A scenario of the AEC as a leader of de-development

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Abstract

This is a conceptual paper, arising from the author's research into Well-being Futures in Sustainable Development. Written by a 76-year-old retired Communications Engineer during the closing week of 2011, it draws attention to the likely economic conditions into which the ASEAN Economic Community will be born in 2015. The paper considers worldwide socio-economic activity as being fuelled from mined resources **and** from agrarian 'horticultural' food production by semi-self-sufficient farming families. Industrialism and the capitalism developed to serve it and the consumerism stimulated to maintain it, as practiced in the 'industrially-developed nations', is measured as GDPs, **but** agrarian food production for home-household consumption (as practiced in large measure in most ASEAN nations) is not. Well-being in ASEAN countries is higher than their 'GDP per capita' statistics would appear to indicate. Examining the contraction in easily-won mined resources and the expense of substitutes (both 'renewable' and 'non- renewable'), the paper depicts the present difficulties in the economies of the 'developed' nations as the early symptoms of industrial contraction ('de-development'). The paper concludes by examining how the ASEAN Economic Community can re-develop socially and economically as the industrially-developed countries de-develop.

Keywords: economic contraction, village resilience.

1. The Industrial Revolution and beyond

To be feasible, any scenario of a possible future must show a progression from past events to the present situation and to future development.

The diagrams which follow illustrate graphically the progression of the world energy supplies that enable industrialized 'busyness' as we have known it and will know it.

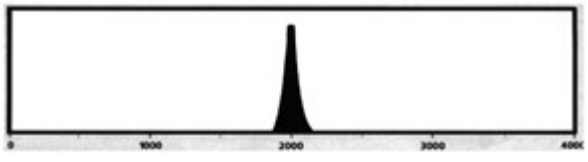
The first figure shows a plot of the extraction of fuels and ores from within Earth, on a baseline of 4000 years from 2000 years ago till 2000 years in the future.

Significant features of the plot are:

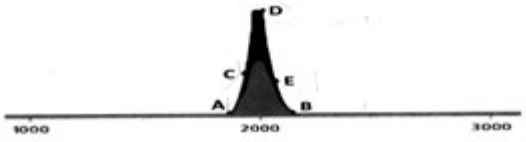
(1) Before about 1750, there was very, very little extraction from within Earth. Mankind lived by harvesting from the surface of Earth the foods and fuel (wood) that had been grown purely by solar energy input.

(2) After about 2250 (about 8 generations from now), mankind will once again be living purely by harvesting the products of Earth's surface.

Extraction of fuels and ores:



If we look at the fossil-fuel energy consumed in the period since the start of the Industrial Revolution (and as a result of which consumerism developed) and how much will be available in the future, it would plot as shown below (with coal coloured in grey and oil coloured in black):



C and D mark the start and end of the author's years as a practicing engineer.

D and E mark the start and end of the career-years of a young graduating engineer today.

The amount of oil available at E, forty years from now, is only a small fraction of the amount being used today, and the amount of coal is significantly less. The implication is that present levels of consumerism are not sustainable, and the decrease in them (which is already being forced on people in the West) will become global.

The above diagrams show history-and-the-future as dividing into three eras.

First, before 'A' (approximately AD1750) there was what might be called "Agrarian Era One".
Then, from 'A' to 'B', is "The Industrial Era". The second half of the Industrial Era (from about AD1950 onwards) is commonly called "The Information Age". The growth of 'industrial agriculture', based on petro-chemically-derived inputs and mechanization has been a major feature of the Industrial Era. However, it should be noted that throughout the Industrial Era there have continued to be regions (such as the ASEAN countries, with the exception of Singapore) in which a considerable portion of the population has continued agrarian 'horticultural' agriculture in much the same manner as was practised before 'A'. The general fixation by mainstream economists on Gross Domestic Product (as measured by the quantity of goods and services 'traded' in 'The Market') has obscured the fact that the production for household use of home-grown food by families in agrarian societies is a massive input into the broader economic system.

After 'B', will come what might be called "The Re- Agrarian Age".

As pointed out in the Introductory Chapter to a profound, but little known, book *For the Common Good* [1], the effect of the Industrial Revolution was to shift the activities of the industrially-developing nations from harvesting the products of solar radiation falling on the surface of Earth to using the products of mining Earth's subsurface. That is, to shift from dependence on energy currently coming from the sun to dependence on stored energy from within the earth. The benefits of industrialism came at the price of increasing dependence on a limited source of energy, and energy is the ultimate means of sustaining life.

