

Submission to Inquiry into Agricultural Competitiveness
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Greater income, competitiveness and economic efficiency are usually taken as self-evidently desirable. These aims should be examined for their effectiveness in giving us less ill-health and social dysfunction, and better prospects. The benefits that greater farm income might have, for some combination of farmers' physical and mental health, feelings of wellbeing, and prospects/security in these (including from climate change), are implied to be the goal of economic growth. The hoped-for benefits should be set against recorded health and security detriments from economic growth, against the long term costs to other parts of society, and against other ways of making the farming sector and Australia's food supply more secure.

Market Boundary-Definition too Narrow

Our national accounting system and assessment of our wealth, GDP, does not record negatives entries for the following activities and trends, almost all made economic by cheap fuel:

- the contamination of Australia's soil resource with residual pesticides like Fipbronil,
- the reduction, due to industrial farming methods, in the percentage of water- and mineral- holding and microbe-feeding organic matter in agricultural soils
- the drawdown by extra-continental export in agricultural product, of soil minerals, including "subclinical" losses not yet recognised as limiting crop growth
- the dispersal of critical non-renewables like phosphate reserves,
- the destruction, for more intensive agriculture, of dwindling natural living-space (including riverine ones) critical to rare and endangered native species
- the fragmentation of land by roads, mines, pipelines and other manmade infrastructure
- the loss of the best food-producing land to urban expansion
- the unpaid costs in burning fossil fuels to produce nitrogen fertilisers and operate agricultural machinery

- the reduction in proportion of built-in muscle-use in farm work, and the resulting rural health-detriments, borne publicly¹
- the rural suicides attributable to intolerable rural life circumstances

Our national accounting system records only the instantaneous and beneficial side of each of these losses (sale of pesticide, Diabetes blood checking kits, etc.). It has no category for negatives entries (see Appendix 1.). Increasing the size of the agricultural sector is thus an inefficient way of attempting to secure good prospects for farmers. Further reducing natural stocks (including of farmers) worsens our long-term prospects for debt repayment, and food security against political, climatic and financial shocks (see Appendix 2.).

Creating Public Conditions for Market Emergence

Public markets for damages listed do not emerge “freely” and need public investment in measures and standards before the invisible hand can function². Governments take an active approach when delivering policy on production of (the desired part of) goods. They see a role for themselves to alter agricultural productivity through financial and regulatory settings and the kinds of training they support. Similarly, formalised, public market-responses to these dis-benefits could be created, if Government designed and established the necessary standards and measures for these effects, to be able to require or promote damage-abatement.

¹ Increasing total food supply is an inefficient way to improve food security for the most “food-vulnerable” (those vulnerable to the price of food and of travelling to get it, and to the lower availability of nutritious food). It deepens trends that are expensive for society to deal with, including the swelling raft of chronic diseases of affluence (including diabetes, heart disease, stroke, arthritis and sleep apnoea) flowing from greater consumption of cheaper, more highly value-added food and from the more mechanised, less active farming lifestyles that are producing the extra food. Bulk expansion of an economy may be seen as an initial stage, where smaller amounts of resource extraction delivered larger social returns. Relative return (profit per tonne of drawdown) has declined and continues to decline, as predicted even according with the idea of diminishing marginal returns, which recognises only the dampened response, of demand side of the transaction, to greater supply. For long term, stable policy, Australia’s agricultural policy must recognise a larger range of stocks and flows, and risks. It must then modify the economic incentives that promote the known detrimental impact that an increasingly resource-intensive agriculture has on our longer term income and energy security, and health prospects.

² Externalities from multiple sources, ones which slowly, subtly and incrementally affect a dispersed group, as listed, cause stress, greater resource use (recorded as a positive) and the non-accounted displacement of problems to other times and places. These subsidies to business are not subject to public scrutiny in the way that public, monetised markets are. The idea that these damages are a normal part of life - or that formalised markets (here, for these “inverse goods”) emerge in ways that are best left to the existing economic settings (set by government) - protects these subsidies.

Productivity could be widened to mean not just the weight of produce per year (or per area, man-hour etc.) but the weight produced per year *and* per “unit” of the costs above.

Sophisticated Markets: Pollution Markets

With abatement promoted by Government, new markets³ could be created in designing and selling methods to reverse the erosion, by these unpriced costs, of our land’s productive capacity. Increases in agricultural productivity (with a broadened definition) would then have a positive influence on public health spending and other remedial activity, such as soil remediation. As well as “clean and green”, produce scoring well on comprehensive productivity statistics could be sold as “Secure-Source”.

