Supplementary written evidence from
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APPG Inquiry into 'World Food Security and the UK'

Executive summary

'Business as usual' will not feed 9 billion people equitably, healthily, safely and sustainably by 2050 (paras 1 &2)). It requires innovation in social, economic and political norms, institutions, laws and regulations, not simply new technologies (3). Food security gives too narrow a focus and food sovereignty is better (4). Britain's past and present role in shaping the food system is huge but in future will decline. Britain lacks an explicit coherent food policy but should pioneer an ecologically-based approach which avoids collapse, techno-dominance or growing bifurcation in the world (5-10). The smart ecological approach requires radical shifts in R&D, and changes to intellectual property (IP) rules, which are undermining such a future (11-12). Today, IP facilitates a form of private taxation and is used to underpin economics based on narrowly defined efficiencies, which are ill-suited to sustainable systems (13-14). Wide-ranging policy changes are needed, from R&D to international negotiations, innovation, seed laws, stocks, finance and diet (15). On IP, the UK should implement the recommendations of the Commission on Intellectual Property Rights and the Food Ethics Council (16-17). This is part of a bigger shift needed to a new cooperative and ecologically-based economic system, which includes new mechanisms for global equity in times of huge climatic changes and a new understanding of security(18).

The need for change

1. 'Business as usual' will not feed 9 billion people equitably, healthily, safely and sustainably by 2050. We need major changes in policy and practice, which cannot be addressed by change simply within the food system but much broader changes in the economic and political system of which food is a part. In fact, food shows well why our current economic model is flawed, with almost a billion underfed and a billion over fed people. An equitable, healthy, safe and sustainable food system requires an ecologically-based economics of enough and sufficiency, not one of continuous growth and expansion of consumption. Around the world, soils differ, climate differs, weather differs and to have sustainable, secure food supplies requires using land in different locally-adapted ways, building upon natural cycles.

2. Speaking about the current financial crisis the OECD Secretary General, Angel Gurría, said:

> We are in our current fix because of an excess of financial innovation, driven by ever-increasing thirst for short-term profit.
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> Against a background of government support for the expansion of financial markets, many people turned a blind eye to basic issues of business ethics and regulation. We now need to rewrite the rules of finance and global business.[2]

Similarly, we do not have the right rules globally and nationally, nor the institutions, incentives and practices, to deliver a well-fed world in 2050. Poor regulation and business

[1] This note supplements evidence given on 25th February 2009. It should be read alongside the set of overheads provided to the committee, and referenced to two books, *The future control of food - A guide to international negotiations and rules on intellectual property, biodiversity and food security*, edited by Geoff Tansey and Tasmin Rajotte, Earthscan, London with IDRC and QIAP, 2008 (also freely available online at http://www.idrc.ca/en/ev-118094-201-1-DO_TOPIC.html) and *The Food System: A Guide*, with Tony Worsley, Earthscan, London, 1995. Geoff Tansey is a writer, consultant and Joseph Rowntree Visionary working for a fair and sustainable food system – see http://www.tansey.org.uk/ - and helped found and run the journal Food Policy in the 1970s

[2] Angel Gurría, 'The world needs to rewrite the rules of finance and global business', 27 January 2009, on OECD website, http://www.oecd.org/document/4/0,3343,en_2649_201185_42053316_1_1_1_1,00.html, last accessed 4 March 09

models damaged the financial system's health. There are equal or worse dangers from dependency upon a few mega firms dominating throughout the food system, in which there is an ever increasing economic concentration of power, from seeds to retailing, animal genetics to fast food catering.

3. Although technological innovation is widely discussed, to achieve the goals set out above requires a far wider range of innovation in social, economic and political norms, institutions, laws and regulations than generally considered. The current trajectory of change sees technological innovations (such as genetically engineered crops, widely-adapted varieties, more 'efficient' intensive, industrially-based linear approaches to farming), led by private sector corporate interest, as the driver of change. A different approach is needed to achieve the goals laid out above, as a wide range of experience on the ground, academic work as well as the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD)[3] shows. Furthermore, the extension of intellectual property rules into agriculture through the Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS) in the World Trade organisation (WTO) is likely to have a major negative effect. TRIPS represents perhaps the biggest ever case of global rule capture by the vested interests of just four major industries[4]. The commodification and privatisation of everything threatens future peace and prosperity. To achieve a well-fed world in 2050 requires new institutions and incentives as well as a variety of ecologically-based approaches that are locally adapted, culturally suitable and which build upon the knowledge and skills of small farmers and merge those with the ecological knowledge and skills of the scientifically trained. There are already examples on a small scale in different parts of the world[5]. The exportation of our current models can lead to a devastating 'de-skilling' that accompanies the forced separation of farming from seed production and improvement; this also entails mass unemployment, indebtedness, societal breakdown and loss of agro-biodiversity.

