

## PROPOSAL FOR CARBON OFFSET PROGRAM

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### 1. Why reduce the greenhouse gas emissions from human activities?

Greenhouse effect is essential to life on earth. Without it the temperature on our planet would be minus 18 °C instead of the existing average of 15°C.

Greenhouse effect protects us from solar radiations and is part of the equilibrium creating the atmosphere and so the air we breathe. This natural balance is being disrupted because of Green House Gas emissions from human activities.

Green House Gas (GHG) emissions are reinforcing the natural greenhouse effect, so temperatures are rising in average. This is what we call the **global warming**. The problem with global warming is that it is impacting the climate; that's why it is referred to as the climate change.

**For example:** one more degree in average will raise the humidity on earth of 7%, so meteorological phenomena are becoming more intense, stronger hurricanes, cyclones, storms, rains, aridity periods, heat waves, etc. Others impacts like the sea level rising are an effect of the global warming. Climate change is influencing our daily life and the economics because of its impacts on natural resources and biodiversity that don't have the time to adapt or, on our agriculture which productivity is decreasing whereas the population is growing, we are in 2015 over 7,28 billion people against only 4 billion in 1974.

Everybody emits GHG, we are all responsible. It is our duty to reduce our individual emissions as much as possible and even more for companies and organizations.

### 2. What is exactly Greenhouse Gas?

Greenhouse gas is made of several gases that contribute to the greenhouse effect. We will focus on those which are caused by human activities:

- Carbon Dioxide (CO<sub>2</sub>) is the main gas produced by human activities (industries, transports, heating systems, etc.), and deforestation (as trees absorb CO<sub>2</sub> and reject Oxygen when they are cut they do not play their role and CO<sub>2</sub> increases). CO<sub>2</sub> is the first cause of global warming (40%).
- Black carbon emitted by cooking stoves using wood or charcoal has emerged as the second cause of global warming (18%)
- Methane (CH<sub>4</sub>) from agriculture cattle raising and waste (when it is burnt or left to rotten in open air)
- Nitrous Oxide (N<sub>2</sub>O) from industrial agriculture and motor (car, plane, etc.)
- CFCs chemicals gases not destructible with high toxicity (HCFCF, CFC) mostly from air conditioner system (air condition, fridge, etc.)

All these gases have their own life cycle and global warming potential. To facilitate the calculation of a carbon footprint and compare result, one unit had to be chosen.

A translation into carbon is the easiest way to compare them and is now the common reference. That's why we speak about **CO<sub>2</sub> or carbon emissions** when we speak about GHG.

### 3. What is Carbon Offsetting ?

A **carbon offset** is a reduction in emissions of greenhouse gases made in order to compensate for or, to offset an emission made elsewhere.

In short, offsetting one ton of carbon with a carbon credit means there will be one less ton of carbon dioxide in the atmosphere than there would otherwise have been. Each ton of carbon is equal to one carbon 'credit'.

There are many ways to reduce or stock GHG emissions like: renewable energy (solar panels, wind turbine), energy efficient technology (LED, Improved cooking stove), tree plantation, waste recycling (plastic /paper/ glass/iron/ aluminum), waste treatment (methanization system), etc.

For example projects consist in :



Preventing deforestation by providing local communities that rely on forests for fire wood an alternative (use of more efficient cook stoves etc..). Nowadays, 20% of the world’s annual carbon emissions are caused by deforestation and over 13 million hectares of forest is lost annually – equivalent to an area the size of Costa Rica.

**Carbon emissions reductions** are generated from projects either aiming to reduce the emission of GHGs into the atmosphere or, to remove GHGs from the atmosphere (sequestration). In order to facilitate this trading mechanism between carbon emission and carbon emission reduction, two different markets have been created:

- **Compliance or mandatory market :**

Highly CO2 emitting companies, governments, or other entities buy carbon offsets in order to comply with the total amount of carbon dioxide they are allowed to emit. This market exists in order to achieve compliance with obligations of CO2 reduction under the Kyoto Protocol of the United Nations Framework Convention on Climate Change signed in 1997.

- **Voluntary market :**

It enables businesses such as EXO TRAVEL, local authorities, NGOs, and individuals to offset/compensate their emissions by purchasing carbon credits that were created either through the United Nations mechanisms or outside by accredited organizations (see below : CER and VER).