The implications of depending on this finite source of energy were examined in *Limits to Growth* [2] and predicted exactly what has happened----- that industrialism would 'overshoot' into rampant consumerism and that Earth would have difficulty in absorbing the wastes produced, such as carbonic and sulphuric fumes, and that the transition from dependence on mined resources back to harvesting Earth's surface will be more sharp than economic systems in the industrially-developed countries can satisfactorily adapt to. [3]

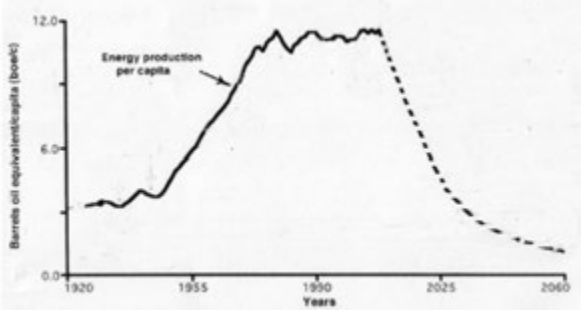
The people in the agrarian countries still have the skillsets that enable them to adapt to the coming circumstances. As the Wikipedia article on 'Oil Depletion' says: *Oil shortages may force a move to lower input "organic agriculture" methods, which may be more labor-intensive and require a population shift from urban to rural areas, reversing the trend towards urbanisation which has predominated in industrial societies; however, some organic farmers using modern organic-farming methods have reported yields as high as those available from conventional farming, but without the use of fossil-fuel-intensive artificial fertilizers or pesticides.* The continued maintenance of these self-sufficiency skillsets in, for instance, Isaan contrasts sharply with the way that such skillsets have died out over the past four generations in the totally-industrial countries. [4], [5]

The next graphs focus on the very recent past and the near future. Their projections of future availabilities are based on the reports of the geologists. Geological surveys having been carried out worldwide, the geologists are now able to estimate the total recoverable reserves (those already found and those still to be found) of coal, oil and natural gas [6].

The first graph below shows the fossil-fuel energy produced and likely to be available *per capita.* That is, it shows the result of dividing the quantity of available fossil-fuel energy at any given date by the world population at that date.

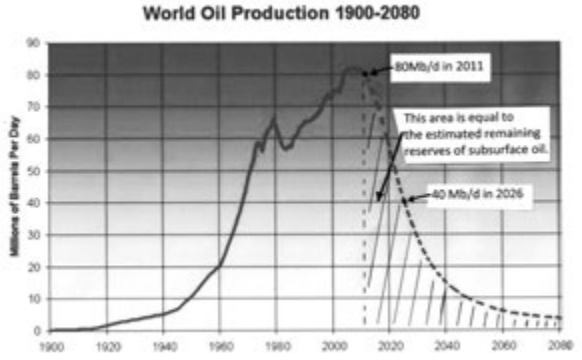
The ominous message of this graph is that, over the whole world, energy available *per capita* will halve between now and AD2020. The poorest people will suffer much more than a halving of what they can afford, as the richer ones will try to keep up their lifestyles.

The people of the villages of the ASEAN countries are fortunate that their village lifestyles are not energy-intensive in the manner of urban lifestyles.



Amongst the fossil-fuels, oil is of particular interest for two reasons. First, because the whole of the modern (post-'green revolution') agricultural production by 'industrial' methods depends entirely on petrochemicals for its nitrogenous fertilizer, for its herbicides, for its pesticides and for the running of its farm machinery; and, second, because societies have come to depend on oil to fuel the people-movement that is such an integral part of suburban development. (In fact, Kunstler in his examination of how America will be affected by curtailment of oil supplies goes as far as to declare that the development of suburbia in the USA will prove to have been 'the greatest mis-allocation of resources ever' [7]).

The next graph shows the past and the future prospects for oil production from conventional wells (i.e, 'cheap' oil). The only extra oil that can be produced (from tar sands, deep-sea wells, and crops of plants) is very expensive.

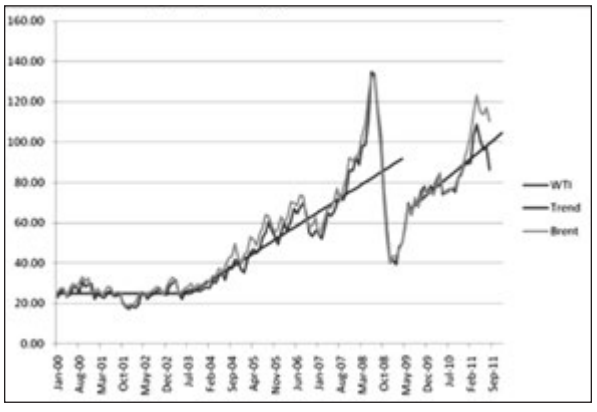


Again, the ominous message lies in the rapidity of the fall, down to half (from 82Mb/day to 41Mb/day) over the next 15 years. It also shows that the present slight decline in oil supply (which, in 2008, pushed up the price very suddenly from about US$90 to over US$130 and brought on industrialized-country recession) is going to become more precipitous, resulting in ever-increasing unemployment (and social unrest) in the heavily-industrialized nations.

