

# Need for Action

## Preamble

To avoid any misunderstandings, the following clarification should be made straight away: any increase in radiative forcing is a deviation from climate neutrality and obliges us to protect the climate. The sensitivity of the global temperature to the increase in radiative forcing is approximately  $0.8^{\circ}\text{C}$  per  $\text{W}/\text{m}^2$ . The continued persistence of current global development until the end of the century could result it to a radiative forcing of up to  $8 \text{ W}/\text{m}^2$ .

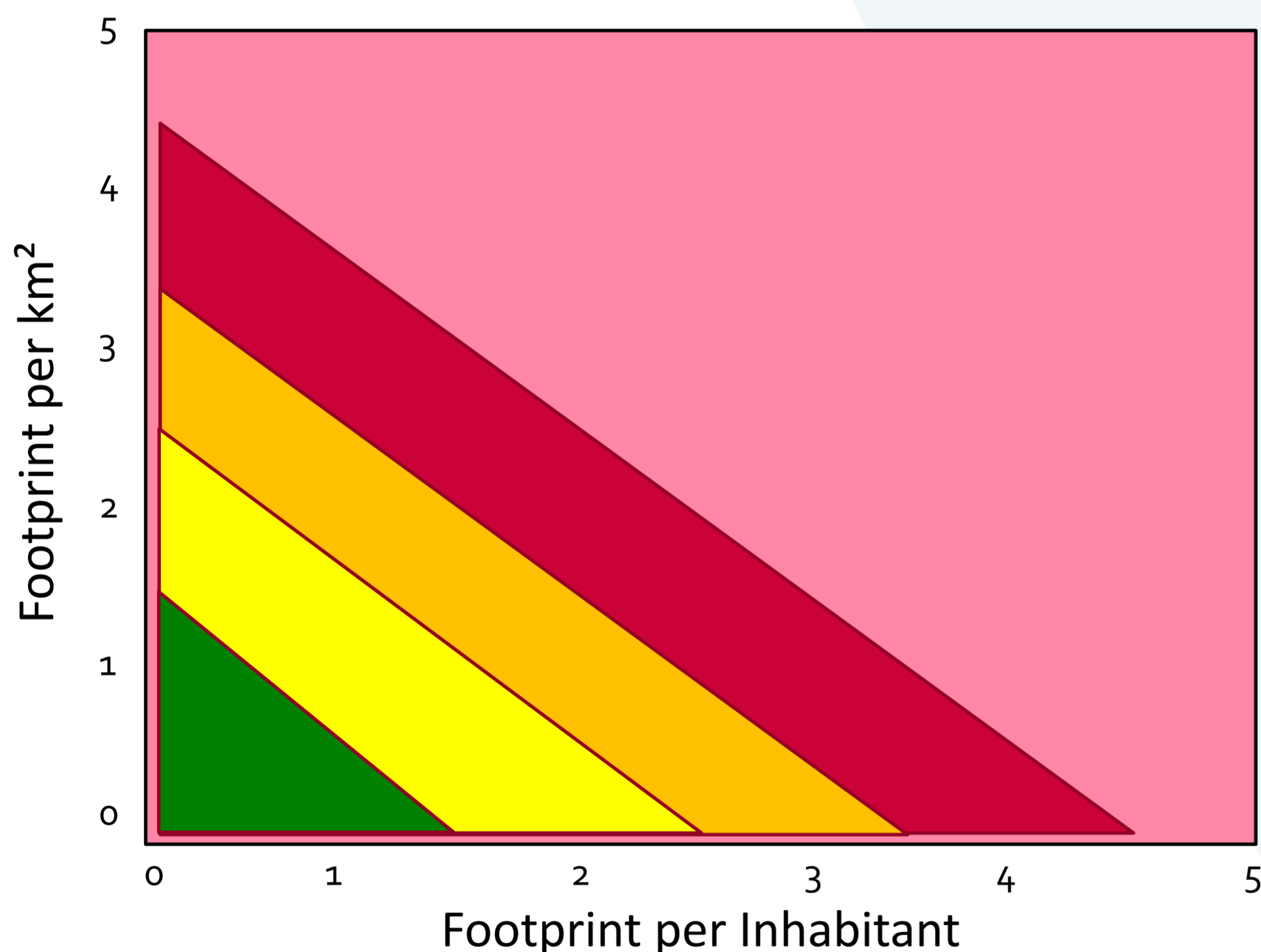
The need for action is triggered by the radiative forcing per reference value. The value of the global average is used as the basis for assessment. A footprint of 1 corresponds to the following values:

