































8





















| European Coopera | ation in the field of Scientif | rmal Systems – TU1205 – | BISTS |
|--|--|--|---------------------|
| Pollution | is not a | always disa | strous! |
| | | | |
| Plant dry weight (biomas | ss) responses to at atmospheric CO2 | mospheric CO2 enrichme concentration. | nt, for 600 ppm |
| 8 | | | |
| Cereals | | Vegetables | |
| Barley | 40% | Cabbages | 29% |
| Rice | 36% | Tomatoes | 32% |
| Wheat | 33% | Cucumbers | 45% |
| Legumes | | Other | |
| Beans | 64% | Coffee | 175% |
| Peas | 33% | Olive trees | 36% |
| Soybeans | 46% | Citrus | 30-60% |
| Roots and tubers | | | |
| Carrots | 78% | | |
| Potatoes | 30% | | |
| | | | |
| | | | |
| COST is supported by the ELLBID Framework Programme | | ESF provid | des the COST Office |









| European Cooperation i Building Integratio | n the field of Scientific a on of Solar Thern Environment-Properties | nal Systems – T -d_1220.html | U1205 – BISTS |
|---|--|---|---|
| Refrigerant | Ozone Depletion Potential (ODP) | Global Warming Potential (<i>GWP</i>) | •Global Warming Potential (<i>GWP</i>) is a measure of how |
| R-11 Trichlorofluoromethane | 1.0 | 4000 | much a given mass of a gas |
| R-12 Dichlorodifluoromethane | 1.0 | 2400 | |
| R-13 B1 Bromotrifluoromethane | 10 | | contributes to global warming. |
| R-22 Chlorodifluoromethane | 0.05 | 1700 | GWP is a relative scale which |
| R-32 Difluoromethane | 0 | 650 | compares the amount of heat |
| R-113 Trichlorotrifluoroethane | 0.8 | 4800 | |
| R-114 Dichlorotetrafluoroethane | 1.0 | 3.9 | trapped by greenhouse gas to |
| R-123 Dichlorotrifluoroethane | 0.02 | 0.02 | the amount of heat trapped in |
| R-124 Chlorotetrafluoroethane | 0.02 | 620 | the same mass of Carbon |
| R-125 Pentafluoroethane | 0 | 3400 | Disvide The CM/D of Carbon |
| R-134a Tetrafluoroethane | 0 | 1300 | Dioxide. The GWP of Carbon |
| R-143a Trifluoroethane | 0 | 4300 | Dioxide is by definition 1 and is |
| R-152a Difluoroethane | 0 | 120 | the reference. Be aware that |
| R-245a Pentafluoropropane | 0 | | CW/Ds are highly controversial |
| R-401A (53% R-22, 34% R-124, 13% R-152a) | 0.37 | 1100 | GWPS are nignly controversial. |
| R-401B (61% R-22, 28% R-124, 11% R-152a) | 0.04 | 1200 | |
| R-402A (38% R-22, 60% R-125, 2% R-290) | 0.02 | 2600 | •Ozone Depletion Potential |
| R-404A (44% R-125, 52% R-143a, R-134a) | 0 | 3300 | |
| R-407A (20% R-32, 40% R-125, 40% R-134a) | 0 | 2000 | (ODP) of a chemical |
| R-407C (23% R-32, 25% R-125, 52% R-134a) | 0 | 1600 | compound is the relative |
| R-502 (48.8% R-22, 51.2% R-115) | 0.283 | 4.1 | amount of degradation it can |
| R-507 (45% R-125, 55% R-143) | 0 | 3300 | |
| R-717 Ammonia - NH ₃ | 0 | 0 | cause to the ozone layer |
| R-718 Water - H ₂ 0 | 0 | | |
| R-729 Air | 0 | | ESE provides the COST Office |
| R-744 Carbon Dioxide - CO ₂ | | 1* | through an EC contract POLINDATION |

| - | Estimated | Estimated Clabel Wayming Detentials * | | | | | | | |
|---|--|--|---|--|--|--|--|--|--|
| Compound | Estimated Atmospheric Lifetime (years) | Global Warming Potentials * (at time horizons of) 20 years 100 years 500 years | | | Source | | | | |
| CFC-11 | 50±5 | 5000 | 4000 | 1400 | (b) | | | | |
| CFC-12 | 102 | 7900 | 8500 | 4200 | (b) | | | | |
| CFC-113 | 85 | 5000 | 5000 | 2300 | (b) | | | | |
| CFC-114 | 300 | 6900 | 9300 | 8300 | (b) | | | | |
| CFC-115 | 1700 | 6200 | 9300 | 13000 | (b) | | | | |
| HCFC-22 | 13.3 | 4300 | 1500 | 520 | (b) | | | | |
| HCFC-123 | 1.4 | 300 | 93 | 29 | (b) | | | | |
| HCFC-124 | 5.9 | 1500 | 480 | 150 | (b) | | | | |
| HCFC-141b | 9.4 | 1800 | 630 | 200 | (b) | | | | |
| HCFC-142b | 19.5 | 4200 | 2000 | 630 | (b) | | | | |
| HCFC-225ca | 2.5 | 550 | 170 | 52 | (b) | | | | |
| HCFC-225cb | 6.6 | 1700 | 530 | 170 | (b) | | | | |
| HFC-23 | 264 | 9100 | 11700 | 9800 | (c) | | | | |
| HFC-32 | 5.6 | 2100 | 650 | 200 | (c) | | | | |
| HFC-43-10mee | 17.1 | 3000 | 1300 | 400 | (c) | | | | |
| HFC-125 | 32.6 | 4600 | 2800 | 920 | | | | | |
| HFC-134a | 14.0 | 5000 | 3800 | 1400 | | | | | |
| HEC 152a | 40.5 | 460 | 140 | 1400 | | | | | |
| HEC-227ea | 36.5 | 4300 | 2900 | 950 | | | | | |
| HEC-236fa | 209 | 5100 | 6300 | 4700 | | | | | |
| HFC-245ca | 6.6 | 1800 | 560 | 170 | (c) | | | | |
| Methane | 12.2±3 | 56 | 21 | 6.5 | (c) | | | | |
| NMHCs ** | | 31 | 11 | 6 | (a) | | | | |
| HFC-134a HFC-143a HFC-152a HFC-227ea HFC-227ea HFC-245ca Methane NMHCs ** * GWP values are uncertainty is D2 | 14.6 48.3 1.5 209 6.6 12.2±3 - | 3400 5000 460 4300 5100 1800 56 31 e GWPs for Co | 1300 3800 140 2900 6300 560 21 11 D2 at each time | 420 1400 42 950 4700 170 6.5 6 horizon; typica | (c) (c) (c) (c) (c) (c) (c) (a) | | | | |





































































