

## Some Resources on Carbon Offsets



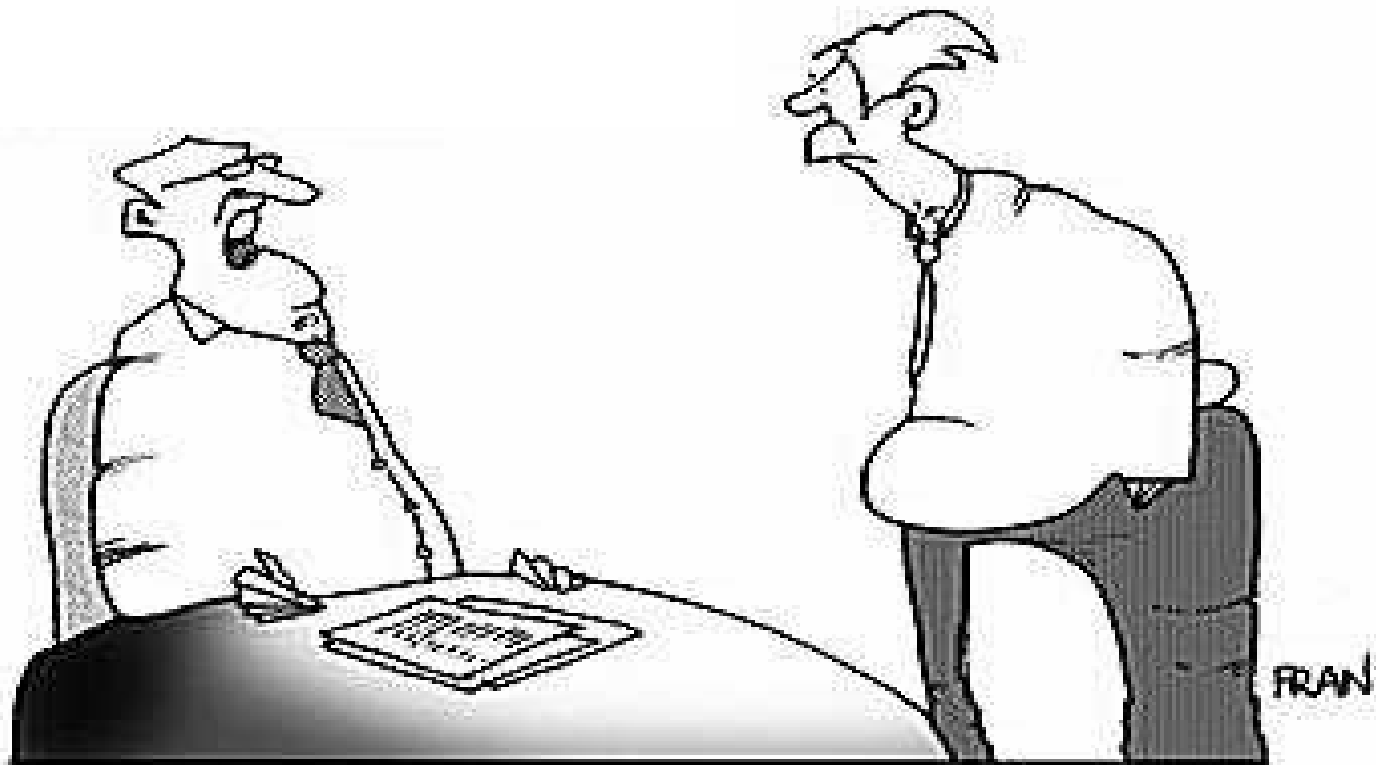
KAPLAN KIRSCH ROCKWELL

- **Tufts Climate Initiative Report:**  
<http://www.tufts.edu/tie/tci/carbonoffsets/index.htm>
- **TerraPass:** [www.terrapass.org](http://www.terrapass.org)
- **Carbonfund:** [www.carbonfund.org](http://www.carbonfund.org)
- **Delta Airlines:**  
[http://news.delta.com/article\\_display.cfm?article\\_id=10745](http://news.delta.com/article_display.cfm?article_id=10745)

# Carbon Offsets 101



# How Offsets Work



I WANT TO OFFSET MY CARBON FOOTPRINT  
JENKINS...CANCEL YOUR HOLIDAY FLIGHTS

# Why Offsets Work



# Climate Change: non-localized



## *Arguments in favor of carbon offsetting*



**Economic and environmental efficiency**

A group of young school children in blue uniforms are smiling and looking towards the camera. They are outdoors, possibly at a school event or fair. In the background, there are other people, including a woman in a yellow sari, and some structures. A yellow banner with a logo is visible on the right. The children are in the foreground, and their expressions are joyful.

