

Ray Wijewardene - The Visionary

By Asoka Abeygunawardana

Former Chancellor of University of Moratuwa, Deshamannya, Vidya-Jyothi Dr. Philip Rayvatha Wijewardene is a man of many parts. Ray was a graduate in three engineering disciplines- Aviation Engineering, Mechanical Engineering and Agricultural Engineering. His hobbies included designing, making and flying aircraft. He has contributed using his practical skills and innovative thinking to air transportation issues in humid tropical countries such as Sri Lanka. He represented Sri Lanka at the Mexico Olympics in 1968 and was placed fourth in Yachting. He won a Silver Medal at the Asian Games in Bangkok.

His thinking in the spheres of engineering and agriculture were way ahead of his time. He took an active interest in issues related to farming practices; he looked critically and scientifically at the farming practices prevailing at that time and he designed the world's first two wheeled tractor- the Landmaster in 1955. In the years that followed, over 300,000 units were sold in 27 countries including Sri Lanka, the United Kingdom, Australia, the Philippines, Malaysia and Japan.

His innovative and revolutionary concepts and philosophies on farming methods were appropriate to the tropical setting. He was a Scientist and Agricultural Engineer, whose vision was focused several decades into the future, penetrating the superficial symptoms, to the roots of problems perceived in the present.

Dr. Ray had a clear vision on the direction for development. He said that word '*globalisation*' has emerged as a turbo-charged re-incarnation of the colonial era, to confuse the context of *dependence*. He said that the word *globalisation* needs to be better understood as 'inter-dependence'. According to him no one... neither person nor nation... is truly *in-dependent* and are 'interdependent' upon each other. Dr. Ray insisted that we should be non-dependent. Despite the warm and mutual desirability of *interdependence*, we all need, strictly, to preserve areas of non-dependence.

Dr. Ray highlighted the need of identifying following areas in which we should maintain strict non-dependence: Food and nutrition for all our people, Health and wellness for our people, energy for national development and arms for strategic integrity.

Food and Nutrition

In the areas of food and nutrition Dr. Ray's motto was "nutrition for all" specifically the 'rice-and- curry' basics for sustaining very adequate levels of national nutrition. And these basics need to be both available and affordable. Commensurate with such an objective would be non-dependence upon the 'inputs' for achieving such a state of nutritional non-dependence. Dr. Ray demonstrated that it is possible. However our scientists have failed to assert that such objectives are achievable. It has been easier to say that food, and the inputs, would need to be imported. Dr. Ray firmly said that a firm political commitment towards non-dependence for food and nutrition would very quickly galvanise as it has happened in Israel, in Cuba, and many other countries when their backs were against the wall.

Health and wellness

Dr. Ray observed that our standards of 'health' have sadly declined over the past half century, despite heavy (and often misdirected) expenditure on 'health'. Most crucial is the growing awareness that even such decline in 'wellness' is poised critically upon imported technology and inputs which we, as still a 'developing' nation, are hard pressed to maintain. Dr. Ray pointed out that a firm but subtle political commitment towards achieving 'real self-sufficiency in health has supported a rapidly growing restoration of both indigenous as well as nationally-sustainable technologies, 'despite the endeavours of the World-Trade-Organisations (WTO) to topple India.

By no means is the medico-health technology of the west inappropriate, to him, what is inappropriate (and dangerous) is the tendency for its adoption in a non-sustainable manner, rather than its adaptation towards the goal of sustained national wellness. Scientific endeavour should work towards non-dependence on external resources for the wellness of the nation. Dr. Ray stressed that pollution is sourced almost entirely from 'imported' commodities.

Energy for national development

The present tendency for increasing dependence upon external sources for a major -and critical -portion of energy makes us most vulnerable, says Dr. Ray. It is inadequately appreciated that while 'hydro-power' is nationally renewable resource, its availability has peaked. He noted that the two options -oil and coal - are heavily polluting the environment. The cost for the imported coal (now acknowledged as the cheaper of the two) to meet the country's future (and even present) needs of thermal generation would require the expenditure of **vast** amounts of foreign exchange. He pointed out that a very limited amount of solar- energy (photo-voltaic) and wind-power can be harnessed -albeit at very high cost -for remote areas.

Dr. Ray's solution to the energy crisis was dendro power. He, together with Mr. P. G. Joseph was advocating dendro power during last 30 years. Dendro power is coupled with Short- Rotation-Coppice (SRC). It is the systematic and dense growing of identified, fast-growing, nitrogen-fixing trees, in which only certain branches are rotationally lopped. Most of the green- foliage of the tree is retained to continually absorb all the CO₂ which would be produced from their combustion. Loppings also provide valuable fodder and soil-protecting mulch. His message was clear: Such environmentally benign conditions do not pertain to thermal energies evolved from any of the imported fuels, either coal or oil. Further, the costs for generating thermal energy from these (sustainable) fuel-wood plantations is less than the costs for coal-powered electricity... and will be even lower in the future with the costs for these imported fuels continuing to escalate dramatically. A political commitment towards the goal of non-dependence for energy could well accelerate the process of switching to dendro power in Sri Lanka.

Arms for Strategic Integrity

Several countries which are very much smaller than Sri Lanka have -for strategic expedience -developed their own arms industry, says Dr. Ray. His example was Switzerland: While located at the centre of two world wars Switzerland enforced its neutrality throughout. Well within the past two-hundred years Sweden and Switzerland, were substantial producers of arms. By far the major portion (well over 70 per cent) of an arms industry comprises hand-arms, automatic fire-arms and RPGs. Dr. Ray highlights that such weapons can be and have been made in Sri Lanka.

Dr. Ray- the visionary saw the path for the post fossil fuel era very early. He demonstrated and proved whatever he can on these subject areas. We have to admit that as a nation we are late. Better late than never; Yes the Nation is about to proceed in the right direction. That is the only way we can salute this great personality!