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To: Inquiry into Australia's future oil supply and alternative transport fuels

From: Ugo Bardi, President ASPO-Italia (Italian Section of the association for the study of peak oil)

Dear sirs,

I note with satisfaction the interest of the Australian senate for such urgent and vital matters as the future availability of fossil fuels; something which has not been yet understood by other governments.

I have worked for several years on the subject of oil depletion and in general on modelling the patterns of production of mineral resources. The data are widely scattered and the opinions of those who are engaged in barrel counting vary. Nevertheless, for those who have gone in depth in the matter, there is only one conclusion possible: *the depletion of all the major mineral resources is a constraint on the world economy that already started to be felt in the mid 1970s.*

The depletion of mineral resources is a gradual process which shows no dramatic "endpoint", even the much talked "Hubbert peak" is nothing but an element of a gradual evolution of the production pattern. Hence, nobody, and especially not the members of ASPO international, are forecasting a coming apocalypse due to the end of fossil fuels. Still, the "easy" resources are gone long ago, and technological progress is not sufficient to keep pace with the increasing energetic and environmental costs of extracting "difficult" resources, scattered over wide areas or hard to access.

I would invite the people who have the responsibility of taking strategic decisions to look at the present economic and geopolitic situation taking into account a fact what is usually overlooked: the choking effect that the reduced availability of mineral commodities is causing on the economy. Once this effect is understood, many events which otherwise may seem incomprehensible start to appear logic, and even unavoidable: the increase in prices of oil, the power games in the Middle East, the strategic contrast between USA and China, the general difficulty of economies such as the Italian and the European one, which are based on imported mineral commodities.

As a last element, I would invite governments to reconsider a seminal work of the 1970s, "The Limits to Growth" produced by a team of the Massachusetts Institute of Technology headed by Dennis Meadows. This study has been denigrated and demonized over the years to the point that for most people it is now considered as an obvious



mistake. But there was nothing wrong in the study which was just so advanced that it could not be understood by mainstream economists. The demonization campaign that followed was based in part on misunderstandings and in part to falsifications and pure slander. A new look of that study (re-examined by the authors themselves) shows that the base case model of the 1972 correctly described the world's economic trends up to now. In the study, an irreversible worldwide economic collapse was estimated to start around 2010. The present trends could well be a premonition of such an incoming collapse.

The MIT work of 1972 was taken by many as a prophecy. It was not; it was a scenario that was not unavoidable and that would be played out or not depending on our actions and decisions. During the past 30 years, and before, humans seem to have been working together as if their collective purpose were to