## *Arguments in favor of carbon offsetting*

### **Co-benefits:**

Benefits to local populations and the environment through technology transfer and capacity building.

# How Carbon Offset Markets Work



**Compliance Market:  
Cap-and-trade**



**Voluntary Market**

# The Offset Markets

## Mandatory frameworks

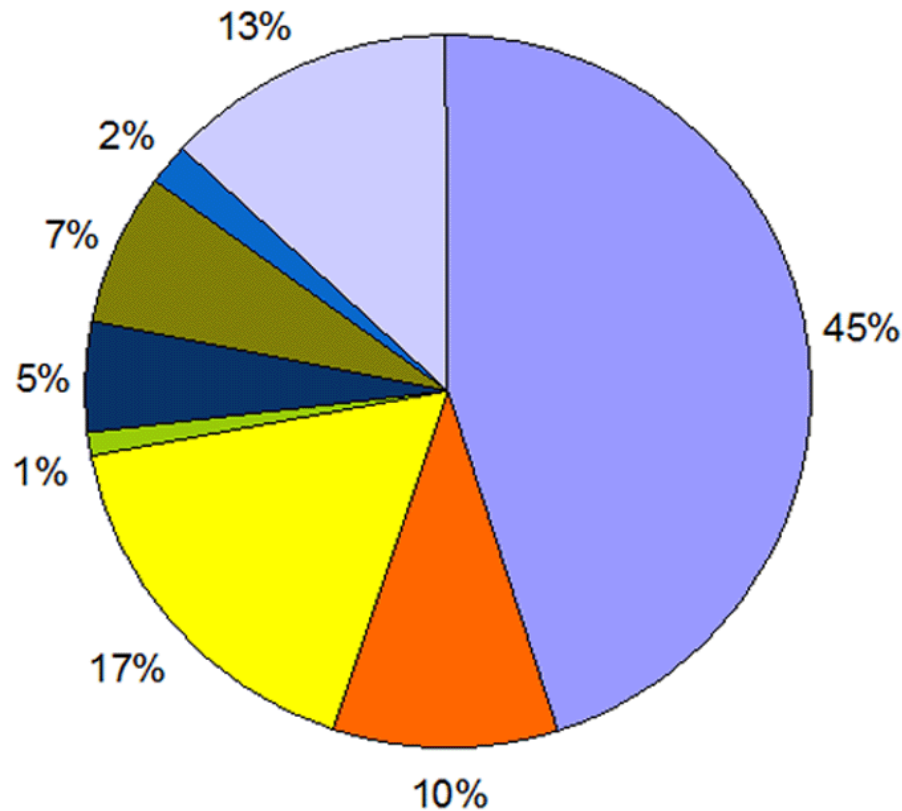
- Kyoto Protocol's Clean Development Mechanism (CDM)
- European Emissions Trading Scheme (EU ETS)
- Northeast Regional Greenhouse Gas Initiative (RGGI)

## Voluntary markets

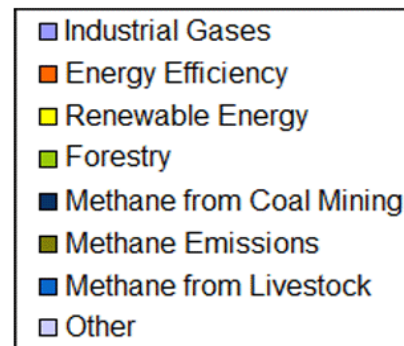
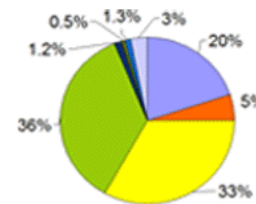
- Personal offsets (e.g. for air travel)
- Corporate offsets (e.g. to achieve carbon neutrality)

# Size of Carbon Markets

**Kyoto Projects (CDM and JI)**  
Total Volume in 2006: 466 MtCO<sub>2</sub>e



**Voluntary Offset Projects (CDM and JI)**  
Total Volume in 2006: 13 MtCO<sub>2</sub>e  
(excluding CCX transactions of 10.3 MtCO<sub>2</sub>e)



