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4<sup>th</sup> February 2008

Dear Sir/Madam

**Comments from GM Freeze on the Strategy Unit discussion paper *Food; an analysis of the issues*.**

Our comments fall into two categories: general comments on the all the issues covered; and specific comments related to the use of GM technology and other technological innovations that impinge on food supply and agriculture.

**GM Freeze**

GM Freeze is an alliance of 55 organisations calling for a moratorium on GM foods, the growing of GM crops for any purpose and on patents on genetic resources in agriculture, food production and forestry until the need for and safety of GM technology has been established and alternative approaches have been fully evaluated.

Our members include consumer groups, farming organisations, environmental groups, development agencies, religious groups, animal welfare groups and food companies.

**General Comments**

GM Freeze welcomes the Prime Minister's interest in food and food production. The failure of the UK to develop a coherent food and farming strategy which links together all parts of the food supply web has cost the UK dearly over the last 50 years. The linkages between farming, food quality, public and environment health and economic viability are very clear. A farmer who is being squeezed on farm gate price by companies further up the food chain will be less able and far less likely to be investing in food safety, pollution prevention, habitat creation or management, worker safety and education and in developing their business to make it more viable and/or to improve the quality of their products.

GM Freeze held a series of small workshops in 2006 in England, Wales and Scotland which involved a professionally facilitated discussion about the Future of Farm and Farming with groups of people from different points in the food supply web. The conclusions from each sessions were remarkably similar. One point, in particular, stood out - that the sustainable management of the countryside in the UK was very dependent of farmers receiving a fair price for their products. A summary of the workshop outcomes can be accessed at

[http://www.gmfreeze.org/uploads/Future\\_of\\_Food\\_and\\_Farming.pdf](http://www.gmfreeze.org/uploads/Future_of_Food_and_Farming.pdf)

One of the greatest difficulties in planning a sustainable food web that works from a health, environment, social, economic and ethical perspective is ensuring that policies in one area support objectives in another.

An example of the difficulties in achieving this comes from the Food Standard's Agency's recommendation for the consumption of oily fish. How does this policy relate to that of sustainable management global fish stocks or the use of fish farming practices which do leave a permanent footprint on the planet from habitat loss and pollution?

As the Strategy Unit Report points out, the history of the food chain and research and development over the last half century has driven the real price of food down. However as the report acknowledges, even this has not lead to everyone in the UK getting access to a healthy diet. The cheap food policy has produced many of the social and environmental problems which the Strategy Unit highlights. GM Freeze believes that leading on from this analysis there should be a public debate about the need to value food much higher and the need to pay more to meet all the policy objectives. Food poverty has not been tackled by previous food and farming policies because it is a social and economic problem not a food production one and should be tackled from this perspective.

### **GM Technology**

It is not clear why the section of the report which deals with GM crops and foods is included in the report. There are many other farming technologies and methods which could have merited a similar profile in the report, eg agroecology or organic. GM Freeze is concerned that the current contribution and possible future contribution of GM crops should not be overstated.

GM crops only occupy 7.5% of global arable land or 2.1 % of all agricultural land. Thus we remain very dependent of crops bred traditionally growing on 92.5% of the remaining arable land for our food supply. In the EU only 0.1% of arable land grew GM crops in the last year. The range of commercial GM crops is limited outside the USA to soya, maize, oilseed rape and cotton. Thus the major cereals and roots crops grown commercially are all non GM. There is no evidence that GM crops consistently yield more than non GM crops. No GM crops specifically developed for small farmers in the Global South have been commercialized despite the hype about Golden Rice and drought tolerant crops.

The following quote shows that we are some way off the promised land when it come to drought tolerance

Professor Ossama El-Tayeb, Ph.D. Professor Emeritus of Industrial Biotechnology at the University of Cairo

*I read with interest and respect Friderike Oehler's message (nr. 56) and fully appreciate her concerns and am similarly convinced of the potential of "alternatives". I wish to add that transgenicity for drought tolerance and other environmental stresses (or, for that matter, biological nitrogen fixation) are too complex to be attainable in the foreseeable future, taking into consideration our extremely limited knowledge of biological systems and how genetic/metabolic functions operate. Those who propagate the ideas that any biological function could be genetically manipulated are optimists who are probably victims of a consortium of "arrogant" scientists and greedy business who have strong control on policy making and the media. Having said that, I feel we should not lose hope of reaching such noble goals and should continue to fund such research whose fruits may be reaped by a future generation. These goals have been used by the proponents of currently available genetically modified organisms (GMOs) under the control of big business, who propose that GM crops will alleviate poverty soon while in fact currently available ones mostly contribute negatively to poverty*

*alleviation and food security and positively to the stock market. The holders of intellectual property rights for present day GM crops keep teasing us about the potential of GMOs resistant to abiotic stresses and the like while doing nothing about developing such crops for this generation. These are simply not easily exploitable in a business market and are accordingly not on their agenda. Basic research in this area is being funded almost exclusively by public funds.*

See <http://www.fao.org/biotech/logs/C14/280307.htm>

The Strategy Unit paper uses an example of how GM potatoes may absorb less fat when frying (the healthy chip?) but then fails to make any connection between this statement and how such products would really help alleviate obesity. Surely the answer is that people with weight problems need to avoid high fat foods altogether? The idea that there is going to be a technical fix for dieting is not something the Unit should be pushing.