4. Conflicts over resources, of which food and water are central, are a very significant threat to world food security. A better term might be food sovereignty. The general definition of food security misses out the processes by which food is produced and distributed, who is in control and who benefits, the distribution of wealth and power and the need for local access to production. This is just as true in the UK as in the developing world where the term originated.

The UK's role and policies

5. Owing to its history, the UK is part of the problem. This country, and Europe more generally, is a major contributor to the current structure of food production and trading, in part though its imperial past and in part through the exercise of its current economic power. In Britain, we assume we will continue to feed ourselves through the existing supply chains, first developed in our imperial past. The requirements of investors and the market as it is currently structured produce inappropriate behaviours from firms involved in the food system, especially in the health and environment areas, but fit with the requirements of shareholders. Food within capitalism is just another commodity.

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[3] See evidence by Janice Jiggins, 25 Feb 09, and, for example, Jules Pretty, *Agri-Culture: Reconnecting People, Land and Nature*, Earthscan, 2002, and *Regenerating Agriculture: policies and Practices for Sustainability and Self-Reliance*, Earthscan, London, 1995.

[4] The issues around IPRs, TRIPS, genetic resources and biodiversity are discussed in far more detail in *The Future Control of Food*, see note 1, and the references can be found there.

[5] See, for example, Niels Röling, 'Conceptual and Methodological Developments in innovation' in *Innovation Africa: Enriching Farmers' Livelihoods*, Pascal C Sanginga, et al, (eds), Earthscan, London, 2009; and Niels Röling 'Pathways for impact: scientists' different perspectives on agricultural innovation' International Journal Of Agricultural Sustainability 7(1) 2009, pp 1–12 (draft copy provided to the committee)

6. There is no explicit, coherent cross-Government food strategy in the UK, especially considering the wide range of issues food policy needs to deal with – from health to sustainability to equity[6]. That last existed in the Second World War. However, the recent creation of the Food Policy Council in DEFRA hopefully will lead to change. I would discourage use of the term UK plc as it is highly misleading.

7. The UK is not and should not be conceived of as a plc, which is an artificial creation from a series of legal fictions - from limited liability for an artificial entity, which is treated as a judicial person, to the narrowness of its responsibilities to shareholders in law, and its ability to own 'intellectual property'. Nations have many more responsibilities – to balance vested interest in the interests of all citizens. Britain has a huge responsibility in helping to seek world food security, but there is a big question over whether we do in fact have the appropriate science, skills and technology to do so – to move us away from the industrial model for farming. This is particularly the case since the basic solutions to address a dysfunctional food system are not technological.

Looking ahead

8. In 1909, the tensions and fading empires that led to many of the events, and revolutions, to come and the bases of the technologies that developed later were already in place - from car to plane, telegraph to electricity. So too were the legal frameworks that led to the development of the private institutions that came to dominate, the large corporations. In 2009, I suspect that most of the conditions that will shape this century are here – global warming due to the industrial revolution and fossil fuel use, the emergence of new powers and fading of old, the jockeying for resources, the loss of biodiversity, new bio-, nano- and cognitive neuro science and technologies. If we as peoples and nations respond nationally and internationally to the crises that will arise this century in ways similar to the response of peoples and nations last century, then far worse conflicts and suffering lie ahead despite, indeed perhaps because of, our many scientific and technical advances. By focussing so much creative human skills and energy on R&D into better means of killing rather than ecology and community we collectively increase the chance of such destruction. To avoid that, requires new approaches, rules and institutions to manage global problems in a diverse, unequal world in which food will be a key bone of contention. It requires intergenerational thinking, working for global equity and actions not based on electoral cycles. I suggest we, in Britain, should be focusing our energies and efforts on being the first country out of the old industrial revolution paradigm into a new ecologically based-one and support others in doing so.

9. The rules we create and legal fictions we have invented shape our future and food systems and we have the wrong rules for success in the 21st century. Our current structures underpin the three possible futures I suggest we want to avoid (and which we can as they are based on political choices). These might be characterised as[7]:

Collapse: be it economic or physical or a descent into violent conflict over resources or beliefs[8].