(Source, Capoor, 2007 & Hamilton, 2007)

# Carbon Offsets Under Cap-and-Trade

***Clear rules and regulations***

***Clean Development Mechanism***  
***Joint Implementation***



# Carbon Offsets Under Cap-and-Trade

**A hypothetical example: The world: emits 1000 units**

**Country A emits 800 units**

**Country A establishes a legally binding cap-and-trade system.  
Reduction target 20% (160 units less)**

**Country A does not allow any offsets from country B**

**Country A has to reduce its emissions at home by 160 units.**

**Country B emits 200 units**

**Country B has no reduction target.**

**Result: Total global emissions will be lowered to 840 units**

# Carbon Offsets Under Cap-and-Trade

A hypothetical example: The world: emits 1000 units

Country A emits 800 units

Country A establishes a legally binding cap-and-trade system.  
Reduction target 20% (160 units less)

Country A does allow 20% of its reductions from offsets from country B

Country A has to reduce its emissions at home by 128 units.

Country B emits 200 units and has no reduction target.

Country B has to reduce emissions by 32 units to supply country A with offsets.

Result: Total global emissions are lowered to 840 units

# Carbon Offsets Under Cap-and-Trade

**In a cap-and-trade system offsets only lead to a geographical shift in emissions reductions.**

**They do not lead to additional emissions reductions.**

**It is the cap that determines the level of emissions reductions.**

# Carbon Offset in the Voluntary Market



***No cap; all action is purely voluntary***  
***No unified rules and regulations***

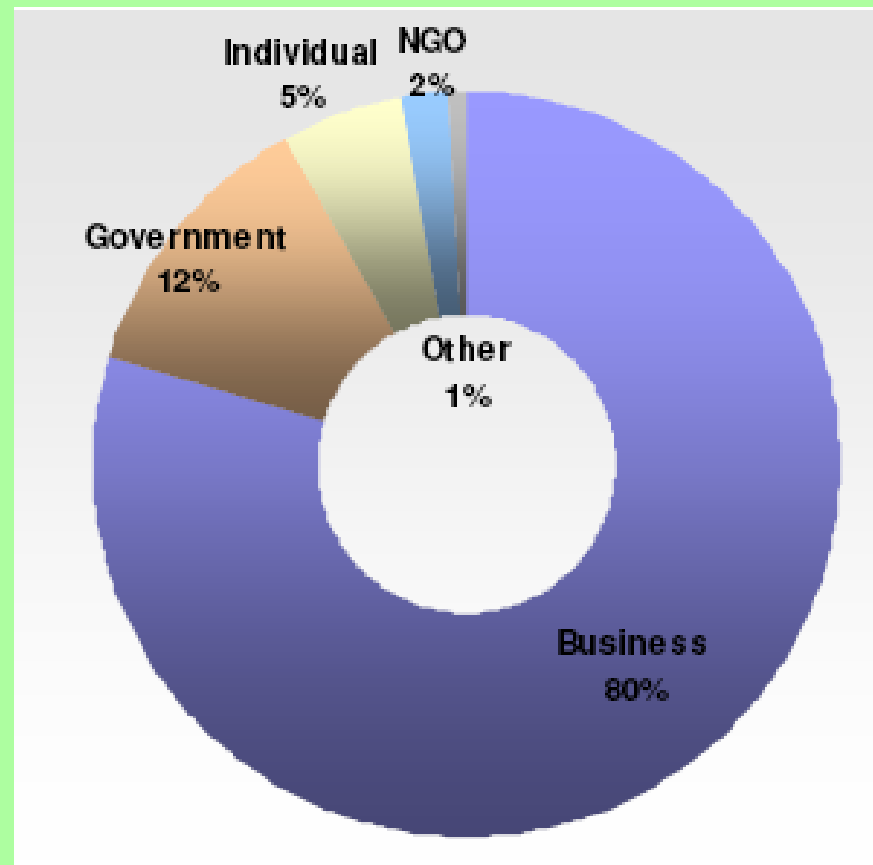
***Voluntary Carbon Standard (VCS)***  
***Voluntary Gold Standard***

