

Warwickshire's Voluntary Climate Change Adaptation Scheme with Practical Action

Linking climate change mitigation & adaptation with sustainable development

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Introduction

Emissions associated with economic growth and a high standard of living, are the most significant cause of climate change. Climate change is one of the biggest challenges facing society today. There is still time to avoid the worst impacts of climate change if we take strong action to reduce emissions now. Everyone needs to play their part, individuals, business and Local Government.

Once a consumer has taken steps both to avoid and to reduce emissions, they have two other options to help tackle global climate change:

They can offset their remaining unavoidable emissions, or a part of those emissions from home energy use, annual car mileage or a flight. Offsetting means investing in a project that leads to reduced or avoided emissions. Carbon offset schemes are not a cure for climate change but they can help raise awareness and reduce the impact of our actions.

Or

They can compensate for their remaining unavoidable emissions by supporting those less fortunate than themselves to adapt to climate change. Even if all developed countries were to stop emitting greenhouse gases tomorrow, a certain degree of human influenced climate change is now inevitable because of delays in the atmospheric system. The impacts of global climate change are already being felt by the most vulnerable countries, which are those already the poorest and least able to adapt to the changes.

Aim of this project

The aims of this project are to:

1. Develop a Warwickshire specific scheme to enable people to compensate for the impact of their personal carbon footprint by supporting Practical Action's climate change adaptation projects in Bangladesh and Nepal.
2. Raise awareness of the impact of climate change on developing countries.
4. Build up a growing community of carbon conscious people

Practical Action's climate change projects aim to give people in vulnerable communities different ways of coping with the climate extremes.



Warwickshire Climate Change Partnership

What is carbon offsetting?

All our actions such as lighting our homes, driving our cars and flying for business or pleasure consume energy and produce carbon emissions.

Mitigation offsetting is a way of compensating for the emissions produced with an equivalent carbon saving. This involves buying carbon reductions (carbon credits) generated by projects that have reduced carbon emissions. These projects often involve re-planting forestry, small-scale or large industrial renewable energy and energy efficiency technologies.

Consumers can offset emissions from a particular activity (e.g. a flight) or emissions over a period of time (e.g. an individual's annual car mileage) or emissions across their entire lifestyle or business (e.g. all of the gas and electricity consumed in their home/business premises from transport such as driving and flying).

What does the Partnership mean by 'Voluntary Adaptation Scheme'?

Adaptation funding is a way of compensating communities suffering from the impacts of climate change through supporting a climate change adaptation project.

Climate change threatens to derail efforts to reduce poverty in the developing world. Thus, in addition to wide scale, long term mitigation, immediate, small-scale, local adaptation projects against the inevitable impacts are urgently needed to help the world's vulnerable communities face and adapt to the threat of climate change.

Adaptation is defined by the IPCC as "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities" (IPCC 2001a: 365).

An adaptation scheme does not actually reduce the emissions contributing to climate change but helps those communities most at risk from the climate changes brought about by the consumption of fossil fuels in developed countries.

Developed countries need to engage urgently and effectively in mitigation through reducing emissions; in the least developed countries, the focus is on helping vulnerable communities to adapt. For rapidly growing developing countries, there is a need both for mitigation and adaptation.

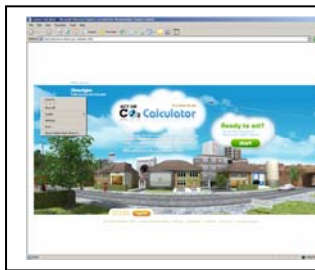
How do I donate to the 'Warwickshire Voluntary Adaptation Scheme'?

This involves three stages: 1. calculation of the amount of carbon produced and its equivalent value; 2. deciding what to invest in and 3. making a donation.

Step 1 Calculation

Calculate the amount of CO₂ emissions to be offset from the activity carried out. These calculations can be made using either the Government web site or one of the voluntary offset agencies:

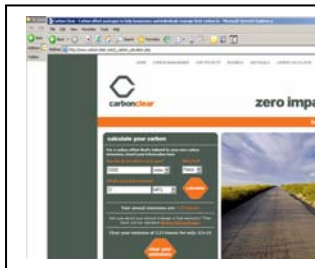
e.g.