The ASEAN region is fortunate that the majority of its population are rural villagers, who have a relatively low consumption of oil *per capita*, and have lifestyles that permit reductions in even that level quite easily. Moves are already being made on this front. For instance, three villages in Thailand in Udon Thani Province, which depend on the nearby wetland for energy, are reducing their dependence on fossil fuels with the help of eco-friendly cooking stoves. With the support of a Global Environment Facility (GEF) Small Grants Programme (SGP) award, these communities are reducing their overall dependence on fossil fuels and improving the quality of their environment. [8]

The 'financial crisis' and 'de-development' in 2008

In mid-2008, oil consumption threatened to outstrip supply. As oil demand is 'inelastic' (i.e. usage does not respond rapidly to price) the immediate impact was a sharp rise in price. This made some commercial ventures unprofitable and they ceased trading, with significant 'private sector' job losses, and that brought usage into line with supply. The pre-2008 level of economic activity has not been regained, and yet (as shown in the following graph) the price of oil is rising again, reflecting the falling supplies of 'cheap oil' from the major fields and the need to substitute expensive alternatives from sources such as tar sands. It is reported that the output of the 800 major oil fields is falling at 6.7% per year. [9].



The 2008 'economic recession' in the West brought about a realization that sovereign debt needs to be constrained, and so Governments (especially in the 'Eurozone' and in Britain) are introducing austerity reductions in 'public sector' employment.

So 2008 through 2011 has been the first period of de-development in the industrially-developed countries.

2012 to 2015 for the ASEAN countries

In recent decades, the economies of the ASEAN countries have grown largely by increases in manufacturing in urban areas and by the provision of tourism services. But this has occurred alongside the maintenance of a large rural base in which producing for home consumption has continued, along with some growing of cash crops.

It is manufacturing (of goods for export to industrialized countries) and tourism (by holidaymakers from those industrialized countries) that will be adversely affected by 'Western' de-development. In an earlier paper [10], this author considered the case of Thailand in a scenario of worldwide recession causing manufacturing employment to fall from 30% of the workforce to 8% and of tourism employment falling from 10% of the workforce to 2%. The 'return to the villages' would cause the overall numbers of village dwellers to rise by 25%, but there is sufficient employment (mainly self-employment) available in the agricultural sector for those villagers; and, with a considerable rise in the world price for rice (following shortages due to reduced supplies of cheap petrochemically-derived fertilizers, herbicides and pesticides) the overall effect would be bigger, more prosperous villages with increased 'social capital.

Collapse of manufacture-for-export

As indicated in the preceding paragraph, the collapse of manufacturing-for-export as 'Western' consumers can no longer afford to import will cause considerable restructuring of societies in ASEAN countries, but (apart from Singapore) losses of well-being should be more than compensated for by the strengthening of the villages. Manufacture for the AEC markets will still provide some employment for local skilled people.

Collapse of long-haul holidaymaker tourism

This will be an early effect of the de-development of the industrialized countries, and there are indications of it already being 'in the pipeline' [11]. To a small extent the reduction in holidaymaker arrivals may be partially offset by 'babyboom' retirees coming to ASEAN countries to avoid northern winters. In the longer term, 'educational tourism' may

develop, with Western overseas students coming to study in the Far East.

The strengthening of the 'resilient economy' villages

De-development in the industrialised countries will reveal just how 'brittle' their economies are at household, regional and national levels. In contrast, the agrarian base of the major ASEAN countries is 'resilient' at household, regional and national levels.

At household level (and in complete contrast to industrial-country households, where all depends on the breadwinner remaining in employment, the economy of the ASEAN villager family has the flexibility to adapt to changed circumstances. Even areas, such as Isaan, that have economic difficulties due to vulnerabilities to drought and flood have much more societal resiliency than their 'Western' counterparts. [12], [13, 14]

What were 'the rural poor' would now be better described as 'the peri-urban secure'. [15]. In fact, they may well come to be envied by residents in 'high-GDP' welfare states.

There are several ways in which 'urbanity' has come to the villages:

Adults returning from working in Greater Bangkok, and in countries such as Japan, Taiwan, Korea, Singapore, the Gulf States and Israel have 'cosmopolitanised' the villages. (Keyes 2010 [16])

Paved roads now allow for youngsters to ride their motorbikes to the highway and then go to university on the bus, and so on.

The villagers still have the robust social security system of the extended family in the village, with reciprocity and redistribution in their economic system alongside the use of markets.

They own their own houses on their own land, and so have no rent or mortgage payment to find each month, so 100% housing security [17]

It is usual to keep a good reserve (often enough for three years consumption) of rice in their household granaries, so 100% food security.

They keep their savings in gold.

And, finally, they work for themselves and so have 100% job security, since no boss ever sacked himself!

Over this century, as industrialism, its capitalism and its consumerism contract to being less rampant components in 'Quality of Life', there'll be much to be emulated in their lifestyle.

"Have surplus rice: will trade (for oil, or gold)"

The increased price of oil due to the depletion of oil reserves increases all the costs of the 'industrial' farming in the 'prairie' regions whose cheap products have, in recent decades, depressed the world price for rice. So it is now reasonable for agrarian farmers to expect higher incomes from their production beyond what their households consume.

The beneficiaries of the de-development of the disastrously over-developed industrialized countries will be the Middle East oil-exporting countries and the ASEAN rice-exporting countries, as they re-develop to fit to the new circumstances.

Conclusion

The people of the AEC will live in interesting times!

They will demonstrate how well-being can be achieved in a more-balanced ethical framework than has been achieved by the 'Market Economy' of industrialism.

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