# *Arguments in favor of voluntary offsetting*



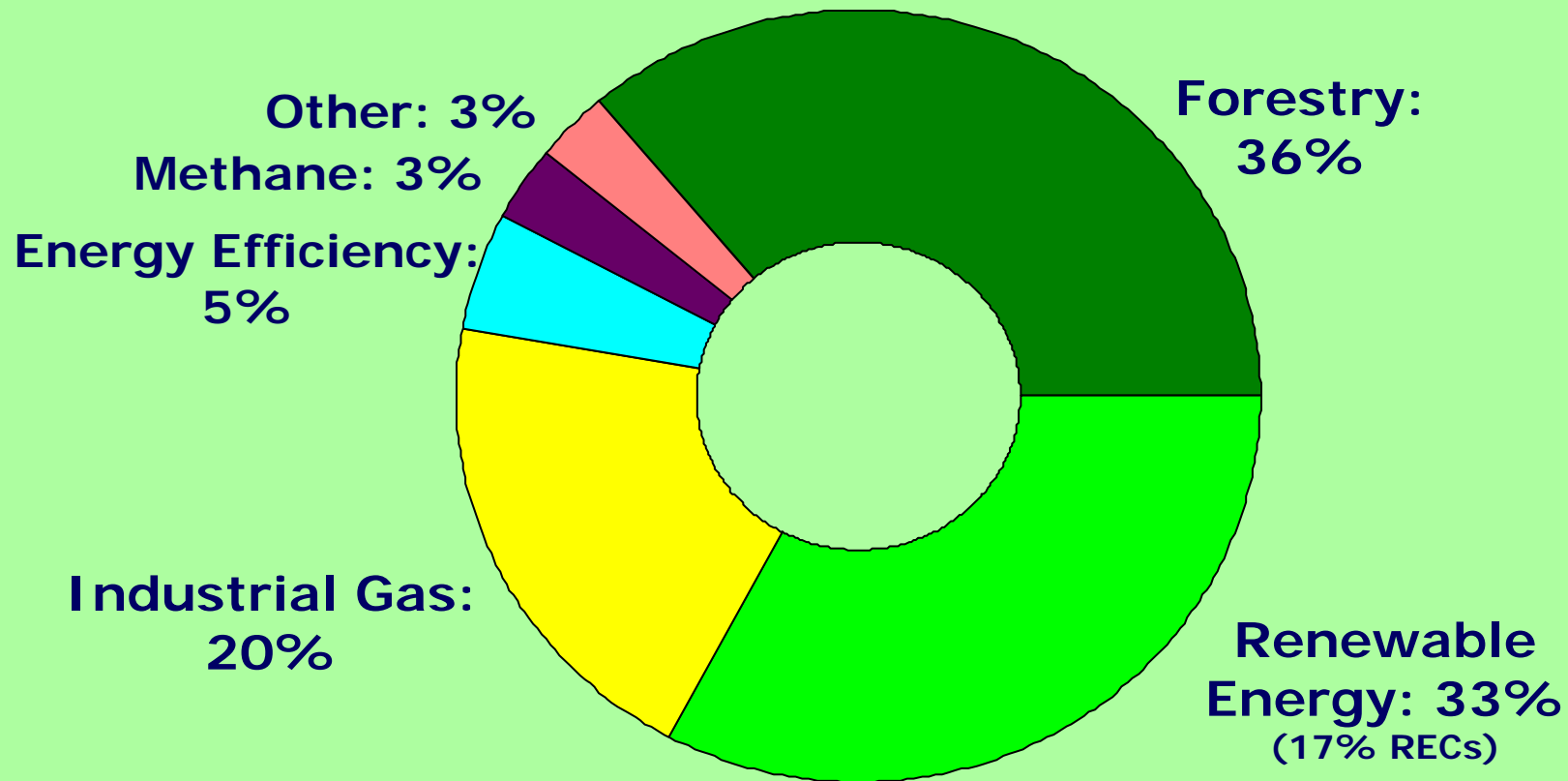
***Voluntary offset market:***  
**Possibility of Broad Participation**  
**Preparation for Future Compliance**  
**Markets**  
**Innovation and Experimentation**  
**Corporate Goodwill**

## *Voluntary Offset Buyers*



Hamilton, 2007

# Voluntary Offsets Sold in 2006





**Are offsets real?**

# Testing Offset Quality



- ✓ Is it *real*?
- ✓ Is it *surplus/additional*?
- ✓ Is it *verifiable*?
- ✓ Is it *permanent*?
- ✓ Is it *enforceable*?