Direct Gov

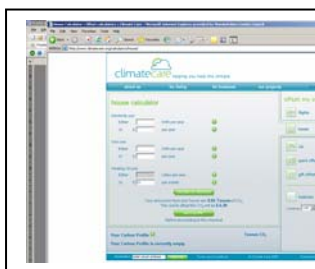
actonco2.direct.gov.uk/index.html

www.dft.gov.uk/ActOnCO2



Carbon Clear

www.carbon-clear.com/2_carbon_calculator.php



Climate Care

www.climatecare.org

Step 2 Investing in an adaptation project

The amount calculated can be invested in a climate change adaptation project.



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Practical Action Adaptation projects increase the resilience of vulnerable communities in less developed countries to cope with climate change.

More details can be obtained from the web site:

<http://www.practicalaction.org>

Examples

Activity	Creates tonnes of CO₂ emissions	Approximate Equivalent Value
4,000 miles driving in an average car	1.3	£10
3 short haul and 1 long haul flight	4	£30
Average UK home	5	£40
Climate neutral citizen UK	12	£90
Climate neutral wedding of 150 guests and a honeymoon flight for the happy couple	14.5	£110
£100 annual electricity bill	0.54	£4.03
£100 annual gas bill	0.83	£6.20
£10 per month heating oil	0.84	£6.28
Birmingham airport to Paris return flight for 1	0.13	£1.01
Birmingham airport to USA Los Angeles return flight for 1	2.47	£18.55
1 tonne CO ₂	1	£7.50

Where are the projects?

Carbon offset projects are generally delivered outside of the UK. Due to the fact that greenhouse gases have a long life-span and tend to mix evenly in the atmosphere it does not matter where gases are emitted in the world: the effect on climate change is the same and mitigation projects overseas tend to be cheaper.

Warwickshire's Voluntary Adaptation Scheme with Practical Action supports community based climate change adaptation projects in Bangladesh and Nepal.

What will Practical Action do with my money?

The 'Increasing the resilience of communities to cope with climate change' Project

This project is working with women and men from vulnerable communities in Bangladesh and Nepal to increase their ability to understand, cope with, and



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adapt to, increased climate variability and climate-related hazards. There are four main components to the work:

1. Strengthening the capacity of communities and their supporting institutions to prepare for and respond effectively to climate-related hazards.
2. Developing and promoting practical technologies to strengthen people's livelihoods and natural resource assets.
3. Enabling vulnerable communities to take part in decision-making processes on climate-related adaptation strategies.
4. Influencing policy at different levels, through sharing the learning from the project and demonstration of an effective approach to community-based adaptation.

Community-led solutions

The starting point for the project has been people's current livelihood strategies, and their local knowledge and observations of climate change and its impacts on agriculture and natural resources. Key to the project is a participatory approach to understanding the existing livelihood system and environmental assets available to the community.

Reducing the risk of disaster

When dealing with the uncertainties of climate change, reducing vulnerability to today's climate variability through disaster risk reduction is an excellent method of building adaptive capacity for the future. Communities can be empowered to help themselves through, for example:

- ❖ Trained volunteers to organise evacuation to places of safety during floods or landslides
- ❖ Ready prepared emergency food and fodder packs
- ❖ Emergency community shelters and grain stores
- ❖ Preparedness for climate-induced hazards reduces the likelihood of them resulting in disasters.

Diversifying livelihoods through new technologies

In each community, project activities have been based on the capabilities and priorities of the people. Some activities focus on protection against environmental degradation and lessen the likely impacts of extreme weather. Others activities are focused on increasing the resilience of people's agriculture-based livelihoods to climate variability.

Bangladesh

In central Bangladesh, the main threat is increased levels of flooding from monsoon-swollen rivers, extending the period when cropland is under water.

Project activities include:

- ❖ Construction of houses on raised plinths to reduce risk of flooding.
- ❖ Construction of floating vegetable gardens, to provide food during flood periods.
- ❖ Cages for fish culture, when river flows are too fast for safe fishing.

Nepal

In the Terai region of Nepal, flooding during monsoons threatens the riverine communities. Higher intensity of rainfall on steep slopes leads to increased risk of landslides and soil erosion.

