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THE ENVIRONMENT AUDIT COMMITTEE

Inquiry into the Voluntary Carbon Market

Memorandum by FERN [1]

1. FERN is a European non-governmental organization focused on forests and climate change. We work to achieve greater environmental and social justice in the policies and practises of the European Union, with a focus of FERN's work on forests and forest peoples' rights. FERN's SinksWatch initiative (www.sinkswatch.org) has been created in 2001 with the aim of tracking and scrutinizing carbon 'offset' projects. Initially, SinksWatch's main focus was on 'offset' projects using tree planting, particularly in areas where land tenure and land use rights are in dispute. Our area of work however has broadened since, in recognition that achieving the goals of the initiative required a wider critique and monitoring of carbon 'offset' schemes. In this context, FERN has pursued research into climate policies and carbon trading. Our research has been carried out in close collaboration with advocacy organisations in the Global South. FERN has also provided submissions and discussion papers on the Kyoto-related carbon 'offset' market and specific carbon 'offset' projects. In relation to forests and climate change, FERN advocates addressing the links between forests and climate change in a way that honours forests as a safeguard against the impacts of extreme weather events without justifying the continued, additional and permanent release of carbon from fossil fuel burning.

In October 2004, FERN was among the principal organizers of a major international conference on "Carbon Trading: Consequences and Strategies" held in Durban, South Africa which led to the formation of the Durban Group for Climate Justice. The Memorandum submitted here draws on the analysis developed jointly with researchers and activists associated with the Durban Group for Climate Justice, academia and NGO networks.

[1] This document constitutes a memorandum submitted to the UK Parliament's Environmental Audit Committee and will be made available only with its permission. The information presented in the memorandum cannot be taken to represent the views of the Committee or in any way indicate the conclusions and recommendations which the Committee may come to in the course of its inquiry.

2. FERN welcomes the Environmental Audit Committee's present inquiry[1] into the voluntary carbon 'offset' market. We are grateful for the opportunity to comment on the following issues in the Committee's remit:

- Many offset projects involve afforestation or reforestation. Is the science sufficiently coherent in this area accurately to assess overall long-term carbon (or other GHG) gains and losses from such projects;
- To what extent are the schemes and projects funded by offset companies more broadly sustainable, in an environmental, social or economic sense;
- Is there enough clarity within the offset market to allow customers to make informed choices based upon robust information about different schemes at different prices; and
- Is there sufficient data available to guarantee accurate amounts of carbon or other GHG mitigation in the sorts of schemes which offset projects finance?

Executive Summary

The principal conclusions of this Memorandum are as follows:

- Carbon 'offset' schemes are a dangerous distraction from generating public support for policies that will help avoid climate crisis and lead the way into a swift and just switch to low-carbon economies;
- Carbon 'offsets' are undermining efforts to educate the public about climate change;
- Carbon 'offset' schemes are unable to verify their claimed contribution to slowing climate change;
- The problems with carbon 'offset' schemes go beyond 'design flaws', 'teething problems of an emerging trading instrument' or fraudulence in individual projects. 'Offset' trading is based on conceptual incoherence, is characterized by measurement and accounting problems that are unsolvable and is giving rise to significant property rights conflicts;
- Tree planting 'offset' projects are faced with an additional set of measurement and accounting issues and carry a particular risk of exacerbating local land use conflicts. Accounting and measurement issues have been discussed in many published, scientifically robust studies showing that our current scientific understanding of the carbon cycle and its impact on climate change *does not* permit an accurate assessment of the overall long-term carbon gains and losses form tree planting or forest conservation 'offset' projects;
- Research into 'offset' tree planting projects by FERN and partner organisations has revealed significant shortcomings of the projects' wider sustainability and cases of serious human rights abuses by actors involved in carbon 'offset' tree planting projects;
- In FERN's view, the relative paucity of documented cases of fraudulent claims and conflicts over individual projects is not indication of critics of 'offset' schemes overrating the problem but rather a result of near total lack of project scrutiny on the ground combined with a situation in which for the time being, both sellers and buyers / brokers of 'offset' credits benefit from the limited scrutiny of projects and credit volume claims;
- Customers are being led to believe that offset activities they pay for 'neutralise' their emissions in close proximity to the time of their 'offset' payment. Though the intransparent nature of the voluntary 'offset' market makes it difficult to assertain this indication, close proximity of 'offset' activity to the emission people pay to have 'offset' appears to be the exception rather than the rule;