# Testing Offset Quality



✓ Is it *real*?

Or is it a product of incomplete accounting?



# Testing Offset Quality



✓ Is it *surplus/additional*?

Or would Facility X have been built anyway?



# *Additionality*

How do I know the project selling offsets would not have happened anyway?

Proving the counterfactual is impossible



# ***Additionality***

**Additionality shows one of the weaknesses of offsetting.**

**Cap-and-trade systems, or purely regulatory action such as efficiency standards and carbon taxes, avoid the issue of additionality altogether.**



# Testing Offset Quality



✓ Is it *verifiable*?

Has a 3<sup>rd</sup> party certified that the project is reducing emissions?



# Testing Offset Quality



✓ Is it *permanent*?



# Testing Offset Quality



✓ Is it **enforceable**?

How many are claiming ownership of the offsets from this efficiency project?



# Offset Standards

CDM	Full standard	Mandatory program (Kyoto Protocol)
Chicago Climate Exchange (CCX)	Full standard	Available within voluntary trading system
Voluntary Carbon Standard (VCS)	Full standard	Forthcoming, initially reliant on CDM accounting standards
<b>WWF Gold Standard</b>	Full standard	“Boutique” CDM, with voluntary component
“Green-e” GHG Product Standard	Mainly accounting/procedural	Forthcoming
ISO 16064, Part 2	Accounting standard	Generic, only basic requirements
GHG Protocol for Projects	Accounting standard	Generic with sector supplements; full guidance