Appendix 1.

If an individual company were liquidating its own assets and declaring itself profitable, the contradiction would be obvious. It is a societal and cultural choice of our time frame for accounting not to publicly register, publicise and limit commercial extractive processes, and ones that consume natural capital. Agriculture is dependent on extractive processes at present. But policy about particular resources can only be “stable” and for the “long-term” as the Terms of Reference require, if it promotes cyclic processes or “circular economics”. Agriculture potentially is, and must become, closed loop, materially. The comments and articles cited below support these assertions.

³ Intensifying current trends could be seen, rather than innovative, as a defensive response to securing our income and wellbeing. Instead, there is ample peer-reviewed data benchmarking the unpriced costs listed, and there is consumer interest in the production-story behind their purchases. A smarter response to information about unwanted trends currently left out of regulated market mechanisms would be to acknowledge and incorporate them into public structures. A new field available to Australian agriculture, keeping it vibrant and innovative, is to economise the costs above. Competitiveness, which currently describes the incentivisation of faster throughput of energy and resources, would then be less available for production methods that erode the agriculture-enabling background of unpriced natural resources. Energy policy aimed at marketing externalities from energy use would reduce the need for many other regulations. Successful competitiveness, by the current definition, will indirectly harm the wellbeing of the most vulnerable overseas, and increase the pool of refugees seeking asylum in Australia in the long term. Starting from such resource- and energy-intensive and biocide-dependent agricultural production methods, there is large scope for development of methods that are more efficient in promoting a secure food and income base, and healthy-life-years. For example, a more inclusive measure of productivity would give recognised advantage to solar-dried produce. With such high levels of insolation in much of Australia’s agricultural land, solar of drying produce (making it less perishable (off-peak transport viable), lighter, and not needing refrigeration) may provide a way to transform, rather than expand, part of the existing fruit, vegetable, mushroom and fish production to make it less fuel-dependent. Development of standards for maximum pesticide residue levels in imported and exported produce may illustrate a path for making wider productivity definitions more widespread internationally.

Australian governments have all sought to increase GDP, and policy to increase the size of the agricultural sector is part of this effort. But GDP must be a deficient measure of benefit from economic growth, since it continues to report benefit despite what is now recognised as the largest market failure ever seen – Global Heating, usually known by the more friendly sounding term, Climate Change. GDP is deficient as a measure of wealth and development (its American designer belatedly and unsuccessfully tried to “recall” it), because it does not distinguish constructive, desired monetary transactions from remedial, reluctant or destructive ones and because it counts depletion of assets as income. This breaks a fundamental rule of accounting. Using existing U.S. government data, Clifford Cobb and others developed the Genuine Progress Index (Cobb, C., Halstead, T., and Rowe, J., *Atlantic Monthly*, October 1995, 'If the GDP is up, why is America Down?'). They included on one side of the ledger some of the usual economic activity, as well as some (previously unpriced) positive activity omitted from GDP. But they introduced items such as resource depletion on the other side of the ledger - priced as usual, but negative. In other words, defensive or remedial activities (repairing smashed cars, clearing up oil spills etc.), and consumption of natural capital were counted as detracting from national wealth, not contributing to it. Even without including any measure for species extinction, and other environmental negatives, America's GPI shows, “an increase until about 1970 and a gradual decline of 40% since then.” An Australian GPI, calculated by Clive Hamilton, shows the same pattern (*Ecological Economics*, 1999, Vol 30, No.1, Jul., p.13-28).

Appendix 2.

Environmental costs of growth, at the scale we are causing them, are human costs by broader account. Public statements and major reports from highly legitimate and credible sources on degradation and loss of natural capital sources describe these human costs. They include the following:

- Nicholas Sarkozy, ex French President, and Nobel prize-winning economist Joseph Stiglitz and members of the *Financial Times*' commentariat, arguing that prosperity is possible without growth and importantly, that prosperity will soon become impossible because of physical growth.
- An article in *Nature* entitled “A Safe Operating Space for Humanity” (Johan Rockström et al., Vol. 461, pp.472-475) by a team of European, Scandinavian and Australian scientists, listing nine environmental thresholds which, if crossed, are very likely to destroy the habitability of the earth for the foreseeable future. Three thresholds have already been crossed - greenhouse gas emissions, species extinction, and nitrogen fixation – all agricultural “specialties”.
- An article in *Environmental Science and Technology* (Zalasiewicz, J., M. Williams, W. Steffen, P. Crutzen, 2010, 44 (7) (Feb), pp 2228–2231), revealing that collectively humans are such a force in the biosphere and have wrought such vast, lasting impacts on the planet that we have entered a new geological period, the (proposed) Anthropocene. Scientists estimate, for example, that each year humans move more rock, sediment and soil than natural processes. The article warns that, without a change of direction, the Anthropocene will be characterized (and already is characterized) by massive extinction of life forms driven by ‘urbanization, pollution, travel, population growth, mining and use of fossil fuels’