#### 4. What does Carbon offsetting mean for Exo Travel ?

The best way to reduce our emissions is to be measure the impact of our activities through a carbon footprint to prioritize which action is the most efficient. The highest source of our CO2 emissions are air travels, however if some could be avoided, most cannot be reduced because it would imply ceasing our ongoing business. But a carbon offset program can be implemented to compensate for our own emissions and to encourage our clients/travelers to do so. In order to reach a neutral situation and slow down the global warming at its scale, the company needs to undertake 5 steps :

- ✓ **STEP 1 : Assess and monitor** the current emissions – from travel, heating and cooling, production, etc.  
It can be achieved with the implementation of Exo Travel Resources Monitoring Tool.
- ✓ **STEP 2 : Avoid** – identify all activities causing emissions that can be avoided; e.g. replace some travels by video conferencing, install combined heat and power systems, switch off policy, reducing waste, etc.  
Reducing CO2 emissions is a priority that the company should always keep in mind.
- ✓ **STEP 3 : Improve** efficiency of energy use to reduce CO<sub>2</sub> emissions further.  
Setting annual objectives and reduction goals is a key to improve our efficiency; it can be achieved through Travelife Action Plan.
- ✓ **STEP 4 : Offset** – only the unavoidable emissions can be offset through investment in certified projects.  
Exo Travel can decide to join an existing carbon offset program to compensate its unavoidable emissions.
- ✓ **STEP 5 : Review** – Review the strategy annually to avoid more emissions and become more efficient every year, and step by step decrease the amount of CO<sub>2</sub> emissions that need to be offset.  
The target should be to achieve a 100% offset of our CO2 emissions.

## 5. How to choose a Carbon Offset program?

Many think that planting trees randomly is sufficient, but it is far more complex than this and we need to ensure before funding a project that it DOES compensate our CO<sub>2</sub> emissions. In order to offset its unavoidable carbon emissions Exo Travel can take actions and decide to enter the voluntary carbon market. On this market, two types of “emission reduction units” are available:

- **CER (Certified Emission Reduction):**

They generate from projects led under the Clean Development Mechanism (CDM) or Joint Implementation projects and are accredited by the United Nations. One CER is equal to one ton of CO<sub>2</sub> emissions – which are then bought and traded on mandatory and voluntary markets.

- **VER (verified emission reduction or Voluntary Emission Reduction):**

They are usually created by projects which have been verified outside of the Kyoto Protocol. One VER is equivalent to one ton of CO<sub>2</sub> emissions – they are developed and calculated in compliance with international standards and certifications created by independent, transparent and non-profit organizations, two main ones are identified :



THE GOLD STANDARD initiated in 2003 by a group of NGOs including WWF, is the most rigorous certification standard globally for carbon offset projects. It ensures that energy efficiency and renewable energy projects actually reduce carbon dioxide (CO<sub>2</sub>) emissions, and provide benefits to the local population. The Gold Standard is

currently supported by over 80 civil society groups around the globe, including WWF. Gold Standard projects must meet the following strict criteria and be verified by United Nations accredited independent auditors.

- ✓ The project contributes to a real reduction of CO<sub>2</sub> emissions.
- ✓ The local population is involved and participates in the project.
- ✓ The project fosters know-how and experience with renewable energy or energy efficiency technologies in developing countries.
- ✓ The project respects the environment and contributes to the conservation of biodiversity and the sustainable use of natural resources



VOLUNTARY CARBON STANDARD (VCS) relies on a peer-review approach. Projects must follow methodologies to ensure that all emission reductions and generated credits are real. Projects must also be what are known as additional, meaning they must exceed the likeliest “business-as-usual” scenario and demonstrate that emission

reductions or removals would not occur without revenue from the sale of Voluntary Carbon Units.

- ✓ VCS methodologies require projects meet specific eligibility criteria and lay out specific, pre-approved procedures for quantifying GHG emission reductions or removals.
- ✓ Emission reductions are independently audited by professionals certified to review projects in specific sectors scopes. VCS offers a secure registry system for issuing and transparently tracking each Verified Carbon Unit.

