# Use of GWPs

GWP are used for two purposes:

1. Checking on reporting obligations (in the context of automated QC checks): “GWP\_Annex.IV”
2. Calculating & checking HFC quota related data & obligations: “GWP\_HFCs”

(For Annex I & II gases, the GWP\_Annex\_IV equals the GWP\_AR4\_100 as given in tbl\_components of the FDB. For HFCs (Annex I, section 1) the GWP\_HFCs equals the GWP\_AR4\_100 as given in tbl\_components of the FDB. For all other Annex I & II gases, the GWP\_HFCs is zero.)

All the GWPs are also found in the GWP excel sheet we had sent you, in the “GWP full” (=Annex IV) and “GWP HFC part only” columns, respectively.

For mixtures the issues is slightly more complex:

## Calculation of GWPs of mixtures for the purpose of checking on the reporting obligation thresholds (= “GWP\_Annex\_IV”)

**For the purpose of the questionnaire, the GWPs of mixture calculated this way is only relevant in the context of a couple of quality checks where metric tonnes of gases/mixtures reported in place of the questionnaire are analysed in order to check whether a reporting obligation is given for other parts of the questionnaire.**

The GWP of a mixture is calculated as a weighted average, derived from the sum of the weight fractions of the individual substances multiplied by their GWP, including substances that are not fluorinated greenhouse gases.

Σ [(Substance X% x GWP) + (Substance Y% x GWP) + … (Substance N% x GWP)]

where % is the contribution by weight.

Companies may specify F-gases of Annex I & II, non-F-gases of Annex IV and “other” gases as constituents of the mixture

GWPs of Annex I, II & IV gases are given in tbl\_components

For each “other” gas specified by the reporter a default GWP of zero is to be assumed, even in case this other gas would be for example an HCFC (chlorofluorocarbon = ozon depleting substance, bearing in fact a high GWP as well)!

For GWP\_Annex\_IV of gases/mixtures contained in the FDB please refer to the spreadsheet we had sent you, “Gases, blends and GWPs from FDB”, in the “GWP full” column.

**The GWP\_Annex\_IV of user-defined mixtures need to be calculated on the spot in the questionnaire, but it does not need to be stored in the FDB because are calculated automatically based on the composition data. The final FDB will contain a query that delivers Annex IV GWPs for all stored mixtures.**

## Calculation of GWPs of mixtures for the purpose of HFC quota related calculations (=“GWP\_HFCs”)

**In the questionnaire, these GWPs are needed when metric tonnes of HFCs & HFC-containing mixtures as summarized in 5G, 5H, 5I & 5J are to converted in to CO2-equivalents for transactions 9B, 9C, 9D, 9E & 9F.**

(More applications in section 13 , however not implanted this year1)

The GWP\_HFC of a mixture is calculated as a weighted average, derived from the sum of the weight fractions of the **individual HFCs (only Annex I , section1)** multiplied by their GWP,.

Σ [(HFC X% x GWP) + (HFC Y% x GWP) + … (HFC N% x GWP)]

where % is the contribution by weight.

For each non-HFC, a GWP\_HFC of zero would be assumed.

For GWP\_HFCs of gases/mixtures contained in the FDB please refer to the spreadsheet we had sent you, “Gases, blends and GWPs from FDB”, in the “GWP HFC part only” column.

**The GWP\_HFCs of user-defined mixtures need to be calculated on the spot in the questionnaire, but it does not need to be stored in the FDB because are calculated automatically based on the composition data. The final FDB will contain a query that delivers HFC only GWPs for all stored mixtures.**