# Climate Challenge

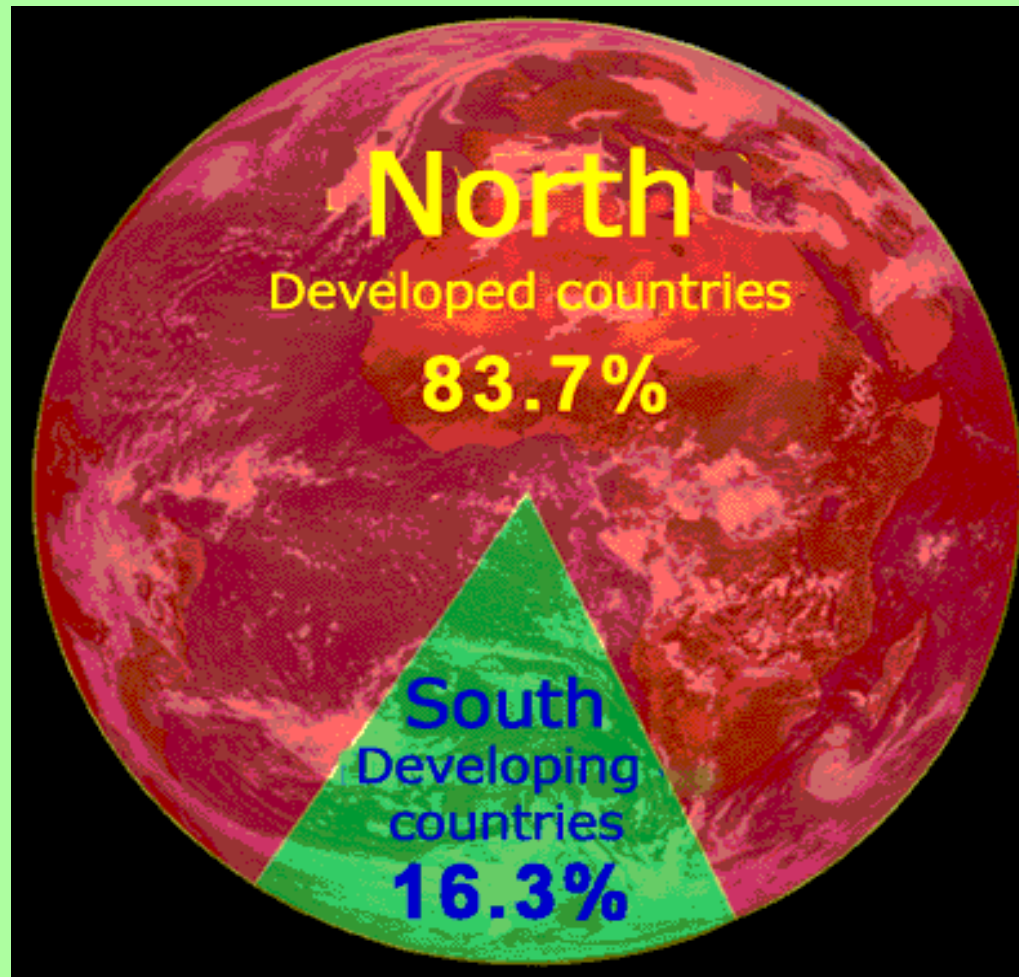


**1941**: Alaska's Glacier Bay National Park was 2,000 feet thick.

**2004**: same shoreline


**To prevent catastrophic change:  
Stabilize CO<sub>2</sub> at 450ppm  
80% below 1990 levels by 2050**

# Cumulative CO2 Emissions from 1800-1988: The Ecological Debt of the North



## Is it ethical?



In Vollmacht  aller Heiligen  
und in Erbarmung gegen Dich, absolvire  
Ich Dich von allen Sünden und Missetha-  
ten und erlasse Dir alle Strafen auf zehn  
Tage.  
Johannes Tetzel.

Translation: By the authority of all the saints, and in mercy towards you, I absolve you from all sins and misdeeds and remit all punishments for ten days. - indulgence as sold by John Tetzel.

## *Criticism of carbon offsetting*

- **Carbon Offsets Stifle Action At Home**
- **Unbalanced Market Dynamics and Free Riders**
- **Negative Impacts on Future Policies**
- **Lack of Development Benefits**

# The Future of Offsets

- 1. Offset mechanisms offer cost-effectiveness that allows caps or voluntary commitments to go deeper.**
- 2. Additionality remains a major concern and needs to be addressed.**
- 3. Offset offer the potential for higher overall reductions without compromising equity concerns.**



**Is it ethical?**

**It depends on the reduction commitment (the cap)**

**A cap could hypothetically be set at more than 100%**

**Address climate needs and equity & development needs**

# Voluntary Carbon Offset Information Portal

a joint project of



[TCI Home](#)

[SEI Home](#)

[Voluntary Carbon Offsets](#)

[Consumer Handout](#)

[Full TCI Report on Voluntary Offsets \(pdf\)](#)

[Introduction to Carbon Offsets](#)

[Carbon Trading Overview](#)

[Carbon Offset Quality](#)

[Offset Project Types](#)

[Airtravel Emissions Calculator Evaluation](#)

[Company Profiles](#)

## Voluntary Carbon Offsets

Consumers who are concerned about the extent of their environmental impact, but who cannot avoid flying completely, may wish to neutralize their travel emissions by purchasing carbon offsets. Individuals can calculate the amount of carbon they are personally responsible for and then purchase an offset for that amount. The funds the offset company receives are then used to implement and manage projects that avoid, reduce or absorb greenhouse gases through renewable energy, energy efficiency, or forest and other bio-sequestration projects.

### Carbon Offsets

**If you buy carbon offsets, you forgo reducing your own emissions (i.e. you still fly) but in exchange you pay someone to reduce their emission in your stead.**

**There are dozens of companies that offer to sell you voluntary carbon offsets. But how to choose the right company?**

This website will help you learn about offsets and how to select an offset project or company. The issues involved are complex and manifold. If you'd like to delve into the subject matter, we recommend you download [the whole report \(pdf, 45p.\)](#) If you'd like to browse a specific topic,

[www.tufts.edu/tci/carbonoffsets](http://www.tufts.edu/tci/carbonoffsets)

[anja.kollmuss@sei-us.org](mailto:anja.kollmuss@sei-us.org)

## What is Cheat Offsetting?

When you cheat on your partner you add to the heartbreak, pain and jealousy in the atmosphere.

Cheatneutral offsets your cheating by funding someone else to be faithful and NOT cheat. This neutralises the pain and unhappy emotion and leaves you with a clear conscience.

## Can I offset all my cheating?

First you should look at ways of reducing your cheating. Once you've done this you can use Cheatneutral to offset the remaining, unavoidable cheating

## are you a cheater?

cheatneutral can help you  
offset your  
indiscretions.

[offset now!](#)



## loyal and faithful?

become an offset project and  
get paid for not cheating

[find out more!](#)



## Projects

Some of the people who are offsetting your cheating:



alex



chris



mim



rich

so far, **cheatneutral**  
has offset **65,768**  
cheats and has  
**9002** faithful  
people ready to  
neutralise your  
misdemeanours.