8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Contribution to WTIM-10 session 9

Document C/41-E
26 November 2010
English

SOURCE: LINK Centre, Wits University, CRID, University of Namur

TITLE: ICT and climate change: measuring and reporting

ICTs and climate change: measuring and reporting

Ewan Sutherland

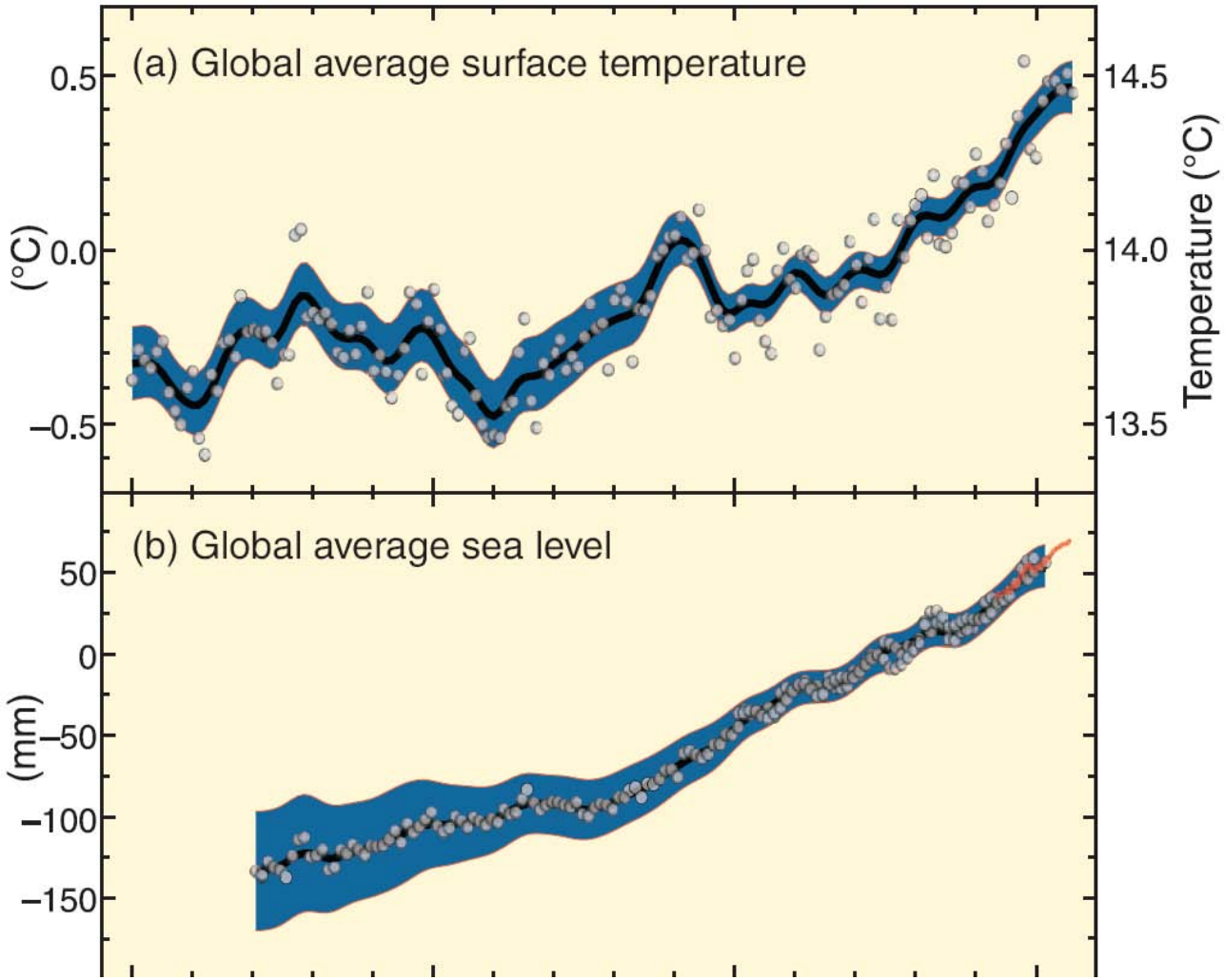
LINK Centre, Wits University

CRID, University of Namur

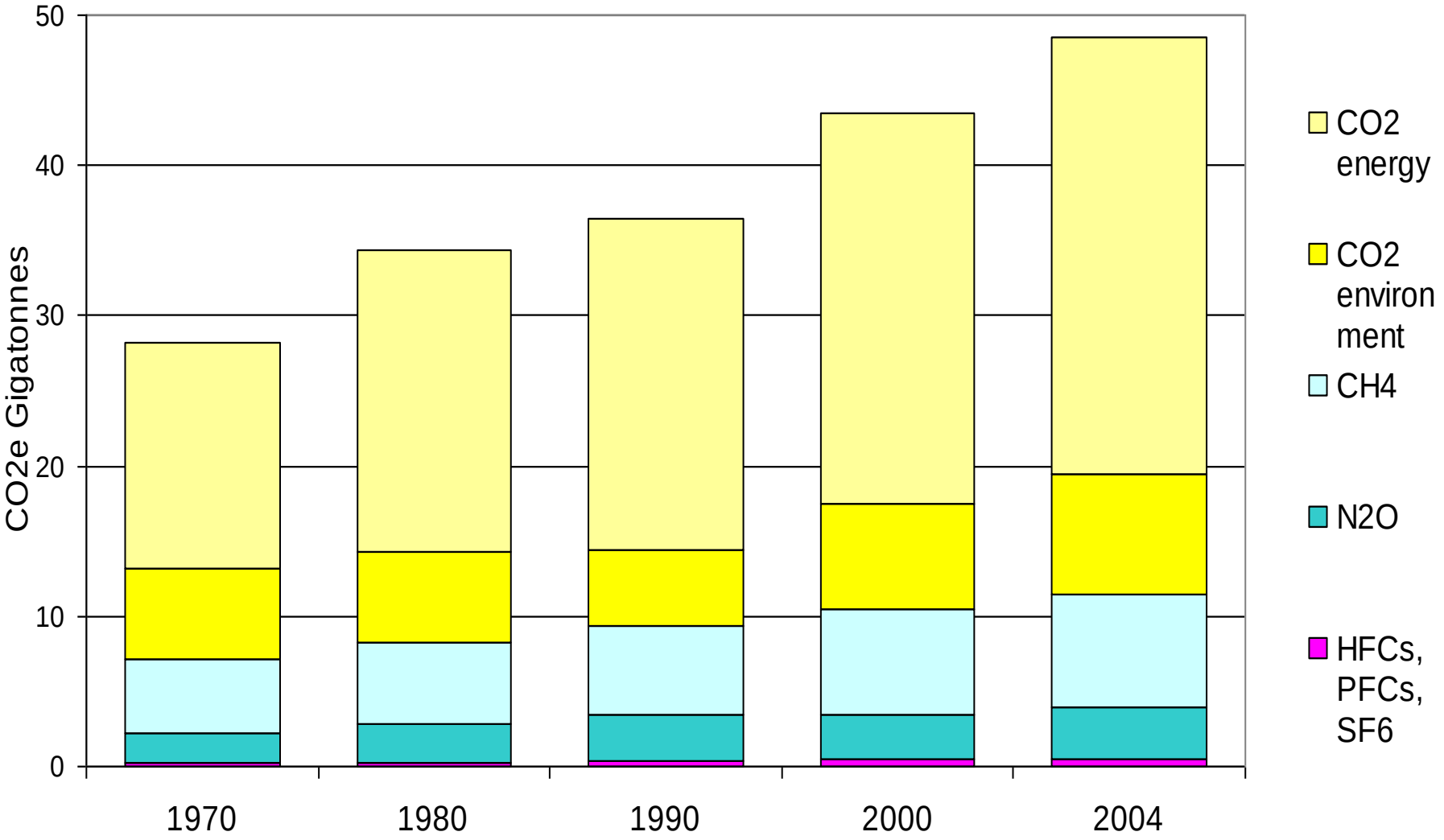
Introduction

- Human beings are warming the planet
- ICTs are ~2.5 per cent of emissions
- CO_2 accounting
- Telcos want to claim downstream benefits
- Conclusions