- In this circumstance, the 'offset' market is based on 'future value accounting' whereby carbon 'offsets' that are expected to be made in the future are presented to customers as having been offset in the present or immediate future;
- Customers are not being presented with accurate information as to the effectiveness or the efficiency of the offset projects;
- Government commitments to address climate change must refrain from using carbon 'offsets' and 'offset' claims in the voluntary carbon market must, as a minimum, be regulated and carefully scrutinized.

Knowledge gaps in terrestrial carbon cycling make measuring and monitoring of carbon fluxes relevant for tree planting 'offset' credits impossible

3. Currently, fossil fuel equivalent to 400 years' worth of accumulated, compressed biological matter are burned every year. This is roughly three to four times more than in 1950. This carbon will not be able to lock itself safely up underground again as coal, oil or gas for millennia and a large part of this fossil carbon is accumulating in the atmosphere. As a consequence, carbon dioxide concentrations in the atmosphere have been rising from approximately 580 billion tonnes pre-industrial revolution to roughly 750 billion tonnes today– the highest in hundreds of thousands of years.
4. The build-up of carbon dioxide in the atmosphere has been exacerbated by the release of carbon from land use changes, and in particular deforestation and destructive forest management practises.
5. The climate impact of biological carbon released through deforestation and other land use changes differs significantly from fossil carbon however. Biological carbon is part of an active carbon pool in which carbon circulates between vegetation, atmosphere and oceans. Whilst deforestation and land use changes have upset the balance within the active carbon pool, the overall amount of carbon circulating between the three pools has remained largely constant over very long periods of time. Burning fossil carbon, on the other hand, increases this overall pool of active carbon. Due to this difference in their climate impact and the different nature of interaction with the atmosphere, claims of compensating the climate impact from release of fossil carbon with increased storage of biological carbon are unsubstantiated. On this basis alone, tree planting 'offset' claims are misleading and it should be unacceptable to treat credits from tree planting 'offset' projects as equivalent to fossil carbon releases. Annex 1 illustrates this difference.
6. In addition to this basic flaw of tree planting 'offset' claims, this particular 'offset' project category is faced with significant measurement and accounting issues. These arise from the fact that current knowledge about terrestrial carbon cycling is far from complete. As a result mathematical formulae used to calculate carbon values in tree planting 'offset' projects make widespread use of default values which may or may not reflect the true nature and volume of carbon interactions triggered by a tree planting 'offset' project. In fact, the gaps are so significant that accounting for the true fluxes of carbon in complex ecosystems like forests and over long periods of time is not possible today. A steady stream of new research and publications in scientific journals re-iterates this:
7. In January 2006, research published in Nature magazine revealed that the planet's plant-life was responsible for far greater methane emissions than had previously been anticipated. Methane, as one of the most potent greenhouse gases, is a serious contributor to climate change. This finding upset a lot of the assumptions that had been made about climate models and undermined the calculations that were being made by offset companies about the net climate benefit of trees.[2]
8. In December 2006, a study was published by Ken Caldeira of the global ecology department at the

Carnegie Institution of Washington in Stanford and Govindasamy Bala, of the Lawrence Livermore National Laboratory, California, which documented that planting trees in northern latitudes reduces the reflection of heat from light surfaces, the so-called albedo effect. The report showed that outside a thin band around the equator, tree planting results in more heat being trapped than would have had the surface remained in its natural tree-less state. The co-author Ken Caldeira commented that, "[t]o plant forests to mitigate climate change outside of the tropics is a waste of time."[3]

9. Table 3 of FERN's joint submission to the EAC enquiry into the international challenge of climate change (October 2004) provides reference to scientific publications between 1998 and 2003 showing that including emissions and gains from tree planting and forests in the Kyoto Protocol would render the accounting unverifiable. The same applies for the use of tree planting in 'offset' projects: the credit claims are unverifiable because of the significant gaps in human understanding of terrestrial carbon fluxes. Table 3 is included for ease of reference an Annex 2 to this submission.

