

SUSTAINABLE GLOBAL GARDENS [SGG] PROPOSALS FOR A ROTARY CLUB CARBON CAPTURE PROJECT

INTRODUCTION

SGG has recently completed a four-year tree programme, during which several hundred small-scale farming households have been engaged and an estimated two hundred thousand trees recorded. This action has been possible through a score of informal partnerships with Rotary clubs, either by provision of funding or by managing planting schemes within their local African communities.

The overall arrangements in this previous 2019-2022 'Tropical Tree-Planting and Conservation' project needed some adjustments as conditions, costs and needs change. This previous project focussed primarily on agroforestry planting on small-scale farms. SGG will continue to support agroforestry planting, but in the new 2023 onwards Tropical Tree-Planting and Conservation programme there will be much more emphasis on carbon capture.

The viewpoint of SGG is that the climate change crisis represents the biggest threat to humanity in the 21st century, so all rotarians need to make climate change mitigation a priority. This requires two simultaneous actions. One is to lower our personal carbon footprint as part of a global effort to reduce carbon emissions into the atmosphere, particularly for the future. There is a wealth of information on the ESRAG website [<http://www.esraggi.org>] about how individual rotarians can reduce their carbon footprint, although I should also say here that I disagree strongly with some comments concerning offsetting. The second aspect is to remove CO₂e which is already in the atmosphere, causing the climatic disasters we hear regularly in the news. The method which is readily available for this, widely encouraged by governments, but also within an individual's control is tree-planting.

CARBON CAPTURE IN PRACTICE

One of the weaknesses of planting trees for climate mitigation is that in temperate climates it can take 5-plus years for the tree to grow sufficiently to capture significant quantities of CO₂e. For this reason we are inviting only those farmers with large numbers of trees at least 3 years old to participate in this scheme. SGG also has adopted a simple measure whereby a farmer can assess whether a specific tree is acceptable for this carbon capture scheme. The farmer is asked to put his hands around the tree trunk at shoulder height so that the two thumbs are touching. If at the same time the farmer's fingers are not able to touch each other, the tree has sufficient girth to be suitable for carbon capture. This simple method will enable a farmer within a few hours to decide how large a stock of mature trees there are in the household farm.

Internet research suggests that a typical 5-year old tree in USA will 'harvest' or capture about 20kgs of CO₂e pa. That means 50 such trees will capture 1 tn/pa of CO₂e. We are confident that in the humid tropics where SGG is active a cluster of 50 trees which have passed the above simple criteria will capture much more than 1 tn/pa of CO₂e. However, we have accepted a wide margin of error in order to benefit from quick and simple action which can be readily undertaken by those with limited formal education. As every IPCC report shows urgency of action is far more important than precision of technique when addressing the threats of climate change. *[those who query the need for urgent action should browse unep.org/resources/reports/climate-change-2023-synthesis-report and watch the accompanying video.]*

There is some discussion on the ESRAG website concerning the real cost of offsetting CO₂e emissions by tree-planting. It has been pointed out there that on the European commercial markets the cost of certified carbon offsetting has been in the region of £75-£80/tn. On the US markets this figure is much lower. SGG takes the view that £75/tn is excessive, and caused by high planting and labour costs in Europe combined with verification being done by specialist commercial firms. SGG already has field experience of being able to plant 10 seedlings in East Africa for the same price as a single whip sapling in the UK. Furthermore, confirmation of the presence of suitable trees is done by simple tree counts undertaken on a voluntary, no-cost basis by SGG. We have good reason to believe that we can implement carbon capture of 1 tn of CO₂e for the cost of £10. **This means that SGG, who have access to hundreds of small-scale farmers wishing to participate in this carbon capture, is offering this climate mitigation service to both rotarians and the general public at a cost of £10 for each ton of CO₂e to be offset.**



Here are two examples of the trees SGG wishes to use for carbon capture. Usually the trees to be used are mixed with others not yet sufficiently large at present. The above left is a photo of Carole [in blue] standing at the base of one of the trees selected. This tree is already 7-8 years old, and the farmer has a stock of 50 similar trees. The above right photo shows part of the forest surrounding Zomba Forest Lodge. Many of the trees here are too thin for this SGG scheme, but ZFL Manager Petal is standing next to a suitable tree and we counted more than 100 such trees is just a small part of the forest.