Techno-dominance: This assumes humans can do anything, have no biological constraints and can deal with any problem they create, including destabilising the biosphere. Ultimately this vision sees humans being liberated from ecological and biological constraints. It

[6] See chapter 10 of The Food System, op cit, note 1

[7] These and the final one are discussed in chapter 10 of The Future Control of Food, fn 1, as well as in other places referenced there. A set a various scenarios to 2035 are also under preparation by the etc group, mailto:etc@etcgroup.org

[8] See, for example, Jared Diamond, *Collapse: How Societies Choose to Fail or Survive*, Allen Lane, London, 2005

embraces extreme genetic engineering, synthetic biology, nanotechnology and the ideas of the transhuman movement, which looks to enhance human beings by genetic engineering and technological augmentation. Eventually, food will be synthesised from any feedstock, for example, by producing proteins in fermentors and then spinning, texturing and flavouring them to appear like meat. This is still science fiction, but some seem to seek it. It envisages a highly technological, highly controlled, broad application, wide adaptation approach with large production units and professionalized supply systems from inputs and seeds to final consumer. This food future is more monocultural, industrial, corporate dominated, and dependent on intellectual property. It also sees little or no future for small-holder farmers or semi-subsistence farmers. However, their rapid displacement from farming and migration could cause major social and political upheaval in countries still with large farming populations.

Bifurcation: This is a variation on the above, and sees a growing split between a rich couple of billion or so wealthy people on the planet, using technologies to live longer and better, with the rest living much poorer lives and subject to control to keep them in their place. They also suffer the consequences of the various disasters likely to occur rather than the rich fraction of humanity[9].

10. The approach I suggest we need to embrace is:

Smart ecological: using the best of our scientific and technical skills with the diverse social, cultural, indigenous and traditional knowledge and skills developed by human communities in different habitats. This approach sees biodiversity and diversity in general as a strength, and says humans must live within ecological realities and work with them rather then dominate and ignore them. Drawing on this experience and diversity provides the best chance of facilitating adaptation to climate change. It promotes knowledge exchange and sharing as well as connections between producers and consumers, favours the micro, small and medium enterprise not the transnational, sees a local, regional, global hierarchy, where the local goes first. Yet it also recognises the need for global public-interest-based institutions, such as a reformed UN, to be effective in regulating and holding to account globally active public or private companies. This approach promotes organic, integrated pest management, low external inputs, higher skilled, open systems of exchange, family-farm-based biodiverse farming, healthy diets, and keeping cooking and farming skills alive from farm to flat. If earlier we had put anything like the funding into this that has gone to support the other approaches we would not be facing such challenges now.

R&D and intellectual property

11. For the UK to embrace the smart ecological approach requires a radical shifting in our R&D capacities and in what we support with our aid money. This vision of the future is not being facilitated and encouraged by the way intellectual property (IP) rules are developing and the direction R&D is taking. Ultimately, there is a basic tension between IP and biodiversity that those in favour of global IP standards have failed or refused to discuss. IP owners do best (in terms of profit) if they have a global standard or product (Windows, Viagra, Roundup etc) that is protected globally by high IP standards. Yet innovation in food and agriculture does best if it can draw on a rich biodiversity that depends on fragile variables such as traditional knowledge, local farming systems and free exchange of materials. By building a property rights system that rewards standardization and homogeneity we affect those variables that underpin our systems of biodiversity.

[9] For further discussion see for example, Paul Rogers, *Losing Control: Global Security in the Twenty-First Century*, Pluto Press, London, 2000, and Chris Abbot et al, *Beyond Terror: The Truth About the Real Threats to Our World*, Rider, London, 2007

12. IP is a key driver in determining who will have what wealth and power in the 21st century. It underpins a business model for the future of agriculture and a corporate-led global food system that facilitates the concentration of economic power in fewer and fewer hands and has helped drive the merging of many seed businesses. IP is the key legal tool the major corporate players need to be involved in genetic engineering (GE). GE would not go away without these rules, but how it was being developed, what it was being applied to and the balance of public vs private interests would be very different.

13. Today, we can think of IP rules as facilitating a private system of taxation. Firms controlling key patents, copyright or trademarks, can set prices at levels far above costs and use them to segment markets so as to extract as much as possible from each while preventing lower priced products in one area from moving to others. It is a system that is now global. Today there is almost no country where patents cannot be taken out. This is in contrast to the existence of tax havens, which are fiercely defended by the same interests that do not want any 'IP free havens'.