10. In fact, scientists cannot even know in advance all the factors related to biotic carbon that will affect climate, and all the nonlinear or non-continuous ways in which they may interact, making the problem even worse than mere uncertainty (Annex 3). The biological carbon fluxes are not only much less stable but also, more importantly, much less predictable, than the paths taken by fossil carbon left under the ground.

11. No matter how much additional biological carbon could be cultivated, moreover, it could never be of an order of magnitude remotely comparable to what would be required to "soak up" the emissions from releasing into the atmosphere the remaining unmined fossil fuels. As Cambridge University forest historian Oliver Rackham stated in this context, to tell people to plant trees to help the climate is "like telling them to drink more water to keep down rising sea-levels."

Examples of environmentally and socially detrimental 'offset' projects abound

12. It does not come as a surprise that carbon 'offset' projects carry a high risk of causing or exacerbating existing local conflicts and are in many cases environmentally and/or socially detrimental. In order to generate carbon credits from trees or energy crops, plantation companies have to maintain and expand their hold on land that ordinary people may need for other purposes. In order to generate carbon credits from burning the methane released from of landfill sites, authorities have an incentive to keep them open. In order to keep track of the carbon their agroforestry schemes generate, rural development organisations have to divert resources from their traditional work. In order to get carbon credits for halting flaring, oil companies have to go on drilling and polluting.

13. The Durban Group for Climate Justice, the World Rainforest Movement and several others have provided a significant number of case studies documenting the detrimental environmental and social impact of 'offset' projects. The conflicts generated or exacerbated by tree planting 'offset' projects are particularly worrying. Extensive documentation of and reference to these cases is provided in Chapter 4 of the recently published book 'Carbon Trading. Critical Conversations on Climate Change, Privatisation and Power'[4] as well as in the October 2006 publication 'Trouble in the Air'[5].

14. The World Rainforest Movement and FERN have further documented serious human rights abuses, land use conflicts and poor working conditions in several carbon 'offset' projects. At least one of these, the Kibale project in Uganda, sells carbon credits to UK based consultancies and their clients. The question of due diligence assessments of these carbon 'offset' outfits arises mot acutely in such cases where projects directly or indirectly pose a threat to the well-being of communities affected by the project. The Uganda example also featured in the BBC Inside Out London area

programme on 12 January 2007. The author of this submission visited the communities affected by the said project in summer 2006. A copy of the programme is available on request.

Lack of transparency in the voluntary offset market leaves door wide open for fraudulent accounting practises and unsubstantiated claims

15. When the rock-band Coldplay promoted their successful album, "A Rush of Blood to the Head" in 2002, they bought the services of the Carbon Neutral Company (CNC) to fund the planting of 10,000 mango trees by villagers in Karnataka to offset the emissions brought about in the recording of the album. Fans of the band were also encouraged to 'dedicate' a tree in the plantation. For £17.50, fans could acquire the carbon absorbing rights to a specially dedicated sapling in the forest.

16. In April 2006, the *Sunday Telegraph* exposed that many aspects of the project had been disastrous and that the emission reductions sold to Cold Play had not materialized. Anandi Sharan Miele, head of the NGO Women for Sustainable Development (WSD), CNC's project partner in Karnataka, admitted that of the 8,000 saplings she had distributed, 40 per cent had died. In the village of Lakshmisagara, only one person out of a village of 130 families received saplings, as the rest did not have the water resources to support them. This person was able to sustain 50 saplings out of the 150 she received due to a well she had on the land, but complained that "I was promised 2,000 rupees (£26) every year to take care of the plants and a bag of fertiliser. But I got only the saplings". A number of other people from other villagers told similarly disgruntled stories; "We were promised money for maintenance every year but got nothing," and "[Ms. Mieli] promised us that she'd arrange the water," but the water tanker visited only twice.[6]