PROPOSAL

Some carbon capture has already been agreed in SGG's previous tree project, but this was very much at a pilot stage. Since January 2023 SGG has been looking to establish a much greater client base for carbon capture by tree-planting and forest restoration in Africa. This involves the following actions:

- the farmer, community group or institution grows and cares for at least 50 trees of their own choice. The species grown is the choice of the planters, although SGG is discouraging certain species [e.g. eucalyptus, some fruits]. These trees need to be at least 3 years old and a certain given size before they can be part of this project;
- in Europe where carbon emissions are much higher than in Africa, clients should first calculate their 'carbon footprint'. You need to do this on a regular basis, so that you know whether you are moving towards 'net zero' -something governments have pledged to reach sometime in the next 2-3 decades. There are several formulae and websites available which will enable you to do so, but I

suggest that members of a Rotary club all adopt the same formula. It is usually easier to do this on a household basis: it is more important to have a simple answer **now** so that **you can take action now**, rather than getting bogged down in complex calculations. A typical per capita carbon footprint would be between 8 and 10 tns of CO₂e/pa;

- when your carbon footprint is known, you need to take action to reduce that figure to net zero in the next two decades. That is likely to require a 5% reduction in emissions every year. The ESRAG website and many others offer plenty of practical advice about how to do this, but there is general agreement that this requires a change of lifestyle. If you wish to continue with ‘business as usual’ you are almost certain to fail. Be courageous: net zero can be achieved! What SGG has found when discussing these issues is that many rotarians are already well along this path towards net zero by better domestic heat conservation, reduced car travel by working from home/car-sharing, changing eating habits, reduced air travel, increased use of renewable energy sources etc, etc – so continue on your way to net zero!
- the last two bullet points are not directly about trees, but SGG considers them vital. There is general agreement that tree-planting will make little difference to climate unless people combine tree projects with a reduction in carbon emissions;
- changing our lifestyle, the habits of a lifetime is liable to take some significant time. In the meantime, you can offset some of your carbon footprint [or even all if you wish] by paying African tree growers to capture carbon on your behalf. Thus, decide how many tons of carbon you wish to offset and inform SGG. I suggest the simplest way to do this is as a club with a single donation [to cover Club activities], but including individual members who wish to offset part of their own carbon footprint. Remember the cost is £10 per tn/pa for SGG’s carbon capture;
- when SGG receives requests for carbon capture, we select a farmer or institution who has the required stock of trees. An MOU will be made with the grower receiving £1 per tree over a 5 year period. One problem with similar schemes is that a grower might receive funding for carbon capture, and then soon after fell the tree for timber sales. To avoid this problem SGG will pay the grower 20p when the MOU is agreed, but not pay the other 80p until a 5 year period has passed, when the tree will be at least 8 years old. At that point the grower will be offered another £1 to keep the tree for another 5 years. After that it is quite likely that the grower will cut, but SGG is not so concerned about that because it is in the next decade that trees need to be planted in large numbers. Our policy is also ‘if you cut a tree, plant at least two as replacements’;
- if a Rotary Club, institution or individual wishes to move towards net-zero and offset some of their carbon footprint by engaging an African farmer to care for mature trees, I suggest you contact SGG through sgginfo16@gmail.com to discuss a suitable location for such carbon capture.;
- in summary ask members to calculate their household carbon footprint, then encourage them to lower that figure by 5% pa, and thirdly ask them if they wish to offset some of footprint by offsetting through SGG’s new Tropical Tree-Planting and Conservation Project;
- a final point to remember is that this new SGG project will continue to invest in agroforestry and forest restoration as before, but here there is a little more encouragement for our African partners to keep their trees for a longer period as well as the climate mitigation benefits for us all.

I hope this helps. Our best wishes to all those who are trying to lower their carbon footprint.

Paul