Priorities from the community included:

- ❖ Gabion spurs along a tributary, to deflect flood flows away from bank side houses.
- ❖ Fruit and fodder tree planting to stabilise hillsides.
- ❖ Improved breeds of goat to raise incomes through higher productivity.

Project 1 - Resisting the flood waters in Bangladesh

Floating Vegetable Gardens



The creation of floating gardens would give people the opportunity to grow food while land is flooded, and not have it destroyed when the floods come.



Floating Garden (1 unit - Construction cost + Seeds+ Training) £6 (4-5 gardens are required for a family).

Goat Kid (1 unit: Cost + Training + Health Care). £20 (2 Kids are required for a family).



Ducks (8 ducks + initial food support) £ 15 for a Family.



Fish Cage (1 Cage: Construction cost+ Fish + Training) £ 15 (3-4 cages can help a family for nutrition and additional income).



Flood proof house (1 unit: Construction cost + Materials) £ 80.

Gaibandha Village Project, Bangladesh

Within this project Practical Action is working with communities who lose their homes, schools and livelihoods to rising river levels, helping them to raise land levels away from the river on which to build cluster villages. There are many elements to these projects including the following:

Tap stands, with extension pipes, to ensure villagers have a safe, clean source of water £25



Flood resistant housing £220

Schools, both for children and adult education £4,500

Bangladesh Summary	Cost
Floating Garden	£6
Ducks – 8 (enough for one family)	£15
Fish Cage	£15
Goat Kid	£20
Village tap stands	£25
4-5 Floating Gardens - enough for one family	£24 - £30
2 Goat Kids – enough for one family	£40
3-4 Fish Cages – enough for one family	£45 - £60
Flood proof house	£80
Flood resistant housing	£220
Schools for both children and adult education	£4,500

Project 2 – Coping with climate change in Nepal

People are vulnerable to flash floods and landslides during the monsoon season in the southern part of Nepal. These hazards will increase as climate changes. Their livelihoods can be made more resilient to local disasters through:



- The creation of vegetable gardens to provide an additional income.

Fast flowing hill streams are susceptible to flash flooding, which can wash away houses and the soil off the hills.

In the dry season the farmland needs irrigation, contour planting can reduce soil erosion, piped irrigation from local streams reduces loss from evaporation.



- Improved goat management gives higher productivity.

A tree nursery which generally produces plantable good seedlings in two years (about 35,000 seedlings) = £ 1800.00 (i.e. £ 900.00 per year).

cost	No of seedlings
£1	39
£5	194
£10	389
£15	583
£30	1,167
£40	1,556
£50	1,944
£90	3,500
£110	4,278

Training contour planting (Slopping Agriculture Land Technology) for 30 participants in the locality = £400.00.

cost	No of participants
£13	1.0
£26	2.0
£40	3.0
£53	4.0
£67	5.0

A simple flood proof footbridge (is different based on the locality) on average = £ 2,000.00.

Simple wooden/metallic culverts = £ 800 to £ 1500.00.



One simple gabion check dam or dyke (with 8 to 10 gabion boxes) = £ 350 to £ 500.



A goat kid = £17.00.

A set of primary equipments and medicines and lab kit for animal health care = £250.00 - £1000 (it is not for each family but to be managed by village animal health workers).

A simple drip irrigation system £ 25.00.

Sprinkler/drip irrigation system with a simple water reservoir (of 10 to 15 thousand litre capacity) and fulfils for 5 to 8 families = £ 800 to £1200.

Step 3 Donation to Practical Action

Where will the money go and how will it get there?

To ensure the money is ring-fenced for these projects, Practical Action have designed a donation form for either cheques or credit card payments, with a Freepost address to receive payments.

See back page.

Reporting

Every year in the Warwickshire Climate Change Partnership Annual Review, Practical Action will report on the level of donations received for Nepal and Bangladesh climate change adaptation projects through the 'Warwickshire Voluntary Adaptation Scheme'.

Further Information on Carbon Footprints

For FAQ's about working out your carbon footprint see the Government's web site: actonco2.direct.gov.uk or www.dft.gov.uk/ActOnCO2