17. The case highlights one of the most pervasive problems in the voluntary 'offset' market: While carbon consultancies are keen to claim the credit for a success story, their willingness to take responsibility for failure pales in comparison. Most offset companies issue legal disclaimers absolving them legally from responsibility for their project partner's inability to implement projects in such a way that the carbon savings / extra carbon storage is ensured. In the Cold Play case, while Ms. Miele claims that CNC has a "condescending" attitude and that "they do it for their interests, not really for reducing emissions. They do it because it's good money," CNC claims that it funded only part of the programme and that WSD were contractually obliged to provide water and ongoing support for the plantations. By June2006, two months after the report in the *Sunday Telegraph*, the CNC was still offering on its website dedicated mango trees at this location to Coldplay fans and the project continues to be presented as another of the company's success stories. There has been no transparency or accountability to the people who have paid to see this project realised that things might not have been going according to plan.

18. A BBC Radio Five Live programme 'Trading Trees' in November 2006 exposed how tree planting 'offset' projects in Britain were claiming carbon credits for the planting of trees that would have been planted anyhow. A copy of the programme is available on request.

19. In its 2005 Annual Report, carbon consultancy Climate Care state that they sold

20. Kollmuss et all document in their December 2006 report 'Voluntary Offsets For Air-Travel Carbon Emissions' that for-profit 'offset' companies invest only a mean of 43.4% of the income from 'offset' sales into projects[7]. The actual figures may well be even lower as calculations were based on aggregate figures provided by the 'offset' companies.

21. The following *aid memoir* from a conversation by the author with a carbon market analyst highlights the risk of projects in the voluntary 'offset' market selling credits more than once. The

conversation had focused on the risk of a client being sold a credit that a project developer has already sold to someone else (see also comment by carbon 'offset' project developer SouthSouthNorth in 'Low Hanging Fruit', ref.5): "Recycling of voluntary offset credits: According to [source] there are several examples of projects that have been around on carbon retailers' websites for years, and should therefore likely have sold their credits long ago. One example is the Desi Power biomass project in India. It has been promoted on [carbon consultancy name] website but also in relation with several events. There is no established standard for voluntary 'offset' projects, and no registry, therefore there is no transparency and no way to see whether credits from the same project are sold more than once. Since there are too many retailers in the market and too strong competition it has not been possible to agree on one standard or registry. [name of consultancy] is among the most serious players. Nevertheless, projects appear and disappear from their website and there is no clear trace of what happened to them. Also, the same consultancy sold what it claimed to be Gold Standard credits from a Brazilian project to [UK charity], although [source] had never heard about the project. Brazilian NGOs protested fiercely against the project. [source] agreed with my claim that although retail carbon sellers have an incentive to maintain credibility, they might not have that much money and the incentive to recycle credits is clearly there. There are also examples of projects financed by government funds that have subsequently sold 'offset' credits. Then they are not really additional."

22. The absence of a database or any other form of requirement to report that would allow the public to trace which project is used to cover which 'offset' sales provides a breeding ground for fraudulent accounting and overselling.

Bad apples or underlying system failure?

23. To sell carbon credits, every 'offset' project has to make the case that if the 'offset' project did not exist, more carbon dioxide would end up in the atmosphere. In other words, every 'offset' project calculates the volume of credits it can sell as the difference between the emissions that 'would have happened if the 'offset' project had not taken place' and the emissions in the presence of the 'offset' project. In order to determine the volume of credits that can be sold, each carbon 'offset' project thus has to answer the question of 'what would have happened without my 'offset' project. As Chris Lang, author of the World Rainforest Movement report on the Mount Elgon 'offset project in Uganda explains: "Anyone who has ever watched a game of football knows that this question is impossible to answer. What would have happened if Zinedine Zidane hadn't headbutted Italy's Marco Materazzi in the chest and been sent off in the 100th minute of the 2006 World Cup final? Would France have won?" Fascinating question for any football fan to discuss and speculate about the many ifs and buts - impossible however to know the answer to the question 'what would have happened if..' Every carbon 'offset' project does not only pretend to know the answer to this unanswerable question – they pretend to be able to give an exact figure. This figure will determine how many carbon credits the project can sell as saving over 'what would have happened otherwise' and evidence is plentiful of projects inflating this baseline figure in order to maximise the volume of credits the project will be entitled to sell. Mathematical formulae that have been developed to determine this number may reduce the range of possible answers and reduce the range within which a guess must be made - but an unverifiable guess it will always remain. Consequently no carbon 'offset' project can verify the claimed reductions.