14. According to Peter Drahos, co-author of *Global Business Regulation*[10], 'most governments don't in fact realise that this is the game'. 'Intellectual property is one of the drivers of the bigger economic system within which are many, often complex niches. For economists, key drivers of change are institutions and institutional arrangements. Property rights are at the centre of these, they determine who controls resources, who does and does not have access, and therefore how resources are used. For ecologists what matters is the sustainability of systems, their capacity to maintain a diversity of life. Economists don't think like this. Instead they use property rights to achieve narrowly defined efficiencies. Economists push systems to dangerous tipping points, to the edge of sustainability from the ecological point of view, as it is about maximization of resource use. It is this view of efficiency that dominates IP – maximise use of resources. What we need is an ecological view of property rights, less an efficiency view, if we want sustainable systems'.[11]

Changing track

15. So what might this mean for World Food Security and the UK? I suggest it means casting the net widely across policies and practices well beyond the food system in order to meet the goals laid out in the key question before the Inquiry. These include:

a. UK science and technology policy. It would mean stopping subsidising large corporations through the R&D we publicly fund the results of which only they can use and commercialise, instead putting much more energy into ecologically smart approaches to food and farming alongside the farmers and peasant groups with their traditional knowledge – which would also mean supporting a far wider range of public good research from that in soils to agronomy, so that farmers have a choice.
b. the UK approach to a whole range of international negotiations, from CAP reform to the WTO, UN institutions, private sector accountability and regulation. We would switch our positions on IP negotiations and practices, and ensure open systems of innovation, such as that underpinning most early agricultural development including the first green revolution, and today in open system software development, and let the obsolete models of production and business organisation die and be replaced by the creativity of much wider groups of people, new business models and different, diverse institutions.

[10] John Braithwaite and Peter Drahos, *Global Business Regulation*, CUP, Cambridge, 2000
[11] Drahos quote taken from Geoff Tansey, 'For good or for greed?' *The Ecologist*, Nov 08, p29

c. Revising seed laws, including in the EU over the compulsory seed list, and UPOV[12] to permit Farmers Rights and use of farmers' varieties (landraces)
d. Developing new food stocks systems globally, regionally and locally, and curtailing the speculative use of financial instruments in futures trading[13].
e. Embracing dietary changes to a more plant based diet for health, sustainability and equity reasons, and using taxation, advertising controls, brand revocation and other tools to implement it.

16. I am beginning a project on the appropriate rules, institutions and incentives but in the interim, as far as IP, farming and food is concerned, we need both a change of language and policy. As I have argued elsewhere,

> "The generic term, intellectual property rights (IPRs), masks the different nature and origins of the various forms of IP, and conflates ideas and justifications that might be appropriate for one, such as copyright, with another, such as patents. If, as Peter Drahos, argues 'The privilege that lies at the heart of all intellectual property is a state-based, rule governed privilege to interfere in the negative liberties of others[14]' then as a way of changing our understanding of them we should use language that more accurately reflects what they are. It is time to take up his suggestion that 'the language of property rights would be replaced by the language of monopoly privilege.[15]'
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> So what we should, perhaps, start talking about are intellectually-based monopoly privileges (IMPs) to more accurately reflect what they are – privileges granted by society to a few to exclude the rest, which can enrich the few, in the name of producing things society wants or as a means of rewarding their creativity, but often as a means of protecting investment and minimising corporate risk. Such a change in language can help in restructuring the debate about the kind of IP system and rules we want, whom we want to benefit and the range of things we want them to cover. It will help regain sight of the social contract that lies behind IP policy, which is essential in food and farming."[16]

More specifically, the UK should fully implement and support implementation of the proposals contained in the report of the Commission on Intellectual Property Rights, which was commissioned by the UK government in 2001 and reported in 2002[17], and those of the Food Ethics Council (FEC)[18]. The Commission's recommendations included that:

a. Developing countries should generally not provide patent protection for plants and animals because of the restrictions patents may place on use of seed by farmers and researchers.

b. At the WTO, the continuing review of Article 27.3(b) of TRIPS should preserve the right of countries not to grant patents for plants and animals, including genes and genetically modified plants and animals, as well as to develop *sui generis* regimes for the protection of plant varieties that suit their agricultural systems. Such regimes should permit access to the protected varieties for further research and breeding, and

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[12] French acronym for the International union for the Protection of New Varieties of Plants

[13] see also Steve Suppan, Institute for Agriculture and Trade Policy, "Comments on regulating commodities exchanges as financial markets" Civil Society Consultation, UN Commission on Reforms of the International Financial and Monetary System, February 2009, ssuppan@iatp.org

[14] Peter Drahos, *A Philosophy of Intellectual Property*, Dartmouth, Aldershot, 1996, p 213

[15] ibid, p 223

[16] Geoff Tansey, "Comment: Whose rules, whose needs? Balancing Public and Private Interests" in Keith E Maskus and Jerome H Reichman, eds, *International Public Goods and Transfer of Technology under a Globalised Intellectual Property Regime*, Cambridge University Press, 2005, pp662-668.