Another example of the future benefits of GM crops given in the Report is reduced allergenicity in wheat. From this we assume that the Report means the removal of wheat gluten. What should also have been stated is that if this was possible then the resulting product would have lost one of its most important bread making qualities and only be fit for making biscuits.

The removal of allergens from food stuffs may not prove to be as easy as some GM proponents often make out. For example the GM Science Review looked at removing peanut allergies

*“Efforts to remove the allergen from peanuts would be beneficial to a substantial fraction of the population whose sensitivity to the protein can expose them to life threatening situations and work to this end is underway (Bannon et al.2001). Although this would be beneficial, it is not simple to achieve. Peanut contains potentially more than 20 allergenic proteins. The removal of one or two of them are unlikely to make the peanut safe to eat for all peanut allergy sufferers”*

<http://www.gmsciencedebate.org.uk/report/pdf/gmsci-report1-pt3.pdf>

It is very easy to get carried away with a potentially powerful technology such as genetic engineering. We urge the Strategy Unit not to fall into this trap. The problems of malnutrition and hunger are complex and require long term political and economic stability to achieve the necessary socio-economic reforms needed to tackle them. Science and technology will be important but only if appropriately used and led by the people it is intended to help. The report of the International Assessment of Agricultural Science and Technology for Development (IAASTD) may help clarify the thinking on the types of approach needed if the text in the latest drafts are retained in the final report. For example

### **New Approaches to Research and Development**

*A problem-oriented approach to biotechnology R&D would focus investment on local priorities identified through participatory and transparent processes, and favor multifunctional solutions to local problems. These processes require new kinds of support for the public to critically engage in assessments of the technical, social, political, cultural, gender, legal, environmental and economic impacts of modern biotechnology. Biotechnologies should be used to maintain local expertise and germplasm so that the capacity for further research resides within the local community. Such R&D would put much needed emphasis onto participatory breeding projects and agroecology.*

[http://www.agassessment.org/docs/SR\\_Exec\\_Sum\\_English.pdf](http://www.agassessment.org/docs/SR_Exec_Sum_English.pdf)

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### **Shifting Research Priorities**

*Successfully meeting development and sustainability goals and responding to new priorities and changing circumstances would require a fundamental shift in AKST, including science,*

*technology, policies, institutions, capacity development and investment. Such a shift would recognize and give increased importance to the multifunctionality of agriculture, accounting for the complexity of agricultural systems within diverse social and ecological contexts.*

[http://www.agassessment.org/docs/SR\\_Exec\\_Sum\\_English.pdf](http://www.agassessment.org/docs/SR_Exec_Sum_English.pdf)

A summary of the main recommendations in the IAASTD draft can be found at [http://www.gmfreeze.org/uploads/IAASTD\\_media\\_summary\\_jan\\_2008.pdf](http://www.gmfreeze.org/uploads/IAASTD_media_summary_jan_2008.pdf)

### **Biofuels**

The Strategy Unit Report rightly highlights the impact on grain prices brought about by the production of crops to produce biofuels. This represents a major pressure on farm land, water and food supplies as we seek to grow biofuels (in a single year) to replace fossil fuels formed over millennia. The Strategy Unit Report concentrates on the impact of the current boom on commodity prices and availability of food and feed and tax and policy shifts to encourage production. GM Freeze is concerned that other important issues such as land use changes, biodiversity losses, human rights and socio economic impacts of first generation biofuel crops were not examined. The impacts of second generation biofuel crops is also likely to be massive if they are ever developed.

See [http://www.gmfreeze.org/uploads/6B7\\_biofuels\\_briefing.pdf](http://www.gmfreeze.org/uploads/6B7_biofuels_briefing.pdf)

and <http://www.econexus.info/pdf/Agrofuels.pdf>

for a more in depth look at the issues.

### **Nanotechnology**

The Strategy Unit Report makes much of potential for nanotechnology to “reduce food-borne disease, pesticide use on crops, antibiotics use in livestock and improve supply-chain efficiency”. As with the claimed potential for GM crops, there is little evidence on the ground that nanotechnology will be able to achieve anything for the food industry. The examples used, eg the anti- microbial nature of carbon nanotubes are theoretical rather than based on practical application. The Unit would do well no to get carried away by the rhetoric of industry. Traditional hygiene procedures are very effective at preventing food poisoning if followed correctly. The technical fix approach risks that more operators will become sloppy and make mistakes.

We are pleased that the Unit acknowledges the difficulties in assessing risk from nanotechnology. However, we are concerned that this may be dealt with by an industry code of practice. The distribution of nano particles in the food chain would be global in many cases potentially. This could put billions of people at risk. It is therefore imperative that the use of nanotechnology in food and agriculture is tightly regulated in every country and that risk assessment look beyond the immediate toxic effects by insisting that indirect and long term impacts on people, plants, animals and the environment are also included. To achieve public acceptance of the technology in food and farming, the regulatory process and policy making process should have public oversight with a genuine capacity for the public to influence the outcome of policy and major decisions.

We hope you find these comments helpful in developing the next stage of the process, I confirm that GM Freeze is happy for our submission to be made public.

Yours sincerely

Pete Riley  
Campaign Director