24. This 'additionality' conundrum has been recognised by many architects of the carbon market

but the impossibility to verify the claimed credit volumes was reduced to 'difficulties', 'problems' and 'risks' and a series of 'additionality tools' were developed. None of these 'tools' and mathematical formulae however addresses the core of the issue: Carbon 'offset' projects rely on reducing a multitude of possible scenarios of 'what would have happened without the 'offset' project' to one single number. There however is no magical formula which could be employed to verify whether the assumption made is correct because the answer to the 'additionality' question is one of political decision, not mathematical deduction.

25. This conceptual flaw of carbon 'offsets' cannot be remedied by increasing project scrutiny or by addressing what is other described as 'offset market design' shortcomings. There is no remedy to this underlying flaw and emission reduction claims made by 'offset' projects will always remain unverifiable.

26. Additional questions about the climate benefit of 'offset' projects arise from the often significant time lag between the occurrence of an emission and the subsequent purchase of an 'offset' credit and the implementation of the project activity that will deliver the emission reduction. Searching through the websites of different 'offset' companies, it is virtually impossible to get a clear understanding of how the issue of time lag between emission and emission reducing activity is addressed.

27. Employing a carbon calculation method best referred to as 'future value accounting' allows 'offset' companies to nonetheless argue that they provide carbon 'neutrality': Carbon savings expected to be made in the future are counted as savings made in the present. This is the same method used by Enron to inflate its profits.

28. In closing we would like to draw your attention to the often-heard assertion that carbon 'offset' schemes help raise awareness about climate change. One crucial question to ask in this regard is that of the message of 'offset' schemes. What are these schemes teaching the public?

29. It is our experience that carbon 'offsetting' teaches both that the climate problem is due to individuals and that it can be solved by individual consumer action. Reinforcing the belief that collective action is difficult and that climate action is highly technical, it transforms a political problem into a drama of individual redemption. The technicalities and jargon of carbon 'offsetting' also present an obstacle to public debate.

Recommendations for Action

30. The secretariat of the All-Parliamentary Committee on Climate Change should be immediately removed from the Carbon Neutral Company.

31. Ministers should be very strongly discouraged from proposing that civil servants offset their airline flights' emissions.

32. The UK government should avoid using carbon ‚offsets' to meet its Kyoto Protocol commitments, in the EU Emissions Trading Scheme, and in other government or government-supported climate programmes. Instead, emphasis should fall on measures effective in fostering a just transition away from dependence on fossil fuels, including large-scale public works, subsidy-shifting, conventional regulation, taxation and other non-trading market mechanisms, and support for movements in the UK and abroad which are already helping to slow the movement of fossil carbon out of the ground (see *Carbon Trading*, cited above).

33. The UK should use its position in the World Bank, the Asian, African, and Inter-American Development Banks and the G8 to prevent those institutions' promotion of, and subsidisation of, ‚offset' programmes.

34. In the absence of an impartial scientific review of the false assertion that ‚offsets' represent „emissions reductions", the claims made for ‚offsets' by actors in the voluntary market should be, at a minimum, carefully monitored and regulated. The standard proposed by the UK government on 18 January 2007 would appear a step into the right direction in this regard.

