainable development, 637–642, 638–641
Transformation Pathways (Ch. 6), 470, 479, 480–483, 481–483, 637–642, 638–641
waterborne, 615, 628, 645, 646
See also Urban planning
- Trends in emissions**, 356–364, 361
aerosols and aerosol/tropospheric ozone precursors, 360–361, 361
drivers (See Drivers of emissions)
emissions uncertainty, 361–364, 362
future, 134–137, 135, 136
historical, 125–129, 126–129
Least Developed Countries, 384
perspectives on sources/mitigation efforts, 129–134, 131–133
sectoral and regional, 357–360, 381
sectoral and regional, 347, 358
system perspective on, 394–395
See also individual sectors
- Trifluoromethane (HFC-23)**, 1030, 1046
- Trinidad & Tobago**, 748, 1119
- Troposphere***, 611, 1273
- Turkey**, 782, 838, 950, 1117
- U**
- Uganda**, 1104, 1214, 1235
- Ukraine**, 130, 535, 536, 550, 754, 950, 1044, 1116, 1216, 1236
- Uncertainty***, 137–139, 159, 160, 1273
communicating risk, 167–168
economic modelling, 314–315
emissions, 134, 361–364, 362
historical emissions, 127
Industry (Ch. 10), 772
International Cooperation (Ch. 13), 1015
international negotiations and agreements, 181–183
- large scenario ensembles interpretation, 175–177, 176, 423–424
metrics, 157
policy, 157–159, 183–187, 190, 241, 242
quantifying, 174
representing, 155
science-policy interfaces, 178
sustainability evaluation, 321
transformation pathways, 178–181
translational, 178
Transport (Ch. 8), 633
uncertainty analysis, 173–177, 176
uncertainty aversion, 163
See also Risk management
- Unconventional resource***, 119, 379, 522, 525, 525, 527, 528, 1273
- Unit of measurement**, 1284, 1284–1286, 1285
- United Arab Emirates (UAE)**, 1121
- United Kingdom (UK)**
AFOLU (Ch. 11), 838, 867
Buildings (Ch. 9), 689, 709, 720
emission trends and drivers, 375, 389, 390
energy systems, 189
Human Settlements/Infrastructure (Ch. 12), 937, 948, 950, 954, 958–960, 962–964, 969, 972, 972
Industry (Ch. 10), 756, 758, 781–783
International Cooperation (Ch. 13), 1026, 1029, 1049
Investment and Finance (Ch. 16), 1216, 1217
lobbying, 241
National and Sub-national Policies/Institutions (Ch. 15), 1151, 1159–1162, 1169, 1172, 1180–1181
public support for policies, 187
quota system, 185
Regional Development and Cooperation (Ch. 14), 1121
Transport (Ch. 8), 615, 645
See also International institutions and agreements
- United National Interim Administration Mission in Kosovo**, 1116
- United Nations (UN)**, 121, 125, 1024–1025
- United Nations Environment Programme (UNEP)**, 1025
- United Nations Framework Convention on Climate Change (UNFCCC)***, 120–122, 213, 214, 294, 319, 373, 1011, 1023, 1028, 1273
climate agreements, 1024–1025
climate finance, 1212, 1214, 1215
coalitions among parties, 1025
new policy options, 1035
performance assessment, 1041–1043, 1042, 1047–1048
See also Annex I Parties/countries; Annex II Parties/countries; Non-Annex I Parties/countries
- United States of America (USA)**
AFOLU (Ch. 11), 825, 838, 865
bioenergy, 875, 886
Buildings (Ch. 9), 690, 692, 695, 719, 720
charitable donations, 253
consumption and wellbeing, 310
emission trends and drivers, 130, 375, 377, 377, 378, 387, 389–391
Energy Systems (Ch. 7), 119, 120, 189, 521, 522, 524, 530–532, 535–537, 544, 552–553
financial crisis, 116
Human Settlements/Infrastructure (Ch. 12), 932, 936, 939, 945–948, 950, 951, 952, 952, 954, 957–967, 963, 969, 971–974, 972
Industry (Ch. 10), 748, 757–762, 767

