a. Total anthropogenic emissions 1970 - 2019 values across assessments +1.8%/yr +1.2%/yr +1.5%/yr +0.9%/yr +2.5%/yr 57.9 Gt 56.9 Gt 29 Gt 34 Gt 38 Gt 42 Gt 53 Gt 58 Gt 57.8 Gt 55.4 Gt 60 2% F-gas N20 5% CH4 5% 50 18% CO2 LULUCF CO₂ FFI 18% GHG Emissions (GtCO2eq/yr) 00 00 01 10% 5% 1% 10% 1% 20% 21% 0% 5% 12% 22% 13% 23% 13% 20 65% 17% 65% 61% 59% 10 59% 54% 0 1970 1980 1990 2000 2010 2018 AR6* AR2 AR5 AR4 (* including feedbacks) c. Avg. annual GHG emissions growth d. Absolute GHG emissions growth Turkey China India Indonesia Saudi Arabia Indonesia India Russian Federation Saudi Arabia Pakistan China Iran, Islamic Rep. Turkey Korea, Rep. Iran, Islamic Rep. Brazil Korea, Rep. Canada Pakistan Mexico Canada Russian Federation Mexico South Africa Japan Japan South Africa Australia Australia Germany Germany **United States** United Kingdom United Kingdom -Years: 2009-2018 **United States** Years: 2009-2018 2 -2 %/yr Gt CO2eq/yr e. Avg. annual GHG emissions growth f. Absolute GHG emissions growth Electricity & heat Metals Chemicals Road Road Metals Chemicals Electricity & heat Cement Other (industry) Waste Waste Oil and gas fugitive emissions Oil and gas fugitive emissions Other (industry) Coal mining fugitive emissions Enteric Fermentation (CH4) Other (energy systems) Residential Managed soils and pasture (CO2, N2O) Other (energy systems) Enteric Fermentation (CH4) Coal mining fugitive emissions Managed soils and pasture (CO2, N2O) Residential Land-use (CO2) Land-use (CO2) Years: 2009-2018 Years: 2009-2018

3

0.0

0.5

1.0

Gt CO2eq/yr

1.5

2.0

2

%/yr

0

b. Evolution of GWP100 metric