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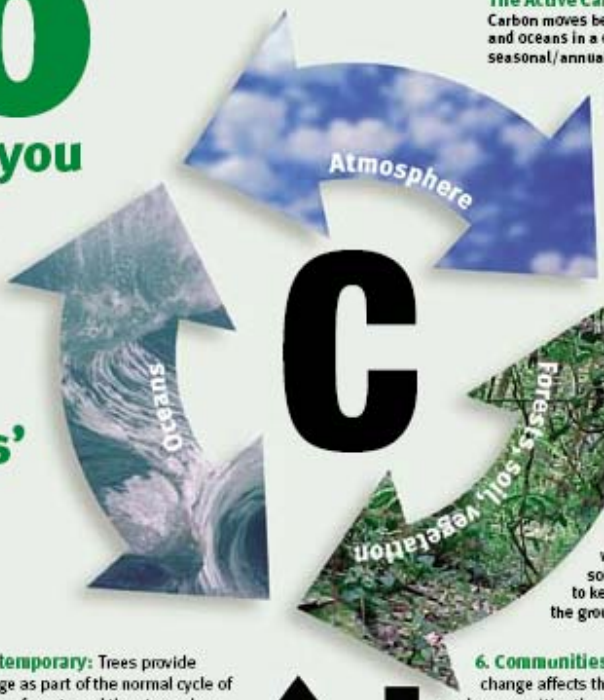
Appendix 1

CO₂NNED THE CARBON CYCLE

10 things you should know about tree 'offsets'



The Active Carbon Pool: Carbon moves between the forests, atmosphere and oceans in a complex natural rhythm of daily / seasonal/annual and multi-annual cycles. The overall amount in all three carbon stores together rarely increases in nature. This is 'active' carbon.

Fossil Carbon Pool: Some carbon is locked away and rarely comes naturally into contact with the atmosphere. This 'fossil carbon' is stored permanently in coal, oil and gas deposits and therefore is not part of the active carbon pool. When humans mine and extract these reserves this inactive fossil carbon does not go back in the ground, but is added into the active carbon pool, disrupting a delicate balance. This is one of the reasons that the concept of 'offsets' is flawed. Offsets allow extraction of oil, coal and gas to continue, which in turn increases the amount of fossil carbon that is released into the active carbon pool disrupting the cycle. That is why campaigners argue that genuine solutions to climate change require us to keep fossil carbon (oil, coal and gas) in the ground.

1. Carbon in trees is temporary: Trees provide *temporary* carbon storage as part of the normal cycle of carbon exchange between forests and the atmosphere. Trees can easily release carbon into the atmosphere through fire, disease, climatic changes, natural decay and timber harvesting.

2. One-way road: The release of fossil carbon in contrast is *permanent* and, over relevant time scales, will accelerate climate change by increasing the overall amount of carbon in the atmosphere – the very cause of today's climate change. Fossil fuels such as coal, oil and gas are locked away and their carbon is only released when humans dig up and burn them for energy. Once released, they become part of the active carbon pool, disrupting the natural cycle.

3. Fake credit: Carbon credits from tree planting claim that carbon stored *temporarily* in tree plantations can justify *permanent* releases of fossil carbon into the atmosphere without any harm to the climate.

4. Big foot: Carbon credits from tree planting increase the ecological debt of the global North. The more fossil fuels a Northern country consumes, the more land it is entitled to use to 'offset' its emissions. This is unfair and increases the already high ecological footprint of the North.

5. Subsidies for mega-plantations: Carbon credits from tree planting stand to provide a new subsidy for the plantations industry. Large-scale plantations have a long list of negative impacts on forests and forest peoples and often exacerbate local land disputes and violence.

Fossil Fuels: Oil • Coal • Gas

6. Communities suffer twice: First, climate change affects the livelihoods of forest peoples and rural communities through increased droughts, floods, forest fires and deforestation. Second, carbon credits from tree planting promote the expansion of large-scale tree plantations, which indigenous peoples and forest-dependent communities oppose in many parts of the world.

7. Ticking time bomb: Avoiding climate change requires drastic reductions of greenhouse gas emissions from fossil fuels. Offsets, however, allow emissions to continue under the false premise that they've been 'neutralized'. This just masks the real crisis and sentences future generations to live with fewer choices and worse conditions.