	Radiative Forcing $\text{mW}/\text{m}^2$	
	pro 1 Million Inhabitants	per 1 Millionen $\text{km}^2$ Land surface
Carbon dioxide $\text{CO}_2$	0.285	16.802
Nitrous oxide $\text{N}_2\text{O}$	0.028	1.621
Methane $\text{CH}_4$	0.071	4.127
Total	0.384	22.550

## Reference Values Are Important!

Results on radiative forcing at the national level must be linked to the frame sizes of the countries. The first framework variable is the area of the country, because this is also associated with the concept of a virtual emission space in the atmosphere. The second variable is the population size, which can be used to represent the intensity of management. Both aspects can trigger a need for action independently of each other. In Bangladesh, the footprint per person is only 0.16, but per  $\text{km}^2$  it is 3.4. In this case, the need for action is driven by the density of the population. In Russia, the opposite is true. The footprint per person is 3.4 and that of the area is 0.5. The assessment of the need for action in the climate protection calculator takes both variables into account.

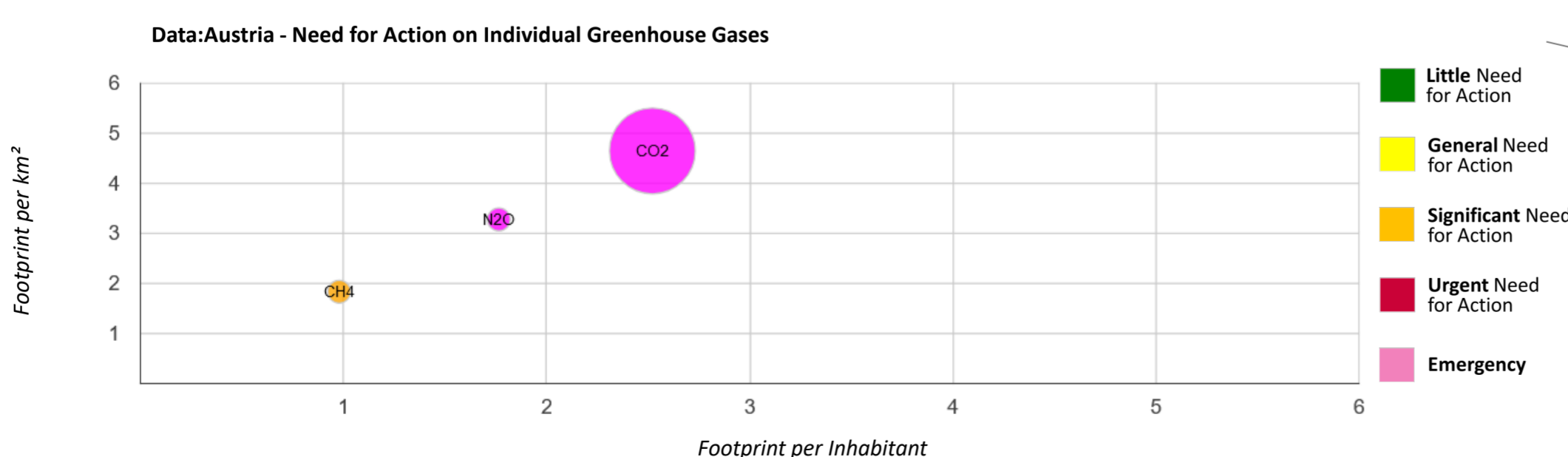
## Classification of the Need for Action



- Little Need for Action:** Need for Action Below the Global Average (e.g. Africa, South America)
- General Need for Action:** Need for action on a global average (e.g. Asia)
- Significant Need for Action:** Need for action above the global average (e.g. China)
- Urgent Need for Action:** Need for action well above the global average (e.g. North America)
- Emergency:** Need for action far above the global average (e.g. Europe)

## Need for Action per Greenhouse Gas

The need for action for the individual greenhouse gases is divided into different classes of action according to the scheme shown. The size of the circle is proportional to the total load.



## Need for Action per State

The overall result of a data set is categorized into different groups of reference data sets. The reference data sets can be selected from the illustration.

