

Climate Change

The potential for disaster

What we can do about it now

**Presented by KINGSLEY GIBSON 24.4.08 in the Tuckey Room.
(as reported by Shirley Joiner)**

What was considered to be a “worst case scenario” for Climate Change is now the expected outcome – it could be even worse! We need to reduce greenhouse emissions. The easiest way is by using renewable energy.

Climate change has already increased the frequency of severe storm events – what was once a 1-100 event is now 1-20 frequency and may become 1-5 frequency with drastic implications for buildings, streets and other infrastructure. There is an undeniable decrease in rainfall as well as the temperature increase and this could lead to a loss of 30% of South West Flora species eg Acacia (then fauna too due to lack of habitat). Each degree in temperature rise is equivalent to 100 km shift to the north, of weather patterns

The ocean has warmed by .8 deg (may be 1 deg already as figures are always a little behind time). As this warming increases we could experience a loss of 80-90% of coral reefs (oddly Ningaloo will be one of the last to be effected), a decline in sea ice, increase in glacial retreat, with global water stress and major impacts as the polar ice melts and the poles absorb and reflect more heat.

At 2 deg. temperature increase, all Greenland’s ice will be lost, the oceans acidified resulting in loss of marine life including krill – approaching “Tipping Point” (beyond which there is NO Human remedy).

As we reach 2 – 3 deg. increase we will experience global drought with major climatic refugees. The Amazon forests will actually burn (they are irreplaceable) and the resultant extra CO₂, be devastating.

At 4deg. the permafrost melts releasing methane and CO₂ into the atmosphere.

At 5deg. the seabed releases methane, further adding to the greenhouse gasses. Beyond this temperature rise – life may not be sustainable.

International Climate Change experts believe we can still make it!

WHAT CAN WE DO ???

Energy efficiency can reduce the effects by 30%.

- Use fuel efficient vehicles – diesels use 57% of fuel of petrol motors and 40% less emissions.
- In housing – black roofs increase heat by 12 – 14%, we need eaves, correct solar orientation.
- Civic/commercial buildings need lighting and ventilation by windows.
- Need better transport planning – easier use of buses and bikes.
- Energy efficient appliances – check ratings, turn off computers/appliances when not in use (standby power can be up to 10 – 12% of the total).
- Rainwater tanks are cost effective over a few years.
- Lighting – reduce number of globes in multiple fittings (especially fluoro tubes).

The cost of these changes are minimal – about .12% of economic growth figures. We need to change our style of economy, our energy production (more wind and solar power) and our culture.

If we do not change our direction we will end up where we are headed (Chinese Proverb)

In answer to questions, Kingsley told of LED Street lights which cost more initially but are more reliable, reducing energy use by 90% and of other types which directed light onto the street not into the air and drivers faces.

He sees wind power as “cost competitive”, but solar panels still expensive (\$12000 - \$13000 per house).

Kingsley says that we need to consider sea level rises when developing along the coast.