Changes from 1850 to 2005



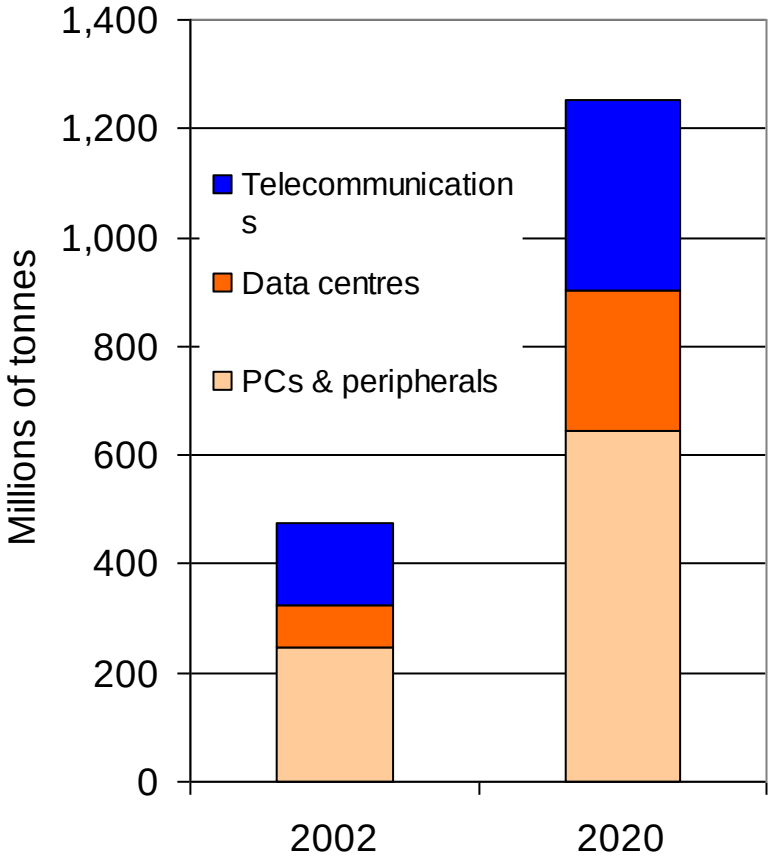
Greenhouse gas emissions

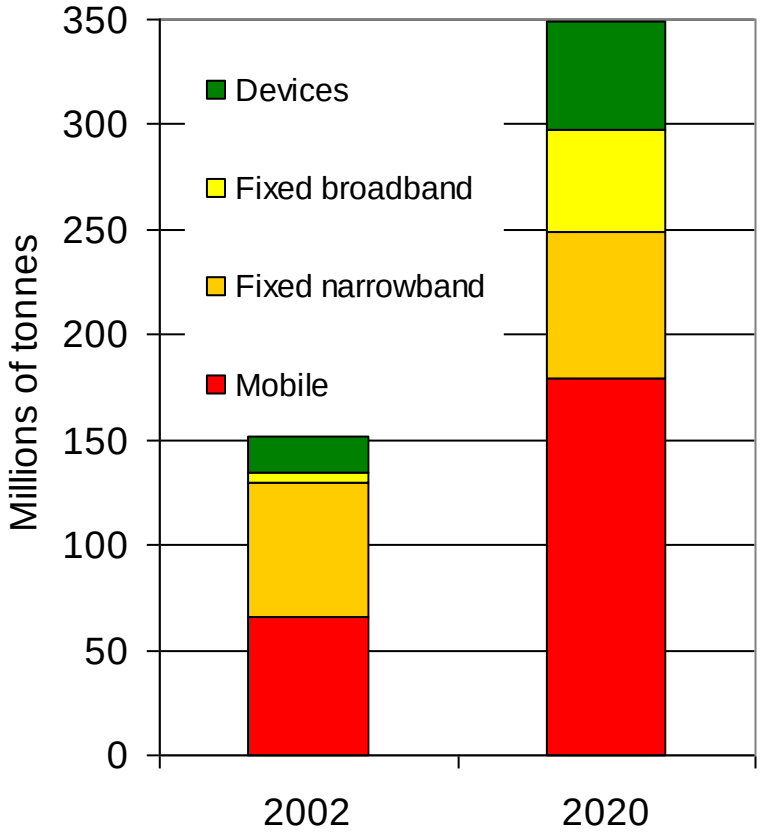


Gases in CO_2 equivalence

Gas	*CO_2e*	*Uses in telecommunications*
HFCs	11,700	refrigerants, propellants & cleaners
SF_6	23,900	electrical insulation
PFCs	6,500	refrigerants & fire extinguishers
N_20	310	vehicle engines & power generation
CH_4	21	-
CO_2	1	vehicle engines & power generation

GeSi estimates of ICT sector emissions





Limited scope for reductions

- Strong growth of telecoms
- GSM Association "green power" initiative:
  - Photovoltaic cells
  - Wind power
  - Pico-hydro turbines
  - Bio-diesel
- NGN – savings "up to 40%"
- FTTH – using poles not ducts

CDP Leadership Index

	GHG Protocol Initiative emissions			*CDLI Score*	*Innovest Carbon Beta Rating™*
	Scope 1	*Scope 2*	*Total (1, 2 & 3)*		
Deutsche Telekom	353,955	2,828,777	3,182,732	95	AAA
BCE	114,463	187,615	318,179	90	AA
Ericsson	8,000	145,000	690,025	90	AAA
BT Group	253,547	467,381	779,617	85	A
Telstra	149,075	1,031,576	1,360,574	85	B

Source: http://www.cdproject.net/climateleaders2007.asp

Tonnes of CO_2 equivalent
Scope 1: Direct GHG emissions
Scope 2: Electricity indirect GHG emissions
Scope 3: Other indirect GHG emissions