- A United Nations report on the trillion-dollar unpaid costs of the global pollution (excluding domestic and government consumption). (The Guardian Weekly, p.17, 26.02.10). The biggest single (measured) externality in the report, accounting for more than half of the \$2.2 trillion worth of damage, was greenhouse gas emissions, to which agriculture contributes around 16%. Each agricultural project contributing to these global pollution figures is no doubt calculated to be economically “worthwhile”, but current price estimates for the pollution-types selected by the study, if paid, would reduce profitability by over 33%. Another huge UN study, expanding the range of “disastrous impacts” studied, is likely to argue “for the abolition of billions of dollars of subsidies to harmful industries such as agriculture, energy and transport.”
- Reports from the International Panel on Climate Change (IPCC) indicating near certainty that burning fossil fuels at the current rate will bring hardship, illness and unrest to many parts of the world in the foreseeable future. To avoid a climate tipping point, we have about until 2020 to make decisive reductions in our rate of greenhouse emissions (i.e our style of economic growth, and definition of wealth). Western industrialised nations like Australia must then reduce emissions by about 90% by 2050, if a viable climate for civilisation is to be maintained. IPCC reports are triply reviewed. This has a conservatising effect on the 3000 scientifically supported statements the second last report made. So the consequences of Australia’s economic course, currently tied to a similar course in the rest of the world, are at least as bad as the IPCC report indicates
- U.K. Government’s Stern Review (2006), an economic assessment of the impact on U.K. and the rest of the globe of IPCC’s predictions, proposing that the costs of waiting longer before we act on climate change (i.e. on our current style of growth) are very high, and that strong worldwide action is essential for avoiding extensive human suffering. Mass markets only respond to very near-term likelihoods and are dangerously unresponsive to predictions of harm that does not single out particular businesses and harm that is delayed. Therefore government action is needed.
- The Stern Review, which used only GDP as a guide, and found that between 5% and 20% of GDP may be lost due to the effects of Global Heating. The Review protects current trends, in that it only aims for stabilising at 450ppm of CO₂, a level associated with serious damage, disruption and risk. Lord Stern, the conservative UK economist, has suggested that we may have to reconsider growth as the goal of rich nations. (The Guardian, “Stern: Rich nations will have to forget growth to stop climate change”, Friday 11 September 2009).
- Comment from Tim Jackson, Economics Commissioner on the UK Government’s Sustainable Development Commission, that we are stoking the destruction of our prosperity by seeking growth. He lists more constructive channels for our time and money, in his book “Prosperity Without Growth”.
- A warning from the General Secretary of the United Nations, Ban Ki Moon, in his message for the 2010 International Year of Biodiversity (published 30th December 2009) that: “Our lives depend on biological diversity. Species and ecosystems are disappearing at an unsustainable rate. We humans are the cause. We stand to lose a wide variety of environmental goods and services that we take for granted. The consequences for economies and people will be profound, especially for the world's poorest people ... We

need new vision and new efforts. **Business as usual is not an option.** ... (emphasis added) ”.

- An article in the conservative magazine, Scientific American, entitled “Breaking the Growth Habit”, by high profile American author Bill McKibben. (2010, April, pp.45-49) and an article interviewing McKibben, “Is Zero Growth really necessary?” (Mark Fischetti, 2010, vol 302 (April), pp.50-51.). McKibben advocating a shift to durable, more adaptable, more localised economies
- Various estimates below 5 billion, some as low as 2 billion, (Gretchen C. Daily, Anne H Ehrlich & Paul R. Ehrlich, J Population and Environment, 1994, Vol 15, No.6, (Jul.), pp.469-475) as a maximum for a sustainable global population. This limit is currently exceeded only by consuming once-off reserves of such as oil, phosphorus, zinc, copper, and rare earth metals, and by overfishing, deforestation, over-extraction from rivers, soil degradation and urban expansion over good soil – all portrayed, as Cobb et al. explain above, as “growth”. Australia’s contribution to this draw-down of resources and energy is one of the highest in the world, at 7.8 global hectares per person, compared with a global allowance of 2.1 ha/person at the current population level.