- International Cooperation (Ch. 13), 1026, 1027, 1037, 1033, 1036, 1044, 1045, 1049
- Investment and Finance (Ch. 16), 1214, 1217, 1222
- legal responsibility for harm, 218
- National and Sub-national Policies/Institutions (Ch. 15), 1153, 1153–1154, 1162–1166, 1168–1173, 1176, 1177, 1180, 1184, 1189
- personal consumption, 308
- Property Assessed Clean Energy (PACE) programme, 186
- public support for policies, 187
- Regional Development and Cooperation (Ch. 14), 1086, 1089, 1091, 1100, 1102–1104, 1111, 1117–1121, 1123
- Sustainable Development (Ch. 4), 115
- Transport (Ch. 8), 609, 613–615, 620, 624, 630–631, 643, 645
- waste management, 787–790, 792
- See also International institutions and agreements
- Unjust enrichment**, 218–219
- Upper Middle Income Countries (UMC)**, 1287
- See also Economic regions (income-based)
- Urban area**. See Human settlements/infrastructure
- Urban density**, 952–955, 953, 955, 962, 963
- Urban form**
- Human Settlements/Infrastructure (Ch. 12), 929, 942, 944, 947–949, 951–958, 953–955, 962–966, 977, 978
- Transport (Ch. 8), 612, 613, 618–621, 630, 632, 641, 647
- Urban heat island (UHI) effect**, 977
- Urban planning**
- Human Settlements/Infrastructure (Ch. 12), 964, 967, 975 (See also Spatial planning; Transport)
- Transport (Ch. 8), 612, 619–621, 647, 648
- See also Human settlement; Infrastructure
- Urban sprawl**. See Human settlements/infrastructure
- Uruguay**, 721
- Utilitarianism**, 223
- V**
- Value (economic)**, 224–232, 229–231
- See also Cost-benefit analysis (CBA)
- Value (ethics)**, 213, 215, 220–223, 299–300
- Verified Emissions Reductions***, 1273
- Vietnam**, 688, 693, 721, 767, 825
- Volatile Organic Compounds (VOCs)***, 361, 361, 548, 611, 622, 975, 1273
- Voluntary action***, 241, 253–254, 568, 781, 864–865, 868, 971, 1156, 1159, 1171–1173, 1273
- Voluntary agreement (VA)***, 567–568, 781, 781, 782, 868, 1172–1173, 1274
- Voluntary carbon market (VCM)**, 1035, 1042, 1050–1051
- W**
- Wait-and-see/wait-and-learn**, 155, 164, 167–168, 189, 190
- Waste management**, 785–792, 786, 787, 790, 791
- Waste/wastewater**, 380, 381–384, 384, 749, 750, 751, 753, 755, 759, 783, 785–792, 947
- See also Combustible renewables and waste
- Water**, 244, 477, 886, 947
- Energy Systems (Ch. 7), 546, 547
- pollution, 233, 546–548, 550–551
- See also Hydropower
- Wellbeing**, 220–228, 294, 295, 310–311, 321–322
- Western Asia**, 934
- Western Climate Initiative (WCI)**, 1027
- Western Europe (WEU)**, 1286, 1286
- Buildings (Ch. 9), 680, 682, 684–685, 698, 699
- Human Settlements/Infrastructure (Ch. 12), 935
- International Cooperation (Ch. 13), 1044
- Regional Development and Cooperation (Ch. 14), 1086, 1087, 1090, 1091, 1092, 1093, 1094, 1094–1097, 1097, 1099, 1100–1103, 1103, 1104, 1105, 1106, 1107, 1109, 1116, 1123
- Willingness to Accept (WTA)**, 243–244
- Willingness to Pay (WTP)**, 226, 243–244
- Wind energy***, 519, 521, 521, 522, 525, 526, 529, 530, 535, 537, 538, 539, 540, 541, 542–544, 545, 548, 548–549, 551, 552, 556–558, 1274
- WITCH model**, 257
- Women, climate change and**, 255
- World energy balance**, 520
- World macroeconomic situation**, 116–118, 117
- World Mayors Summit**, 1027
- World Trade Organization (WTO)**, 121, 1032–1035
- Z**
- Zambia**, 1116
- Zimbabwe**, 750, 1116
- Zoning**, 956, 957, 958, 959, 962, 963
- See also Human settlements/infrastructure; Land use