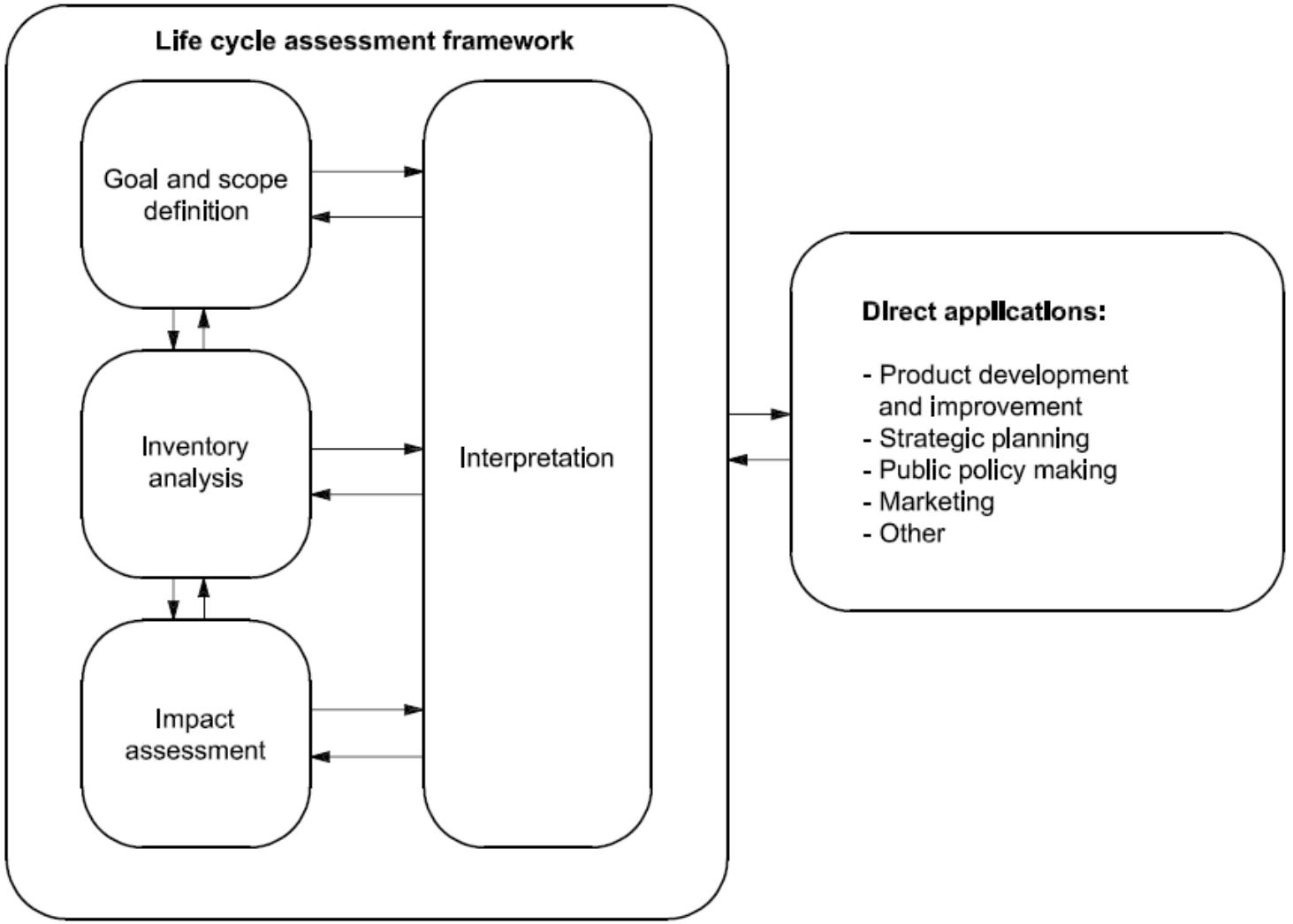
Using telecoms to reduce other sectors

- Teleconferences & telepresence
- Telework
- E-health
- E-education
- E-government
- BUT, technology is not enough it needs many personal and organizational changes

ISO 14000

- ISO 14000 series “environmental management”
- ISO 14001 specifies the basic requirements for an environmental management system:
  - establish, implement, maintain and improve an environmental management system,
  - assure itself of conformity with its stated environmental policy,
  - demonstrate conformity with the standard by
    - making a self-determination and self-declaration, or
    - seeking confirmation of its conformance by parties having an interest in the organization, such as customers, or
    - seeking confirmation of its self-declaration by a party external to the organization, or
    - seeking certification/registration of its environmental management system by an external organization

Life Cycle Assessment



Business users

- Substantial organisational changes are needed to achieve the potential savings
- Complex accountancy of inputs and outputs
- Under pressure to contribute to corporate and national goals
- Benefits are tradable!

Conclusion

- Telcos seeking to offset their growing emissions from savings made by customers
  - e.g., BT service in Germany
- Extremely complex accounting:
  - but no standards

Thank you

Ewan Sutherland

http://3wan.net/

ewan [@] 3wan.net

+44 141 416 0666

skype://sutherla

http:// www.ssrn.com/author=927092