

(Paris, 26th March 2009)

Distinguished ladies and gentlemen,

On behalf of the Intergovernmental Institution for the use of Micro-algae Spirulina Against Malnutrition, IIMSAM, and as an emissary of my Director General, I am most pleased to interact with you and present the case for the relevance of IIMSAM in the context of and to mitigate Geopolitical risks related to food insecurity.

These times that we are witnessing are most interesting and challenging especially in the context of delivering food security to the peoples of the world. Failing to do so shall encompass significant risks both at macro and micro levels that the prudent ones would want to avoid. For in a globalised world, we not only share opportunities but also risks. And together we shall have to face the challenges and overcome them.

The present global food crisis, the affects of which shall be aggravated by the on going global financial meltdown would impact negatively and leave over a billion people vulnerable this year.

I congratulate the Global Interdependence Centre and the Banque de France for raising and underlining the important issue of **food insecurity** to highlight the issue of **food security** just before the G-20 summit on the world economy that is scheduled for early next month. Delivering quality nutrition to the peoples of the world is indeed a significant challenge.

But before we proceed one has to realise the important role that food plays in the day to day life of a common man. Food is a major proportion of poor people's consumption basket, higher food prices may threaten political stability...leading to regressive economic crisis and placing growth at risk.

The year 2008 witnessed food riots in Burkina Faso, Cameron, Ivory Coast, Mozambique and Senegal among others. The quest for basic needs and to quench them in the times of conflicts is indeed a quest for survival that might manifest Darwinian traits. In fact, the more

basic the challenges are, the more difficult are they to overcome and fulfill; and more dramatic can be the result of attempts to achieve the same.

There are many stakeholders that deal with the food security agenda in the present times. Among others, the prominent ones in the picture are the Food and Agricultural Organisation, FAO and the World Food Programme, WFP. Whereas the FAO deals with the procurement aspect, the WFP deals with the distribution aspect of food.

IIMSAM is a fairly new organization, the origins of which can be traced to the United Nations World Food Conference of 1974 which declared **Spirulina** as the best food for the future. It is indeed interesting to know that the International Fund for Agricultural Development (IFAD) and the World Food Council (WFC) were results of the same conference.

IIMSAM came into existence in the year 2001 and from the year 2003 onwards we have been part of the United Nations system with a status with the ECOSOC. IIMSAM strives for the NUTRITIONAL SECURITY of the peoples of the world by food fortification approach through Spirulina; in order to eradicate malnutrition, achieve food security and bridge the health divide. Our programmes have a special priority for the developing and the least developed countries.

The pertinent question that comes to mind is - why is there an institution that centers on Spirulina. According to the United Nations World Health Organization (WHO: 1996), more than starvation the real challenge today is malnutrition-the deficiency of micronutrients (vitamins, minerals and essential amino acids) that no longer allows the body to ensure growth and maintain its vital functions.

Malnutrition severely diminishes the human capital of a country and its multifarious impacts hinder the universal achievement of the United Nations Millennium Development Goals. Developing countries are especially vulnerable to this easily avoidable catastrophe.

Spirulina is micro-algae that can cultivate wherever there is water and sun available. It is a cost effective natural resource abundant in

essential proteins, minerals and vitamins required by the human body. A small dose of Spirulina when mixed with traditional foods, tremendously increases its inherent nutritional value besides making the food easily digestible, that can be readily assimilated by the human body. Therefore Spirulina is an important medium to deliver NUTRITIONAL SECURITY to the peoples of the world. No wonder the claim that was made in the year 1974 by the UN World Food Conference about Spirulina being the best food for the future is also backed by the NASA, the National Aeronautics and Space Administration and the European Space Agency.

We also realize that when we talk about food security at IIMSAM, it is not only about delivering 2100 calories to a person but our definition of food encompasses a concept of holistic nutrition that is to be delivered to the peoples of the world.

Spirulina has over 60% digestible protein that is higher than any other food. It does not need fertile land for cultivation and therefore conserves fertile land and soil. It requires less energy and water input than other foods.

Unlike other crops that can be harvested once or twice a year, Spirulina can be harvested after every 24 hours. At a time when land holdings are diminishing through out the developing world, cultivation of Spirulina can be a tool that leads towards socio-economic empowerment of small and marginalized farmers. More so, it is a localized empowerment solution with specific relevance for the developing and the least developed countries that establishes local capacities and capabilities. Our programmes in Kenya and Fallujah, Iraq are an example of this. IIMSAM plans to expand its operations in South Asia, Latin America, and East and Central Africa this year.

Another important area that plays a significant part in food security is climate change. We know that the results of climate change can be very drastic that might result in poverty, displacement and death. Food security will indeed be affected by how climate change impacts the region as well as by global and regional economic conditions.

Spirulina is a big oxygen producer that is even more efficient than trees and forests to absorb Carbon dioxide and release Oxygen

therefore Spirulina can play a significant role not only in CCS (Carbon Capture and Storage) but also in environment sustainability and climate change.

Back in 1942 Joseph Schumpeter gave warning that the bureaucratisation of Capital kills the spirit of entrepreneurship, and in my opinion that includes intellectual capital as well. IIMSAM since its inception decided to instil continual scientific learning and know-how in its practises that are aimed towards betterment of mankind. IIMSAM distributes state of the art scientific Spirulina cultivation techniques to the farmers free of cost. Our Working Partner Soley Institute developed M2 strain of Spirulina that can cultivate even in arid areas.

The International IIMSAM-SOLEY Research Grants already allocated for the year 2009 would explore a wide range of areas from Technologic Spirulina Farm to explore ways to cultivate algae in hyper-saline agricultural waste water.

I would also like to refer to the IIMSAM-KSF model for grassroots development that I had the good fortune to develop along with our Official Working Partner and Technology Facilitator Hash Biotech Pvt. Ltd and the Kanwaljit Sandal Foundation (KSF) named after an eminent social and peace activist; and renowned educationist Late Prof. Kanwaljit Sandal from Dasuya, district Hoshiyarpur of Punjab in India. IIMSAM-KSF Model for grassroots development shall have an essential component of a unique Spirulina buy-back guarantee scheme that shall safeguard the interest of small and marginal farmers. It has specific relevance for countries where land holdings are getting smaller with each passing generation; and as Prof. Philippe Chalmain mentioned in his speech, also for Indian where farmers are committing suicide.

IIMSAM tries to minimise the risk concomitant with the problem of food insecurity by initiating its programmes at the grassroots. Sometimes simple solutions go a long way. We have precedents as well. A little iodine when added to salt played a crucial role to address the problem of Goitre globally in the 60s and 70s. The discovery of Penicillin by Alexander Fleming stopped deaths by common infection and started the whole antibiotic revolution. Similarly a little Spirulina

consumed on a daily basis can play a pivotal role to counter malnutrition and other pathologies associated with it.

It is a long journey indeed and a Herculean task to overcome. And that was the reason that instead of making a presentation, IIMSAM decided to present you with the facts.

IIMSAM is grateful to you for providing us with this opportunity to interact with you and share our vision with you. Last but not the least; I would like to thank Mr. Michael Horne who made this interaction possible.

I invite you, the peoples and institutions of France, and the GIC to join our efforts to realise a world free of malnutrition and hunger through Spirulina. Together we can and together we shall.

Dhanyavaad. THANK YOU