

### Carbon Costs

#### Mobile Phone LifeCycle

##### The Carbon Connection

A mobile phone doesn't have a combustion engine. It doesn't burn petrol and release carbon dioxide as waste.



Yes, it does use electricity to charge its battery when it's being used and that electricity comes from power plants that probably burn fossil fuels and release CO<sub>2</sub>.

The biggest problem with mobile phones is that they have become semi-disposable. The creation and disposal of all those phones accounts for a great deal of energy used and carbon released.

*So what does it cost to dispose of a mobile phone before it's time?*

The mobile phone and its components represent the raw materials and energy used to create that phone.

Anything that can be done to prolong that phone's useful life reduces or postpones the need to use energy to create a new phone. And the less energy used, the less carbon is released into Earth's atmosphere.

##### It All Adds Up

According to calculations, the manufacturing and subsequent use for one year of one mobile phone produces 60 kg of carbon dioxide. Put another way, one phone is responsible for emitting as much carbon

dioxide as burning almost 26 litres of fuel. This includes both the energy needed to manufacture and transport one phone, as well as the energy needed to operate it for one year.

To find what the real costs of premature disposal is, the original 60 kg needs to be reduced by the cost of annual use, so take 5% off (3 kg). Then, as technology is making these smaller, lighter and smarter, replacements of current models are likely to use around 20% (11 kg) less toxic materials and more recycled or recyclable materials.

##### Savings

The total adjustment to the original number is around 25% giving a saving of 45 kg of CO<sub>2</sub> per donated mobile phone.

Finally, if the phone can only be recycled rather than re-used, that will save around half as much CO<sub>2</sub> as the phones that get reused; this takes into account energy needed in the

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recycling process. So those phones amount to 22.5 kg of CO<sub>2</sub> instead of 45 kg.

Applying a weighted average of reusable vs recyclable donated phones, we get a final savings of 42.8 kg of CO<sub>2</sub> per phone. This is the same as around 18 litres of fuel. If you multiply this by the per litre fuel price, (I'll use \$1.15) each donated phone on average is worth more than \$20.00 in carbon savings.

With worldwide mobile phone sales projected to top 1 billion per year in 2009, any effort to reduce those numbers could yield large energy and environmental savings.

### Calendar of Events

The International Day of People with a Disability is part of a worldwide celebration that occurs on

3 December each year. The special day is unique among community awareness days, as it unites disability organisations, individuals with a disability, businesses, federal, state and local governments and the community.

The day is a collaborative effort to celebrate and acknowledge the experience and expertise of people with a disability.

World Kidney Day is a partnership project of the International Federation of Kidney Foundations (IFKF) and International Society of Nephrology (ISN) and is held annually on the



#### DECEMBER 2008

- 1st - Coastcare week
- 3rd - The International Day of People with a Disability
- 5th - International Volunteer Day
- 11th - International Mountain Day

#### JANUARY 2009

26th - Australia Day

#### FEBRUARY 2009

- 17th - Organ Donor Awareness Week
- 24th - Business Clean Up Day
- 27th - Schools Clean Up Day

#### MARCH 2009

- 1st - Clean Up Australia Day
- 7th - Corners for Kids Motorcycle Rally for Inspire Foundation
- 12th - World Kidney Day



### Melbourne Zoo's

#### "They're Calling on YOU"

##### Melbourne Zoo's They're Calling on

**You** mobile phone recycling program has been developed in partnership with ARP and the Jane Goodall Institute (JGI) to raise awareness of the coltan mining crisis by exposing the link between mobile phones and primate conservation.

Coltan, short for columbite tantalite, is the principal source of tantalum, a rare and valuable metal in huge demand in today's high technology industries. Those of us that own a mobile phone, own a piece

of coltan. The mining of this commodity within the Democratic Republic of Congo is contributing to forest loss and unrest in the region, and is accelerating the loss of mountain gorillas at an alarmingly fast rate.

On October the 8<sup>th</sup>, 2008 Jane Goodall officially launched the program at Melbourne Zoo. Since this launch, the media have helped to generate a large amount of public interest, and this has motivated a number of people to recycle their mobile phones to help our endangered African primates! To find out more visit [http://www.zoo.org.au/Calling\\_on\\_You](http://www.zoo.org.au/Calling_on_You).