**Important:** every carbon credit that is generated by a project has a unique identification number. When a business purchases carbon credits to offset its emissions, those carbon credits are retired through third-party registries. The retirement of the carbon credit ensures a business can claim that emission reduction and the credit cannot be sold to anyone else.

For ensuring best practice approaches towards social and environmental impact of carbon reduction projects, we can also find two main **ADDITIONAL** types of standards:



A label to be

trusted to guarantee the efficiency of a project quality, is the International

Carbon Reduction and Offset Alliance (ICROA), if the organization leading the project is a member of the ICROA. It is a non-profit industry body promoting best practice in voluntary carbon management and offsetting.

## 6. How to choose a Carbon Offset program ?

Finding a good partner is crucial for the success of a carbon offset program. Exo Travel and Exo Foundation can choose an organization providing a Carbon Offset Program. This organization will help us to monitor our carbon emission and to calculate carbon emissions based on the market evolution. It will identify projects generating VER or CER. We can also choose the projects we want to support from their own database. We prefer to choose a Carbon Offset Program which is active in our destinations, as much as possible, but there one covering all of them is not currently existing. But this does not really matter as global warming is global and so an action in one neighbouring country is efficient for all.

### Requirements to find out a good project:

- The partner should be able to provide an annual report including a financial part
- The partner must be a non-profit organization
- A clear methodology on the carbon calculation is available
- The partner is certified Gold Standard and/or Voluntary Carbon Standard
- Verification of carbon benefits by an accredited independent third through an external registry.
- The project has vision over the long term (especially for tree planting) to show the permanence of the project

### Organizations certified and active in Asia:



The CarbonNeutral Company works with over 350 businesses in over 35 countries. It is already working with Tourism companies such as TUI. It has cook stoves, wind power, forestry, geo thermal energy projects. <http://www.carbonneutral.com/>

Nexus-Carbon for Development is a cooperative of development organization acting for a better world, by identifying, educating, and enabling the poor to have a real and improved access to and control over energy and other natural resources and services, while ensuring that the natural resources are managed sustainably and responsibly.



<http://www.nexus-c4d.org/> (active in Indonesia, Lao, Vietnam, Cambodia)



CO2 solidaire is a Network of more than 100 companies joined by the common values held by GERES for almost 30 years: solidarity, integrity and ethics. This involvement with the populations most vulnerable to climate change reflects an awareness by your company of human development issues in countries of the South and of our historical responsibility for current and future climatic disturbances.

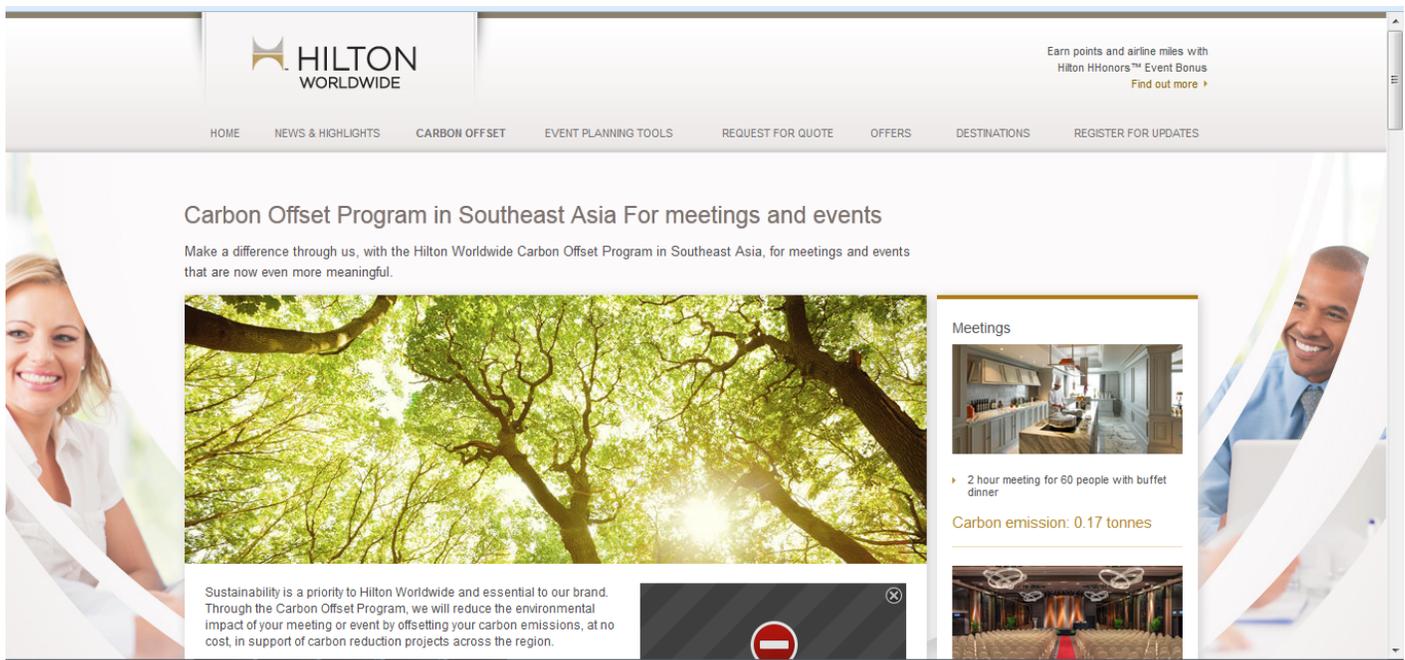
<http://www.co2solidaire.org/en/compensation/companies.html> (active in China, Cambodia and France)