8. Forest fraud: Forests play a vital role in storing carbon and buffering extreme weather events. But linking forest restoration with carbon credits is a dead-end for forest peoples as well as for the climate. Halting the forest crisis requires action against the underlying causes of deforestation, *not more fossil carbon in the atmosphere* and more monoculture tree plantations occupying land needed by local communities.

9. Blind guess: Measuring carbon in forests is fraught with uncertainties. Scientists have found that estimates of the carbon balance in Canadian forests could vary by 1,000 per cent if seemingly small factors, such as increased levels of atmospheric CO_2, are taken into account.

10. *Carbon credits from tree planting are a phony climate fix!*

Prepared by forest campaigner Jutta Kill of European environmental group FERN. For more info, visit: www.sinkswatch.org and www.fern.org

Appendix 2

Uncertainty Revealed Year by Year

- **1998**: German ACGC cautions against counting growth of forests as "emissions reductions".
- **1998** -: Technocrats and NGOs propose "discounting" or "insuring" carbon credits derived from biospheric dumps.
- **1999-2002**: IIASA says Kyoto Protocol "completely unverifiable" due to accounting uncertainties. Proposes quantification and pricing of uncertainties.
- **2000**: VERTIC says forestry and land use "must not be used to meet emissions reductions commitments" since changes to carbon stocks will "rarely be verifiable".
- **2000**: IPCC land use panel assumes without evidence that emissions and "removals by sinks" can be aggregated quantitatively.
- **2001**: R. A. Houghton suggests carbon errors "as large as 500 per cent in the forest inventories of northern mid-latitudes".
- **2001**: Royal Society cites "urgent need" to reduce uncertainties *before* land carbon sinks are used.
- **2001**: World methane sources found to be uncertain by "20 to 150 per cent".
- **2003**: UN, consultancy and NGO discounting and insuring proposals continue to leave uncertainty unquantified or to ignore it.

Appendix 3

Ignorance Revealed Year by Year

- **1990s-2003**: "Missing terrestrial sink" of 110 ± 80GtC, or >3GtC/yr (= half of annual fossil fuel emissions), remains unfound.
- **1990s**: Scientists warn that ocean warming could result in sudden catastrophic releases of methane from methane hydrates on sea floor
- **1998**: German ACGC warns that "complex nonlinear dynamics" of terrestrial ecosystems sets them apart from "energy-related processes".
- **2000**: Review article in *Science* warns that unanticipated "feedback effects between carbon and other biogeochemical and climatological processes will lead to weakened sink strength in the foreseeable future".
- **2001**: UK Met Office calculates tree-planting in boreal regions would heat planet rather than cool it due to albedo effects.
- **2001**: Met Office reveals lengthening of dry seasons could abruptly result in catastrophic releases of carbon through fires in Amazon, pushing temperatures up 6-8 ° C. in 100 years.
- **2003**: UN, consultancies and NGOs continue to speak as if "discounting" and "insurance" can cover the possibility of unanticipated findings.
- **2003**: CDM Methodological Panel rejects methodology for Plantar project which was based on assumption of stable exchange rates between US$ and Brazilian Real.

[1] FERN has previously made submissions to the Environment Audit Committee's inquiry into the International Challenge of Climate Change: UK Leadership in the G8 and EU in October 2004 and the inquiry on sustainable timber in September 2005.
[2] Quirin Schiermeier, "Methane finding baffles scientists," Nature 439, 128 - 128 (12 Jan 2006)
[3] A Jha, "Planting trees to save the planet is pointless," The Guardian (15 Dec 2006)
[4] Available at www.dhf.uu.se; hard copies are available on request from FERN.
[5] Available at www.carbontradewatch.org. Of particular relevance is the chapter 'Low-hanging fruit rots first' by Graham Erion.
[6] A Dhillon and T Harnden, "How Coldplay's green hopes died in the arid soil of India," 30 April 2006, Sunday Telegraph
[7] Kollmuss et al. (December 2006): 'Voluntary Offsets For Air-Travel Carbon Emissions'. Tufts Climate Initiative. Page 19.