

# Annex IV

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## Units

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### IV.1 SI (*Système Internationale*) Units

**Table IV.1.** Basic SI units.

Physical Quantity	Name	Symbol
Length	meter	m
Mass		kg
Time	second	s
Thermodynamic temperature	kelvin	K
Amount of substance	mole	mol

**Table IV.2.** Multiplication factors

Prefix	Multiple	Prefix	Symbol
$10^{-1}$	deci	d	10
$10^{-2}$	centi	c	deca
$10^{-3}$	milli	m	hecto
$10^{-6}$	micro	$\mu$	kilo
$10^{-9}$	nano	n	mega
$10^{-12}$	pico	p	giga
$10^{-15}$	femto	f	tera
			$10^{12}$
			peta
	$10^{15}$		P

**Table IV.3.** Special Names and Symbols for Certain SI-Derived Units

Physical Quantity	Unit	
	Name	Definition
Force	N	$\text{kg m s}^{-2}$
Pressure	pascal	$\text{Pa}$ $\text{kg m}^{-1} \text{s}^{-2}$ ( $= \text{N m}^{-2}$ )
Energy	joule	J $\text{kg m}^2 \text{s}^{-2}$
Power	watt	W $\text{kg m}^2 \text{s}^{-3}$ ( $= \text{J s}^{-1}$ )
Frequency	hertz	Hz $\text{s}^{-1}$ (cycles per second)

**Table IV.4.** Decimal Fractions and Multiples of SI Units having Special Names

Physical Quantity	Name	Unit	
			Definition
Length	Ångstrom	Å	$10^{-10} \text{ m} = 10^{-8} \text{ cm}$
Length	micron	$\mu\text{m}$	$10^{-6} \text{ m}$
Area	hectare	ha	$10^4 \text{ m}^2$
Volume	litre	L	$10^{-3} \text{ m}^3$
Force	dyne	dyn	$10^{-5} \text{ N}$
Pressure	bar	bar	$10^5 \text{ N m}^{-2} = 10^5 \text{ Pa}$
Pressure	millibar	mb	$10^2 \text{ N m}^{-2} = 1 \text{ hPa}$
Mass	tonne	t	$10^3 \text{ kg}$
Mass	gram	g	$10^{-3} \text{ kg}$
Column density	Dobson units <sup>a</sup>	DU	$2.687 \times 10^{16} \text{ molecules cm}^{-2}$
Streamfunction	Sverdrup	Sv	$10^6 \text{ m}^3 \text{ s}^{-1}$

<sup>a</sup> See ‘Dobson units’ in glossary.

## IV.2 Other Units

**Table IV.5.** Other units.

Symbol	Description
°C	Degree Celsius ( $0^\circ\text{C} = 273 \text{ K}$ approximately) Temperature differences are also given in °C (= K) rather than the more correct form of ‘Celsius degrees’
ppm	Parts per million ( $10^6$ ), mixing ratio <sup>a</sup> ( $\mu\text{mol mol}^{-1}$ )
ppb	Parts per billion ( $10^9$ ), mixing ratio <sup>a</sup> ( $\text{nmol mol}^{-1}$ )
ppt	Parts per trillion ( $10^{12}$ ), mixing ratio <sup>a</sup> ( $\text{fmol mol}^{-1}$ )
yr	Year
MtCO <sub>2</sub> -eq	Megatonnes ( $1 \text{ Mt} = 10^6 \text{ kg} = 1 \text{ Gg}$ ) CO <sub>2</sub> -equivalent <sup>b</sup>
GtCO <sub>2</sub> -eq	Gigatonnes ( $1 \text{ Gt} = 10^{12} \text{ kg} = 1 \text{ Pg}$ ) CO <sub>2</sub> -equivalent <sup>b</sup>
MtN	Megatonnes of nitrogen

<sup>a</sup> See ‘mixing ratio’ in glossary.

<sup>b</sup> See ‘CO<sub>2</sub>-equivalent’ in glossary.

## IV.3 Costs

Unless stated otherwise, specific costs are calculated or reported using 5% per year as the default discount rate. The expected lifetime of the equipment is used as the depreciation period.

Costs are expressed in US\$<sub>(2002)</sub>, unless stated otherwise.

To correct cost data for the effect of inflation, the deflator for the gross domestic product (GDP) is applied for years other than 2002.

The conversion of currencies is based on the exchange rate on 31 July of the respective year.