### 7. Communication on Carbon Offsetting :

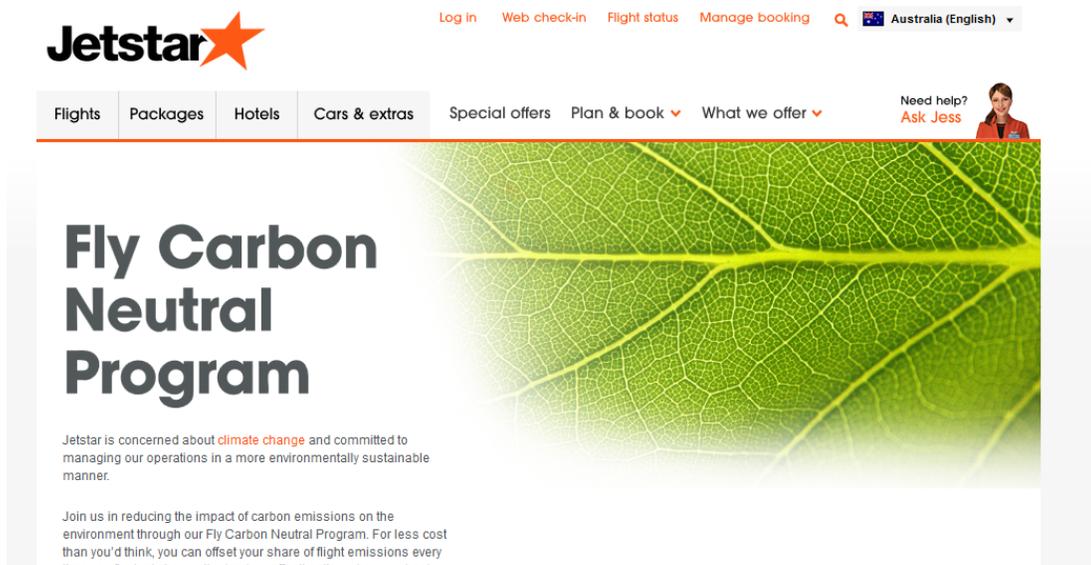
In order to fight against climate change and to act as a responsible company, Exo Travel can commit to compensate its own carbon emission generated by business travels (flight recording).

- A public communication can be done through the company website and promotional materials.
- A compensation scheme with our partner organization could be offered on a voluntary basis to our clients and travelers.
- A “Carbon offset” could be added on each quote, the price would depend on the depending on carbon emission of the travel (based on flight transportation).

### Examples :



Source : <http://www.hiltonmiceasia.com/cop.html>



Source : <http://www.jetstar.com/au/en/what-we-offer/carbon-offset>

Example of communication provided to travelers :



Source : Asia Backpacker