[17] These edited recommendations taken from Commission on Intellectual Property Rights, *Integrating Intellectual Property Rights and Development Policies*, London, 2002, www.iprcommission.org

[18] *TRIPS with everything? Intellectual property and the farming world*, Food Ethics Council, Southwell, UK, November 2002, http://www.foodethicscouncil.org/.

provide at least for the right of farmers to save and plant-back seed, including the possibility of informal sale and exchange. [19]

c. Because of the growing concentration in the seed industry, public sector research on agriculture, and its international component, should be strengthened and better funded so that research is oriented to the needs of poor farmers; that public sector varieties are available to provide competition for private sector varieties; and that the world's plant genetic resource heritage is maintained. In addition, nations should consider the use of competition law to respond to the high level of concentration in the private sector.

d. All countries should accelerate the process of ratification of the FAO International Treaty on Plant Genetic Resources for Food and Agriculture and should, in particular, implement the Treaty's provisions relating to:

- Not granting IPR protection of any material transferred in the framework of the multilateral system, in the form received.

- Implementation of Farmers' Rights at the national level, including (a) protection of traditional knowledge relevant to plant genetic resources for food and agriculture; (b) the right to equitably participate in sharing benefits arising from the utilisation of plant genetic resources for food and agriculture; (c) the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture.

e. All countries should provide in their legislation for the obligatory disclosure of information in a patent application involving genetic resources the geographical source of those resources from which the invention is derived[20].

17. In its report *TRIPS with Everything*, the Food Ethics Council, as well as calling for a change of language from IPRs to that of 'monopoly privileges' recommended that:

a. the rule making process is made more just and equitable
   - by expressly including smallholder farmers, poor consumer and traditional and indigenous communities in shaping policies nationally and internationally, to make the whole process more representative of their interests.
   - by strengthening the capacity of low- and middle-income countries to negotiate on these issues and develop appropriate legislation.
b. IP rules be balanced by introducing and enforcing the necessary anti-trust and liability rules and other international agreements on biodiversity and plant genetic resources for food and agriculture.
c. special and differential treatment should apply to food and farming in low- and middle-income countries with the existing rules being modified to differentiate between the needs of different sectors and countries in agriculture, so that, for example:
   - patent terms may be varied according to the subject matter and level of economic development.

[19] The EU Biotech Directive does provide some protection for small farmers yet developing coutries are not being encouraged to maintain any exception in patent law when they are encouraged to provide for the protection of plants.
[20] This now seems to be the position of a majority of WTO Members

- the exclusionary element of patents, plant variety protection and other forms of IP is rethought for processes and products of importance to food production, with a view to providing a right to reward for use, if necessary, but denying the right to exclude others from using processes, products and knowledge necessary for food security.
- broad patents on research tools and processes and copyright restrictions on basic information should be avoided.

d. a major rethink commence on the nature of research and development, the appropriate links between them and the way IP and other rules affect the direction of research. Aim to keep basic research knowledge open, transparent and freely shared, and separate it from the development of products by private interests in a competitive market environment.
e. a food system-wide study of the uses and role of IP protection and its effects on the system's operation, functioning and market structures, of how the rules on IP protection affect the shape of R&D and are used in influencing consumer habits.
f. recognition be given to the intrinsic value of agricultural biodiversity and mechanisms be developed to maintain and develop this in all countries.
g. Because of the potential of genetic engineering and other forms of modern biotechnology for use as weapons which could decimate crops and animal populations, all governments sign and implement a binding, effective verification protocol to the Biological and Toxin Weapons Convention and over-ride the objections of patent based industries on challenge inspections and commercial confidentiality.

Rethinking security

18. The key challenge in the 21st century for a well-fed world is to create rules, incentives and institutions that promote a new cooperative and ecological economic system, which includes new mechanisms for global equity, farming and business models. Food security is an essential element of human security. This requires a shift away from our current understanding of security, and redirecting the huge amount of human creativity and financial resources devoted to perfecting ever better means of destruction to working in an ecologically sound and creative way. Given the probability of human-induced climatic and other disasters we also need mechanisms and institutions able to respond to them. This offers an opportunity for a new understanding of the meaning of security, which should include progressive redeployment of military activity to the creation of humanitarian disaster emergency forces to deal with the undoubted crises likely to arise.